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FOREWORD

The government of Rwanda conducted the 2010 Rwanda Demographic and Health Survey (RDHS) to gather up-to-date information for monitoring progress on healthcare programs and policies in Rwanda, including the Economic Development and Poverty Reduction Strategy (EDPRS), the Millennium Development Goals (MDGs), and Vision 2020.

The 2010 RDHS is a follow-up to the 1992, 2000, 2005, and 2007-08 RDHS surveys. Each survey provides data on background characteristics of the respondents, demographic and health indicators, household health expenditures, and domestic violence. The target groups in these surveys were women age 15-49 and men age 15-59 who were randomly selected from households across the country. Information about children age 5 and under also was collected, including the weight and height of the children.

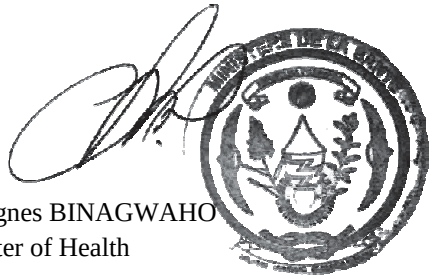
The 2010 RDHS was implemented by the National Institute of Statistics of Rwanda (NISR) in partnership with the Ministry of Health (MOH). The Rwanda Biomedical Centre, through its Institute of HIV/AIDS, Disease Prevention and Control (RBC-IHDPC), and in particular the HIV, malaria, and National Reference Laboratory (NRL) divisions, collaborated on several aspects of the survey, especially the biomarkers. ICF International provided technical assistance in implementation of the survey.

Funding for the 2010 RDHS was provided by the government of Rwanda, the United States Agency for International Development (USAID), the Centers for Disease Control and Prevention (CDC), the United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNFPA), World Vision, and the Global Fund (through the malaria division of RBC-IHDPC),

Results of the 2010 RDHS indicate key changes have occurred in the demographic and health indicators. The survey shows a decrease in maternal and infant mortality rates compared with the surveys of 2005 and 2007-08, an increase in prenatal care visits and utilization of delivery services, an increase in utilization of modern contraceptives, and higher immunization coverage for children age 12-23 months. The total fertility rate has steadily declined. Despite these improvements, the nutritional status of children and mothers remains a big challenge as it has decreased slightly.

This report is therefore an important tool that addresses health concerns and informs policy makers and other stakeholders of priority areas for intervention.

It provides only a snapshot, however, and it is our sincere hope that researchers will deepen our understanding of the topics covered in the survey by undertaking further analysis of the RDHS datasets. Last but not least, we urge all stakeholders, both individuals and organizations, to play an active role in using this valuable information to contribute to a better quality of life for the Rwandan population.



Dr. Agnes BINAGWAHO
Minister of Health

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This report has been prepared with the participation of a large number of individuals and organizations. We would like to express our gratitude to all of them.

First, we sincerely acknowledge the men and women who generously agreed to respond to all questions they were asked. The response rate was high, both for men (98.7 percent) and women (99.1 percent).

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We appreciate the valuable support provided by administrative and financial departments of the NISR. Their interventions allowed this RDHS to be carried out smoothly and under good conditions.

Yusuf MURANGWA,
Acting Director General of
National Institute of Statistics of Rwanda

SUMMARY OF FINDINGS

The 2010 Rwanda Demographic and Health Survey (RDHS) is designed to provide data for monitoring the population and health situation in Rwanda. The 2010 RDHS is the fifth Demographic and Health Survey to be conducted in Rwanda. The objective of the survey is to provide up-to-date information on fertility, family planning, childhood mortality, nutrition, maternal and child health, domestic violence, malaria, maternal mortality, awareness and behavior regarding HIV/AIDS, HIV prevalence, malaria prevalence, and anemia prevalence. A nationally representative sample of 13,671 women, age 15–49 from 12,540 surveyed households, and 6,329 men, age 15–59 from half of these households, were interviewed. This represents a response rate of 99 percent for women and 99 percent for men. The sample provides estimates at the national and provincial levels.

Household composition: The survey results show that Rwandan households consist of an average of 4.4 people. Forty-five percent of the household members are children under age 15.

Housing conditions: Housing conditions vary greatly based on residence. Nearly half (45 percent) of urban households have electricity compared with only 4 percent of rural households. Almost all (90 percent) households in urban areas have access to an improved water source; this compares with 71 percent of households in rural areas. Overall, 58 percent of households use an improved, unshared toilet facility. One in four households has a non-improved toilet facility.

Ownership of goods: Currently, 63 percent of Rwandan households own a radio, and 40 percent have a mobile phone. Nearly one-third of urban households have a television compared with 2 percent of rural households. Fifteen percent of households own a bicycle, but only 1 percent of households own a car or truck. Rural households are most likely to own agricultural land (82 percent).

Education of survey respondents: Sixteen percent of Rwandan women and 10 percent of Rwandan men have had no formal education; 16 percent of women and 21 percent of men have gone to secondary school or beyond. Urban residents and those living in the City of Kigali have the highest level of education. Overall, 77 percent of women and 82 percent of men are literate.

FERTILITY AND ITS DETERMINANTS

Total Fertility Rate: Fertility in Rwanda has declined over the past two decades. Currently, women in Rwanda have an average of 4.6 children, down from 6.1 in 2005.

Fertility varies by residence. Women in urban areas have 3.4 children on average, compared with 4.8 children per woman in rural areas.

Fertility also varies with mother's education and economic status. Women who have no education have nearly twice as many children as women with secondary or higher education (5.4 versus 3.0 children per woman). Fertility increases as the wealth of the respondent's household decreases. The poorest women, on average, have two children more than women who live in the wealthiest households (5.4 versus 3.4 children per woman).

Teenage fertility: According to the 2010 RDHS, 6 percent of young women age 15–19 have already begun childbearing: 5 percent are mothers, and an additional 1 percent of them are pregnant with their first child. Young motherhood is slightly more common in rural areas than in urban areas. Young women with no education are more than six times as likely to have started childbearing by age 19 compared with those who have secondary and higher education (25 percent versus 4 percent).

Age at first birth: The median age at first birth for all women age 25–49 is 22.4. Women living in urban areas have their first birth slightly later than women living in rural areas. Age at first birth increases with education and wealth.

Age at first marriage: Seventeen percent of women in Rwanda are married by age 18, compared with just 3 percent of men. The median age at first marriage is 21.4 for women age 25–49; men age 25–59 marry later, at a median age of 24.9. Age at marriage greatly increases with education; women with more than secondary education get married three and a half years later than those with no education (median age of 23.6 years versus 20.1 years for women age 25–49).

Age at first sexual intercourse: Twenty-one percent of women and 16 percent of men age 25–49 were sexually active by age 18. Three percent of women and men have had sex by age 15. Women start sexual activity about a year earlier than men (median age of 20.7 years for women age 25–49 and 21.6 years for men age 25–59).

Desired family size: Rwandan women and men want about three children, on average. Women's ideal family size is similar regardless of residence, province, or wealth. Women with secondary education and higher desire fewer children than women with no education (2.9 percent versus 3.8 percent).

FAMILY PLANNING

Knowledge of family planning: Knowledge of family planning methods in Rwanda is universal; all women and men age 15–49 know at least one modern method of family planning. The most commonly known methods are injectables, male condoms, and the pill.

Current use of family planning: More than four in ten married women (45 percent) currently use a modern method of family planning. Another 6 percent are using a traditional method. Injectables (26 percent), the pill (7 percent), and implants (6 percent) are the most commonly used methods. Similarly, sexually-active unmarried women are equally as likely to use family planning—four in ten (40 percent) are using a modern method, with 18 percent using injectables and 12 percent using male condoms.

Use of modern family planning varies little by residence. However, use does vary by province. Modern contraceptive use ranges from a low of 36 percent among married women in West province to a high of 57 percent in North province.

Modern contraceptive use increases with education and wealth. Over half (52 percent) of married women with secondary education and higher use modern methods compared with 37 percent of women with no education.

NEED FOR FAMILY PLANNING

Desire to delay or stop childbearing: Fifty-two percent of currently married Rwandan women want no more children. Another 36 percent want to wait at least two years before their next birth. These women are potential users of family planning.

Unmet need for family planning: Unmet need for family planning is defined as the percentage of married women who want to space their next birth or stop childbearing entirely but who are not currently using contraception. The 2010 RDHS reveals that 19 percent of married women have an unmet need for family planning—10 percent of women have a need for spacing births and 9 percent have a need for limiting births. Unmet need is highest among the poorest women and those with no education. West and East provinces have the highest unmet need for family planning: 25 percent and 20 percent, respectively.

MATERNAL HEALTH

Antenatal care: Almost all (98 percent) Rwandan women receive some antenatal care (ANC) from a skilled provider, most commonly from a nurse or medical assistant (94 percent). Thirty-eight percent of women had an antenatal care visit by the time of their fourth month of pregnancy, as recommended. Thirty-five percent received the recommended four or more ANC visits. Seventy-three percent of women took iron supplements during pregnancy; 39 percent took intestinal parasite drugs. Seven in ten women were informed of signs of pregnancy complications during an ANC visit. Seventy-nine percent of women's most recent births were protected against neonatal tetanus.

Delivery and postnatal care: Over two-thirds (69 percent) of Rwandan births occur in health facilities, primarily in public sector facilities. Home births are twice as common in rural areas (31 percent) as in urban areas (16 percent).

Sixty-nine percent of births are assisted by a skilled provider (doctor, clinical officer, nurse, or midwife). Another 16 percent are assisted by untrained relatives or friends and another 10 percent are unassisted.

Postnatal care helps prevent complications after childbirth. Only 18 percent of women received a postnatal checkup within two days of delivery. The majority of women (80 percent) did not have a postnatal checkup.

CHILD HEALTH

Vaccination coverage: Ninety percent of Rwandan children age 12–23 months have received all recommended vaccines—one dose each of BCG and measles, and three doses each of pentavalent (DPT-HepB-Hib) and polio. Less than 1 percent of children did not receive any of the recommended vaccines. Vaccination coverage is slightly higher in urban areas than in rural areas (93 percent versus 90 percent). There is some variation in vaccination coverage by province, ranging from only 81 percent in West province to 96 percent in City of Kigali province. Coverage increases with a mother's education; 97 percent of children whose mothers have secondary education and higher were fully vaccinated compared with 87 percent of children whose mothers have no education. Vaccination coverage has continued to increase gradually in the past five years.

Childhood illnesses: In the two weeks before the survey, four percent of children under 5 were ill with cough and rapid breathing, symptoms of an acute respiratory infection (ARI). Of these children, 50 percent were taken to a health facility or provider.

During the two weeks before the survey, 13 percent of Rwandan children under age 5 had diarrhea. The rate was highest among children 12–23 months (25 percent) and 6–11 months (22 percent). Thirty-seven percent of children with diarrhea were taken to a health provider. Children with diarrhea should drink more fluids, particularly through oral rehydration salts (ORS). Nearly one in two children with diarrhea was treated with ORS or increased fluids. However, one in four children received no treatment (from a medical professional or at home) at all.

NUTRITION STATUS

Breastfeeding and complementary feeding: Breastfeeding is very common in Rwanda, with 99 percent of children having been breastfed at some point in time. The World Health Organization (WHO) recommends that children receive nothing but breast milk (exclusive breastfeeding) for the first six months of life. Over eight in ten children under 6 months in Rwanda are being exclusively breastfed. Infants should not be given water, juices, other milks, or complementary foods until age 6 months, yet 11 percent of Rwandan infants under 6 months receive complementary foods. On average, children breastfeed until age 29 months and are exclusively breastfed for 5.3 months. Complementary foods should be introduced when a child is 6 months old to reduce the risk of malnutrition. In Rwanda, 61 percent of children age 6–8 months begin eating complementary foods.

Anemia: About four in ten children are classified as having anemia, most of whom have mild anemia. Anemia has decreased from 52 percent of children in the 2005 RDHS to 38 percent of children in 2010. Seventeen percent of women are anemic, most of whom are mildly anemic. Anemia is higher among pregnant women (20 percent) than among nonpregnant women (17 percent). Mild anemia is the most common form of anemia among both groups of women.

Children's nutritional status: According to the survey, 44 percent of children under age 5 are stunted or too short for their age. This indicates chronic malnutrition. Stunting is most common among children age 18–23 months (55 percent). Stunting is least common among children of more educated mothers and those from wealthier families. Wasting (too thin for height), which is a sign of acute malnutrition, is far less common (only 3 percent). Eleven percent of Rwandan children are underweight or too thin for their age.

Women's nutritional status: Few Rwandan women are too thin (7 percent), and 16 percent of women are overweight or obese. Overweight and obesity is higher in urban areas than in rural areas (25 percent compared with 15 percent) and increases with age, education, and wealth. Women in the City of Kigali are most likely to be overweight or obese (30 percent).

Vitamin A and iron supplementation: In the 24 hours before the survey, 73 percent of children age 6–23 months ate food, fruits, and vegetables rich in vitamin A. Ninety-three percent of children age 6–59 months received a vitamin A supplement in the six months prior to the survey. Over half (52 percent) of women received a vitamin A supplement postpartum. Vitamin A supplementation has increased since 2005, when 84 percent of children age 6–59 months received a vitamin A supplement in the six months prior to the survey and 34 percent of pregnant women received a vitamin A supplement postpartum. Only 1 percent of women took iron tablets or syrup for at least 90 days during their last pregnancy to prevent anemia and other complications.

MALARIA

Malaria prevalence: There has been remarkable progress in the decline of malaria prevalence in Rwanda, which has decreased by half since 2007–08; from 2.6 percent to 1.4 percent among children age 6–59 months and from 1.4 percent to 0.7 percent among women age 15–49.

Household ownership of mosquito nets: In Rwanda, 82 percent of households have at least one long lasting, insecticide-treated mosquito net (LLIN). LLIN ownership is highest in East province (90 percent) and lowest in North province (70 percent). LLIN ownership in Rwanda has increased by nearly 50 percent in the past few years.

Use of mosquito nets by children and women: Overall, 70 percent of children under 5 and 72 percent of pregnant women slept under an LLIN the night before the survey. This LLIN use shows about a 25 percent increase from use reported in the 2007–08 RDHS.

INFANT AND CHILD MORTALITY

Childhood mortality levels are decreasing in Rwanda. Currently, infant mortality is 50 deaths per 1,000 live births for the five-year period before the survey compared with 73 deaths for the five-to-nine-year period before the survey. Under 5 mortality levels have also decreased from 133 deaths per 1,000 live births to 76.

Mortality rates differ slightly by province. The under 5 mortality rate for the ten-year period before the survey ranges from 79 deaths per 1,000 live births in the City of Kigali to 125 deaths in the East province. Under-5 mortality differs dramatically by a mother's level of education. Children born to a mother who has a secondary education or higher are markedly less likely to die before their fifth birthday than children whose mothers have received no education (63 and 125 deaths per 1,000 live births, respectively).

MATERNAL MORTALITY

The maternal mortality ratio (MMR) remains high in Rwanda. According to the 2010 RDHS, the MMR is 487 deaths per 100,000 live births. The 95 percent confidence interval for the 2010 maternal mortality ratio ranges from 393 to 581 deaths per 100,000 live births. This rate has declined considerably in the past 10 years, from 1,071 deaths per 100,000 live births in the 2000 RDHS and 750 deaths per 100,000 live births in the 2005 RDHS.

DOMESTIC VIOLENCE

Two in five women (41 percent) reported that they have suffered from physical violence at least once since they were 15 years old. One in five women (22 percent) had suffered from sexual violence sometime in the past. Most often, it is the husband or partner who is responsible for the violence, whether physical or sexual.

STI AND HIV/AIDS-RELATED KNOWLEDGE, ATTITUDES, AND BEHAVIORS

Knowledge: Seventy-nine percent of women and 74 percent of men age 15–49 know that the risk of HIV infection can be reduced by using condoms and limiting sex to one faithful, uninfected partner. This knowledge varies by province, from 68 percent of women in the West province to 89 percent of women in the City of Kigali.

Eighty-nine percent of women and 84 percent of men know that HIV can be transmitted by breastfeeding and that the risk of mother-to-child transmission can be reduced by taking drugs during pregnancy.

Multiple and concurrent sexual partners: Less than 1 percent of women and 4 percent of men age

15–49 report that they had sex with two or more partners in the past 12 months. Over one in four of these women and men report using a condom at last sexual intercourse.

Among the women who had two or more partners in the past 12 months, almost two-thirds (63 percent) had overlapping (concurrent) sexual partnerships. Concurrent sexual partnerships may increase the risk of HIV transmission because they allow the virus to pass quickly through multiple individuals. Nearly 8 in 10 men who had two or more partners in the past 12 months had concurrent sexual partnerships.

HIV testing: HIV testing is increasing rapidly in Rwanda. Currently, 76 percent of women and 69 percent of men have ever been tested and received their test results. Among young women and men age 15–24, 59 percent of women and 49 percent of men have ever been tested and received the results.

Nearly 9 in 10 women (88 percent) who were pregnant in the two years before the survey received HIV counseling, were offered and accepted an HIV test, and received their test results. HIV testing during antenatal care is slightly more common in urban areas (93 percent) than in rural areas (88 percent).

HIV PREVALENCE

HIV prevalence: The 2010 RDHS included HIV testing of over 6,900 women age 15–49 and over 6,300 men age 15–59. Ninety-nine percent of women and 98 percent of men agreed to be tested for HIV.

There has been essentially no change in Rwanda's HIV prevalence since 2005. According to the 2010 RDHS, HIV prevalence is 3.0 percent for women and men age 15–49, compared with 3.0 percent in the 2005 RDHS. In Rwanda, HIV prevalence is 3.7 percent for women and 2.2 percent for men.

HIV prevalence is three times as high in urban areas (7.1 percent) as in rural areas (2.3 percent). HIV estimates vary by age, with HIV prevalence highest among women age 35–39 and men age 40–44. HIV prevalence is highest in the City of Kigali where 7.3 percent of adults age 15–49 are HIV-positive. HIV prevalence is fairly uniform throughout the rest of Rwanda and ranges from 2.1 percent to 2.5 percent.

HIV prevalence is particularly high among widows and those who are divorced or separated; 16.6 percent of widows are HIV-positive.

CHILD LABOR

Nearly 9 of 10 children (88 percent) age 5–14 in households worked in a week prior to the survey, either for their own household or for somebody else. Nearly 8 percent of children worked for someone who was not a member of the household: 2 percent for paid work and 5 percent for unpaid work. Eighty-three percent of children age 5–14 fetched water or collected fire wood for household use, 10 percent performed other family work, and 63 percent helped with household chores for 28 or more hours in a week.

HEALTH INSURANCE

On average, 78 percent of households have health insurance, an increase from 68 percent in 2007–08. Nearly all insured households (98 percent) are with Mutual Health Insurance. Other insurors are La Rwandaise d'Assurance Maladie (RAMA), Military Medical Insurance (MMI), and private insurance, which are commonly reported by households in urban areas, in the city of Kigali, and in the highest wealth quintile. At the individual level, 67 percent of women and 71 percent of men are insured. The majority of those insured individuals are covered by Mutual Health Insurance.

RWANDA

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UGANDA
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North
East
City of Kigali
Lake Kivu
West
South
TANZANIA
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Kilometers
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INTRODUCTION 1

1.1 COUNTRY PROFILE

1.1.1 Geography

The country of Rwanda is situated in central Africa, immediately south of the equator between latitude 1°4' and 2°51' S and longitude 28°63' and 30°54' E. It has a surface area of 26,338 square kilometers and is bordered by Uganda to the north, Tanzania to the east, the Democratic Republic of the Congo to the west, and Burundi to the south. Landlocked, Rwanda lies 1,200 kilometers from the Indian Ocean and 2,000 kilometers from the Atlantic Ocean.

Rwanda forms part of the highlands of eastern and central Africa, with mountainous relief and an average elevation of 1,700 meters. However, there are three distinct geographical regions.

Western and north-central Rwanda is made up of the mountains and foothills of the Congo-Nile Divide, the Virunga volcano range, and the northern highlands. This region is characterized by rugged mountains intercut by steep valleys, with elevations generally exceeding 2,000 meters. The Divide itself rises to 3,000 meters at its highest point but is dwarfed by the volcano range, where the highest peak, Mount Karisimbi, reaches 4,507 meters. The Congo-Nile Divide slopes westward to Lake Kivu, which lies 1,460 meters above sea level in the Rift Valley trough.

In Rwanda's center, mountainous terrain gives way to the rolling hills that give the country its nickname, "Land of a Thousand Hills." Here the average elevation varies between 1,500-2,000 meters. The area is also referred to as the central plateau.

Further east lies a vast region known as the "eastern plateaus," where the hills level gradually into flat lowlands interspersed with a few hills and lake-filled valleys. The elevation of this region generally is below 1,500 meters.

Because of its elevation, Rwanda enjoys a temperate, sub-equatorial climate with average yearly temperatures around 18.5°C. The average annual rainfall is 1,250 millimeters, which occurs over two rainy seasons of differing lengths that alternate with one long and one short dry season. The climate varies somewhat from region to region, depending on the altitude. The volcano range and northern highlands are generally cooler and wetter, with an average temperature of 16°C and an average rainfall above 1,300 millimeters. The maximum rainfall is 1,600 millimeters above the Divide and the volcanic range. The hilly central region receives an average of 1,000 to 1,300 millimeters of rain per year, while rainfall on the eastern plateau, where the climate is relatively warmer and drier, generally falls below 1,000 millimeters and can be as low as 800 millimeters. Although Rwanda enjoys more or less constant temperatures, the climate is known to vary from year to year, with extreme variations in rainfall sometimes resulting in flooding or, more often, drought. These extremes have a profound impact on agricultural production.

Rwanda has a dense network of rivers and streams, which drain into the Congo River on the western slope of the Congo-Nile Divide, and into the Nile River in the rest of the country via the Akagera River, which receives all the streams of this watershed. Water resources also include several lakes surrounded by wetlands.

Deforestation caused mainly by land clearing for agricultural expansion has resulted in mostly anthropic vegetation with only a few small areas of natural forestland (representing 7 percent of the country) remaining on the Congo-Nile Divide and the slopes of the volcanic range.

Rwanda is divided into 4 geographically-based provinces—North, South, East, and West—and the City of Kigali, with the provinces being further subdivided into 30 districts, 416 sectors, 2,148 cells, and 14,837 villages (Imidugudu).

1.1.2 Economy

In Rwanda, regular efforts have been made to develop the service sector and to stimulate investment in the industrial sector. These efforts are now bearing positive results, as the service sector has contributed more than the agricultural sector to the economy in recent years. Although the agricultural sector appears to have been overtaken by the service sector, it still employs many Rwandans. According to the 2002 General Population and Housing Census (RGPH) more than 8 of 10 people are employed in agriculture, including 81 percent of men and 93 percent of women (NISR, 2005). However, the agricultural sector faces major problems, including production dominated by small farming operations of less than one hectare, rudimentary techniques, and a low rate of investment. Agrarian reforms are being gradually introduced to address these problems; in particular, population resettlement and labor quality improvements focus on specialized training, mainly for women. Efforts are also under way to regionalize crops and to fully expand the use of farming techniques (MAAR, 2004).

In 2010, the tertiary sector accounted for the largest share of Rwanda's gross domestic product (GDP) at 47 percent, followed by the primary sector at 32 percent, the secondary sector at 15 percent, and the reminder at 6 percent were from Financial Intermediation Services Indirectly Measured (FISIM) and taxes.

Nevertheless, agricultural production rose by 5 percent from 2009, to 2010. This rise is due to the increase in production of food crops (5 percent) and export crops (14 percent), which recovered from a decrease of 15 percent in 2009.

In 2010, industry value added grew by 8 percent, while mining exports registered a decrease for the second consecutive year—11 percent in 2010, compared with 18 percent in 2009. Manufacturing increased by 9 percent; electricity, gas, and water increased by 15 percent; and construction grew by 9 percent. At the same time, services value added increased by 10 percent in 2010 as a result of 9 percent growth in transport, storage, and communication; 8 percent growth in wholesale and retail trade; and 24 percent growth in finance and insurance, after a recovery from a decrease of 4 percent in 2009.

In 2010, the private final consumption expenditure was 83 percent of GDP, and the government final consumption expenditure was 15.8 percent of GDP. The level of investment (gross capital formation) was estimated at 21 percent of GDP, reflecting high levels of construction activity and imports of capital equipment. The imports were provisionally estimated to have increased by 12 percent at constant prices. These figures imply an increase of 8 percent in private final consumption expenditure compared to that in 2009. Exports grew by 20 percent after a decrease of 25 percent in 2009. The per capita GDP at constant 2001 prices was FRW 326,160 in 2010, compared with FRW 314,080 in 2009.

Data from the *2005 Rwanda Demographic and Health Survey* (RDHS) showed that 86 percent of women were working in agriculture, compared with 62 percent of men. In addition, 14 percent of men and 4 percent of women worked as unskilled labor. Results from the *2007-08 Rwanda Interim Demographic and Health Survey* (RIDHS) showed that in urban areas, 59 percent of the households fell in the highest wealth quintile, compared with only 12 percent of households in rural areas. By comparison, in urban areas only 9 percent of households fell in the lowest (poorest) wealth quintile, compared with 18 percent in rural areas.

Finally, because of the failure of most development strategies that had been based on structural adjustment programs focused on growth measured in terms of per capita GDP, the overwhelming majority of development partners are recognizing the need to incorporate social factors into development strategies. Therefore, new initiatives

are geared toward pro-poor economic growth and poverty reduction to revive the economies of developing nations (MFEP, 2007). Rwanda has adopted this new orientation.

1.1.3 Population

According to a 2009 population projection, the country would grow to 10,412,820 inhabitants in 2010. The population of Rwanda increased steadily and rapidly, from 4,831,527 to 7,157,551 in 1991 and to 8,128,553 inhabitants in 2002. The increase was, essentially, due to rapid population growth. The 2002 RGPH census estimated the natural growth rate at 2.6 percent and the fertility rate at 5.9. The rate of increase declined significantly, to 1.2 percent, between 1991 and 2002. The decline, which resulted from the deaths of more than one million people in the Genocide of the Tutsis, compares with a 3.1 percent decline between 1978 and 1991.

Population density is high across the country and has increased steadily to 395 inhabitants per square kilometer in 2010, as compared with 321 in 2002, 283 in 1991, and 191 in 1978. The population is essentially young, with 42.3 percent of all Rwandans under the age of 15. In sex-disaggregated terms, the 2009 population projections show women to be in the majority (51.7 percent), while men make up 48.3 percent of the population.

The illiteracy rate in Rwanda declined between 2000 and 2005. Between the two RDHS surveys, the rate decreased from 34 percent to 30 percent of women, and from 24 percent to 23 percent of men. This means that 70 percent of women know how to read and write and are considered literate compared with 77percent of men. The educational level of Rwandans is also low. Twenty-three percent of women and 17 percent of men have had no education, while nearly 67 percent of women and 70 percent of men have only a primary school education. About 11 percent of men and 9 percent of women have reached the secondary school level, while those with education beyond the secondary level make up only 1 percent of the population.

Under Article 33 of Rwanda's current constitution (adopted in 2003), "Freedom of thought, opinion, conscience, religion, worship, and the public manifestation thereof is guaranteed by the State in accordance with conditions determined by law." Although numerous religions are practiced in Rwanda, Christianity is by far the dominant faith, practiced in some form by 93 percent of the resident population, the majority of whom are Catholic. In the 1991 census, 90 percent of the resident population identified themselves as Christian. Their number has increased at the expense of those who profess no religion, who have declined from 6.8 percent in 1991 to 3.6 percent in 2002. The number of Muslim adherents has risen slightly, from 1.2 percent of the population in the 1991 census to 1.8 percent in 2002.

Nearly all Rwandans speak the same language, Kinyarwanda, which is the country's official first language, followed by English and French. Kiswahili, the third most common foreign language, is generally spoken in urban areas and in the provinces bordering othercountries where this language is widely spoken, such as the Democratic Republic of the Congo and Tanzania.

1.1.4 Population Policy

Out of concern for improving the country's quality of life, the Rwandan government has developed strategies to ensure an acceptable balance between demographic growth and available resources, particularly since the 1980s.

A family planning initiative developed in 1982 provided for training, improved access to family planning services and, in particular, the promotion of family planning through trained communicators known as Abakangurambaga ("Awakeners of the People"). A subsequent policy was adopted in 1990 aimed at curbing demographic growth and reducing fertility through family planning. To create an environment favorable to behavioral change that would result in lower fertility rates, other elements were included in the plan, such as

increased production, public health improvements, land use planning, training of communicators, the promotion of education and school attendance, and the employment and advancement of women.

Following the 1994 genocide, population problems were seen in a new light, with emphasis on both quality of life and population growth. A new national population policy was developed and issued to all development partners in 2003. This policy emphasizes quality of life by providing objectives and strategies to affect both demographic (fertility, mortality) and socioeconomic factors. The policy advocates slow population growth, managed sustainability of natural resources, food safety, access to primary and secondary education for all children (with a focus on technical and vocational instruction as well as information technology), good governance, equal opportunity, and participation in development by both men and women.

1.1.5 Public Health Policy

Since the 1980s, the Government of Rwanda has implemented primary health care as the key strategy for improving the health of the population. In February 1995, the Ministry of Health began making reforms in the health sector in accord with the Lusaka declaration; these reforms were later adopted by the Government of National Unity in March 1996. The new policy was based upon three main strategies: (1) the decentralization of the health system using the health district as the basic operational unit; (2) the development of the primary health care system through its eight core components; and (3) the reinforcement of community participation in the management and financing of services.

The Ministry of Health has laid down seven major policy objectives for the health sector: (1) to improve the availability of human resources; (2) to improve the availability of quality drugs, vaccines, and consumables; (3) to expand geographical accessibility to health services; (4) to improve financial accessibility to health services; (5) to improve the quality of services in the control of disease; (6) to strengthen national referral hospitals and research and treatment institutions; and (7) to strengthen institutional capacity.

Characteristics of Rwandan health care services include decentralization, continuous provision, flexibility, and efficiency. The health system consists of three levels of provision: central, intermediary, and peripheral. The central level includes the central directorates and programs of the Ministry of Health and the national referral hospitals. It elaborates policies and strategies, ensures monitoring and evaluation, and regulates the health sector. It organizes and coordinates the intermediary (at the provincial level) and peripheral (at the health district level) levels of the health system and provides them with administrative, technical, and logistical support.

1.2 Objectives and Methodology of the Survey

The 2010 Rwanda Demographic and Health Survey (RDHS) is the fifth of its kind, following surveys conducted in 1992, 2000, 2005, and the 2007-08 Rwanda Interim DHS (RIDHS). The 2010 RDHS was carried out by the National Institute of Statistics of Rwanda (NISR) and the Ministry of Health (MoH). ICF International provided technical assistance to the project through the MEASURE Demographic and Health Surveys program (MEASURE DHS). The survey was funded by the Government of Rwanda, the United States Agency for International Development (USAID), the United Nations Children's Fund (UNICEF), the Centers for Disease Control and Prevention/Global AIDS Program (CDC/GAP), the Global Fund to Fight AIDS, Tuberculosis and Malaria, the United Nations Population Fund (UNFPA), and World Vision. The survey was conducted on a representative sample of women age 15-49 and men age 15-59.

1.2.1 Objectives of the Survey

The main objectives of the 2010 RDHS were to:

- Collect data at the national level to facilitate calculation of essential demographic rates, especially rates for fertility and infant and child mortality, and to analyze the direct and indirect factors that determine levels and trends in fertility and child mortality
- Measure the levels of knowledge of contraceptive practices among women
- Collect data on family health, including immunization practices; prevalence and treatment of diarrhea, acute upper respiratory infections, fever and/or convulsions among children under age 5; antenatal visits; and assistance at delivery
- Collect data on the prevention and treatment of malaria, in particular the possession and use of bed nets among children under 5 and among women and pregnant women
- Collect data on nutritional practices of children, including breastfeeding
- Collect data on the knowledge and attitudes of men and women concerning sexually transmitted infections (STIs) and acquired immune deficiency syndrome (AIDS) and evaluate recent behavioral changes with regard to condom use
- Collect data for the estimation of adult mortality and maternal mortality at the national level
- Take anthropometric measurements in half of surveyed households in order to evaluate the nutritional status of children, men, and women
- Conduct confidential testing for malaria parasitemia using Rapid Diagnostic Testing in half of the surveyed households and anonymous blood smear testing at the National Reference Laboratory
- Collect dried blood spots (from finger pricks) for anonymous HIV testing at the National Reference Laboratory in half of surveyed households
- Measure hemoglobin level (by finger prick) for anemia of surveyed respondents in half of surveyed households.

1.2.2 Questionnaires

Three questionnaires were used for the 2010 RDHS: the Household Questionnaire, the Woman's Questionnaire, and the Man's Questionnaire. They are based on questionnaires developed by the worldwide Demographic and Health Surveys (DHS) program and on questionnaires used during the 2005 RDHS and 2007-08 RIDHS surveys. To reflect relevant issues in population and health in Rwanda, the questionnaires were adapted during a series of technical meetings with various stakeholders from government ministries and agencies, non-governmental organizations, and international donors. The questionnaires were translated from English and French into Kinyarwanda.

The Household Questionnaire was used to list all the usual members and visitors in the selected households as well as to identify women and men eligible for individual interviews. Basic information was collected on the characteristics of each person listed, including age, sex, education, and relationship to the head of household. For children under 18, survival status of the parents was determined. The Household Questionnaire also collected information on the following:

- Dwelling characteristics
- Utilization of health services and health expenditures for recent illness and injury
- Possession of iodized salt
- Possession and utilization of mosquito nets
- Height and weight of women and children
- Hemoglobin measurement of women and children
- Blood collection from women and children for rapid test and laboratory testing of malaria
- Blood collection from women and men for laboratory testing for HIV

The Woman's Questionnaire was used to collect information from all women age 15-49 and was organized by the following sections:

- Respondent background characteristics
- Reproduction, including a complete birth and death history of respondents' children and information on abortion
- Contraception
- Pregnancy and postnatal care
- Child's immunization, health, and nutrition
- Marriage and sexual activity
- Fertility preferences
- Husband's background and woman's work
- HIV/AIDS and other sexually transmitted infections
- Other health issues
- Adult mortality
- Relationship in the household

The Man's Questionnaire was administered to all men age 15-59 living in every other household in the RDHS sample. The Man's Questionnaire collected much of the same information as the Woman's Questionnaire but was shorter because it did not contain a detailed reproductive history or questions on maternal and child health or nutrition.

An instruction manual was also developed to support standardized data collection. All data collection instruments were pretested in June-July 2010. The observations and experiences gathered from the pretest were used to improve the instruments for the main survey data collection.

1.2.3 Sample Design

The sample for the 2010 RDHS was designed to provide population and health indicator estimates for the country as a whole and for urban and rural areas in particular. Survey estimates are also reported for the provinces (South, West, North, and East) and for the City of Kigali. The results presented in this report show key indicators that correspond to these provinces and the City of Kigali.

A representative sample of 12,792 households was selected for the 2010 RDHS. The sample was selected in two stages. In the first stage, 492 villages (also known as clusters or enumeration areas) were selected with probability proportional to the village size. The village size is the number of households residing in the village. Then, a complete mapping and listing of all households existing in the selected villages was conducted. The resulting lists of households served as the sampling frame for the second stage of sample selection. Households were systematically selected from those lists for participation in the survey.

All women age 15-49 who were either permanent residents of the household or visitors present in the household on the night before the survey were eligible to be interviewed. In addition, in a subsample of half of all households selected for the survey, all men age 15-59 were eligible to be interviewed if they were either permanent residents or visitors present in the household on the night before the survey.

1.2.4 Sample Coverage

All of the 492 clusters selected for the sample were surveyed for the 2010 RDHS. A total of 12,792 households were selected, of which 12,570 households were identified and occupied at the time of the survey. Among these households, 12,540 completed the Household Questionnaire, yielding a response rate of nearly 100 percent (Table 1.1).

In the 12,540 households surveyed, 13,790 women age 15-49 were identified as being eligible for the individual interview; interviews were completed with 13,671 of these women, yielding a response rate of 99.1 percent. Male interviews were conducted in every second household. A total of 6,414 men age 15-59 were identified in the subsample of households. Of these 6,414 men, 6,329 completed the individual interviews, yielding a response rate of 98.7 percent.

The response rates were slightly higher in rural areas for men, while for women they were almost the same in rural and urban areas.

Table 1.1 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence (unweighted), Rwanda 2010

	Residence		
Result	Urban	Rural	Total
Household interviews			
Households selected	2,054	10,738	12,792
Households occupied	2,014	10,556	12,570
Households interviewed	2,009	10,531	12,540
Household response rate1	99.8	99.8	99.8
Interviews with women age 15-49			
Number of eligible women	2,386	11,404	13,790
Number of eligible women interviewed	2,367	11,304	13,671
Eligible women response rate2	99.2	99.1	99.1
Interviews with men age 15-59			
Number of eligible men	1,178	5,236	6,414
Number of eligible men interviewed	1,156	5,173	6,329
Eligible men response rate[2]	98.1	98.8	98.7

[1] Households interviewed/households occupied
[2] Respondents interviewed/eligible respondents

1.2.5 Hemoglobin, Malaria and HIV Testing

In a subsample of one-half of all households selected for the Man's Questionnaire, blood specimens were collected from women age 15-49 and children age 6-59 months for measurement of hemoglobin in the field. The specimens were tested for malaria in the field using the Rapid Diagnostic Test (RDT) and tested for malaria in the lab using the microscopic method. Additionally, in the same one-half of all households, blood specimens for HIV testing were collected from all women age 15-49 and men age 15-59 who consented to the test. The protocol for the blood specimen collection and testing for HIV was reviewed and approved by the Rwanda National Ethics Committee, the Institutional Review Board of ICF International, and the Centers for Disease Control and Prevention (CDC) in Atlanta.

Hemoglobin testing

The 2010 RDHS included anemia testing of children age 6 to 59 months and women age 15-49 in the same one-half of households that were selected for interviews of men. A consent statement was read to the eligible respondent or to the parent or responsible adult for children and young women age 15-17. This statement explained the purpose of the test, informed respondents that the results would be made available as soon as the test was completed, and requested permission for the test to be carried out.

Anemia levels were determined by measuring the level of hemoglobin in the blood (a decreased concentration of hemoglobin characterizes anemia). The concentration of hemoglobin in the blood was measured in the field using the HemoCue system. A special-purpose photometer is used to determine hemoglobin levels. A capillary blood sample is taken from the palm side of the end of a finger, punctured with a sterile, non-reusable, self-retractable lancet. The blood drop is collected in a HemoCue microcuvette, which serves as a measuring tool, and placed in the HemoCue photometer to determine the level of hemoglobin in the blood. A pamphlet was given to each respondent, explaining symptoms of anemia, prevention methods, and the individual results of the hemoglobin measurement of the respondent and any children for whom the respondent gave permission to be measured. Each person whose hemoglobin level was lower than the recommended cutoff point (testing severely anemic) was advised to visit a health facility for follow-up with a health professional.

Malaria testing

Malaria diagnostic tests, including a rapid diagnostic test (RDT) and a test using thick and thin blood smears, were given to eligible women and children in the 2010 RDHS. For the RDT for malaria, a drop of blood was obtained by a prick at the end of the finger, usually at the same time as anemia testing. First Response test kits were used according to manufacturer recommendations. The results of the malaria RDT were recorded in the Household Questionnaire, which allows linking with the characteristics of the respondents. Results from the RDTs were used to diagnose malaria and guide treatment of parasitemic children during the survey. The parent or guardian of children with a positive RDT was provided with written results, and children were given Coartem® for treatment, according to the current malaria treatment guidelines. Women with a positive RDT were referred to the nearest health center for treatment.

Thin and thick blood smears were also collected from participants who agreed to malaria testing. Blood slides were stained with Giemsa stain prepared by the laboratory in advance of the fieldwork. Parasite densities were calculated by counting the number of asexual stage parasites/200 white blood cells (WBCs), assuming 6,000 WBCs/dl of blood. Blood smears were considered negative if no parasites were found after counting 200 fields.

An informed consent form was read to the eligible person or parent/responsible adult of the child or teenager age 15-18 . This consent form asks, first of all, for the authorization of the person before undertaking the test and then explains the objectives of the test, informing the individual taking the test or those responsible for children that the results would be communicated immediately after the test. For each eligible woman and child, a

slide with thick and thin blood smears was prepared, transmitted, and stored for microscopic examination of malaria parasites at the NRL.

HIV testing

Women and men who were interviewed in the subsample of households selected for the men's survey of the 2010 RDHS were asked to voluntarily provide blood for HIV testing. The HIV test is anonymous; that is, the results of the test were not linked to survey data until the individual respondent's identifying information was destroyed by NISR. Therefore, the respondents' HIV test results can never be linked to identifying data. For women and men willing to be tested, drops of blood were drawn and dried on filter paper. Only an identification number (barcode) drawn at random was assigned to each specimen. Since no information containing personal identification accompanied the samples, it was not possible to inform the respondents of the result of their test. Analysis of the samples for HIV was carried out at the NRL.

Information and educational brochures about HIV/AIDS prevention and the existing Voluntary Counseling and Testing (VCT) and Prevention of Mother-To-Child Transmission (PMTCT) sites were distributed to all households selected for the survey, whether these households were selected for testing or not. These brochures were prepared by TRAC-Plus and the Commission Nationale de Lutte contre le Sida (CNLS) or National AIDS Control Commission in close collaboration with NISR and were adapted to the population surveyed.

1.2.6 Training and Fieldwork Data Collection

Thirty-eight women and men were trained from June 14-July 2, 2010, in the administration of the RDHS survey instruments, anthropometric measurement, hemoglobin testing, malaria testing, and blood drawing for HIV testing. Seven days of fieldwork were followed by one day of interviewer debriefing and examination. Pre-test fieldwork was conducted in 230 households in two rural and two urban villages outside of City of Kigali. The majority of pretest participants attended the main training and served as field editors and team leaders for the main survey.

NISR recruited and trained 117 participants, and at the end of the training it retained 105 to work as field personnel. The main training was conducted from August 16-September 14, 2010. The training consisted of instruction regarding interviewing techniques and field procedures, a detailed review of items on the questionnaires followed by tests, instruction and practice in weighing and measuring children, and mock interviews and role plays among participants in the classroom. Each of the fifteen data collection teams included a team leader, a field editor, three female interviewers, one male interviewer, and one biomarker staff member.

The main fieldwork was launched immediately upon the conclusion of field staff training. Each of the 15 teams was assigned to 2 of the 30 districts. Fieldwork supervision was conducted by NISR, NRL, and ICF International through regular visits to teams to review their work and monitor data quality. The UNICEF team also regularly visited the teams in the field. Additional contact between the central office and the teams was maintained through cell phones. Fieldwork was conducted from September 26, 2010, to March 10, 2011. Questionnaires and blood samples were regularly delivered to NISR headquarters.

1.2.7 Data Processing

Data entry began on November 1, 2010, almost one month after the survey was launched in the field. Data were entered by a team of 15 data processing personnel recruited and trained for this task. They were assisted during these operations by 4 data verification and codification officers and 2 receptionists. Completed questionnaires were periodically brought in from the field to the National Institute of Statistics headquarters, where assigned agents checked them and coded the open-ended questions. Next, the questionnaires were sent to the data entry facility and the blood samples (DBS and malaria slides) were sent to the NRL to be screened for HIV. Data were entered using

CSPro, a program developed jointly by the United States Census Bureau, the ORC Macro MEASURE DHS+ program, and Serpro S.A. Processing the data concurrently with data collection allowed for regular monitoring of teams' performance and data quality. Field check tables were regularly generated during data processing to check various data quality parameters. As a result, feedback was given on a regular basis, encouraging teams to continue their high quality work and to correct areas in need of improvement. Feedback was individually tailored to each team. Data entry, which included 100 percent double entry to minimize keying error and data editing, was completed on April 21, 2011. Data cleaning and finalization was completed on May 27, 2011.

HOUSEHOLD CHARACTERISTICS 2

A household is a person or a group of persons, related or unrelated, who live together and share common cooking and eating arrangements. This chapter summarizes demographic and socioeconomic characteristics of the people who live in the households of Rwanda, which were sampled during the 2010 RDHS. Characteristics of the housing structure were also provided by responses to the survey. The Household Questionnaire collected the basic demographic and socioeconomic information (e.g., age, sex, educational attainment, and current school attendance) for all usual residents and visitors who slept in the household the night preceding the interview. This method of data collection allowed for analysis of the results for either the de jure population (usual residents) or the de facto population (persons in the household at the time of the survey). The Household Questionnaire also collected information on housing facilities, including dwelling characteristics, source of water supply, sanitation facilities, and household assets.

The information in this chapter is intended to facilitate interpretation of key demographic, socioeconomic, and health indices presented later in the report. It will also assist in the assessment of the representativeness of the survey sample.

2.1 HOUSEHOLD POPULATION BY AGE AND SEX

Table 2.1 shows the distribution by age and sex of the household population surveyed, according to urban-rural residence. The household survey involved 55,292 respondents, of which 47,868, or 87 percent, live in rural areas and 7,424, or 13 percent, live in urban areas.

Table 2.1 shows the distribution by age and sex of the household population, which is further depicted by the age pyramid in Figure 2.1. The age pyramid is wide at the base, narrowing rapidly as it reaches the upper age limits, an indication of a population with high fertility and even higher mortality. Although the base of the pyramid (age 0-4 years) remains large, the figure shows a decline in fertility as well as an decrease in mortality between age group 0-4 and age group 5-9. In addition, there is a notable gender imbalance: there are 89 males for every 100 females in the total population. Further analysis reveals structural elements peculiar to the Rwandan population. First, the number of men drops off significantly in age groups 10-14, 15-19, 20-24, 30-34, and 35-39. The same trend occurs among females in age groups 10-14, 15-19, and 30-34. The fall in the population at age 10-14 might relate to high child mortality in previous years. And the drop in the age 15-19 group can be directly attributed to the low birth rate during 1994 and the adjacent years, while the fall observed at age group 30-39 might be the effect of Tutsi genocide in 1994.

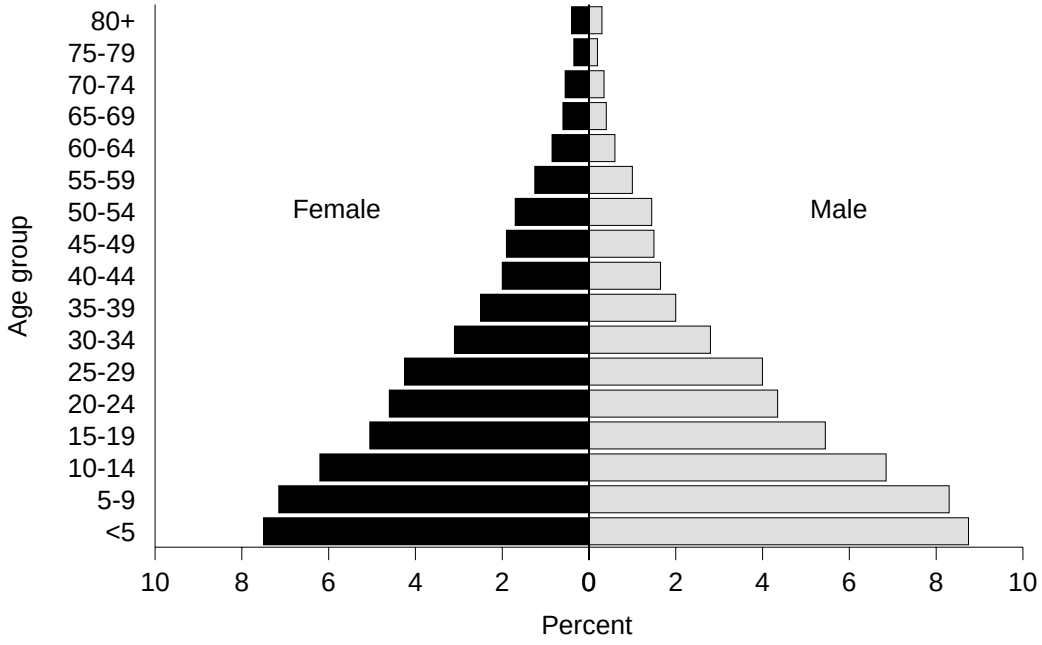
The overrepresentation of women overall is noted in both urban and rural areas. In rural areas, males predominate among those age 0 to 19. From age 20-24 on, however, the situation begins to reverse, and the gap narrows. In urban areas, males age 0 to 14 and 25 to 34 outnumber females, but beginning at age group 35-39, the proportion of females exceeds that of males.

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, Rwanda 2010

	Urban			Rural			Total		
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total
<5	15.2	13.2	14.2	17.9	15.3	16.5	17.5	15.0	16.2
5-9	13.1	12.7	12.9	17.1	14.6	15.8	16.6	14.3	15.4
10-14	11.5	10.8	11.1	14.1	12.7	13.3	13.7	12.4	13.0
15-19	11.3	11.8	11.6	10.9	9.9	10.4	10.9	10.1	10.5
20-24	11.2	12.1	11.7	8.3	8.7	8.5	8.7	9.2	9.0
25-29	12.3	10.5	11.4	7.3	8.3	7.8	8.0	8.5	8.3
30-34	7.9	7.1	7.5	5.3	6.1	5.7	5.6	6.2	6.0
35-39	4.6	5.7	5.2	3.9	4.9	4.4	4.0	5.0	4.5
40-44	3.8	3.7	3.7	3.2	4.0	3.7	3.3	4.0	3.7
45-49	3.1	3.4	3.2	3.0	3.9	3.5	3.0	3.8	3.4
50-54	2.2	2.9	2.6	3.0	3.5	3.3	2.9	3.4	3.2
55-59	1.4	2.2	1.8	2.1	2.6	2.3	2.0	2.5	2.3
60-64	0.8	1.2	1.0	1.3	1.7	1.5	1.2	1.7	1.5
65-69	0.5	0.7	0.6	0.8	1.3	1.1	0.8	1.2	1.0
70-74	0.5	0.8	0.7	0.8	1.1	1.0	0.7	1.1	0.9
75-79	0.2	0.6	0.4	0.4	0.7	0.5	0.4	0.7	0.5
80 +	0.4	0.5	0.4	0.6	0.9	0.7	0.6	0.8	0.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Number	**3,628**	**3,796**	**7,424**	**22,400**	**25,468**	**47,868**	**26,029**	**29,264**	**55,292**

Figure 2.1 **Population Pyramid**



Rwanda 2010

2.2 HOUSEHOLD COMPOSITION

Table 2.2 shows that the mean size of a Rwandan household is 4.4 persons. It has decreased slightly compared with the mean household size of 4.6 found in the 2005 RDHS. This mean size varies somewhat by residence: 4.5 in rural areas compares with 4.2 in urban areas. In addition, Table 2.2 shows that 67 percent of Rwandan households are headed by men. Female-headed households represent 33 percent of households, 34 percent in rural areas and nearly the same percentage in urban areas (31 percent). The percentage of female-headed

households increased significantly between 1992 and 2000, from 21 percent to 36 percent, but dropped slightly again in 2005 (to 34 percent) and in 2010 (to 33 percent). Approximately half of all households contain three to five people, 26 percent hold six to eight people, and 4 percent have nine or more people. One-person households make up only 7 percent of the population.

Table 2.2 shows also that 30 percent of households at the national level are lived in by foster and/or orphaned children. The data show that 22 percent of households are lived in by foster children, 16 percent are lived in by single orphans, and 3 percent are lived in by double orphans. No significant variation exists between rural and urban areas.

Table 2.2 Household composition

Percent distribution of households by sex of head of household and by household size; mean size of household, and percentage of households with orphans and foster children under 18 years of age, according to residence, Rwanda 2010

Characteristic	Residence		Total
	Urban	Rural	
Household headship			
Male	69.5	66.3	66.7
Female	30.5	33.7	33.3
Total	100.0	100.0	100.0
Number of usual members			
0	0.0	0.0	0.0
1	10.4	6.1	6.7
2	14.6	11.5	11.9
3	17.4	18.3	18.2
4	17.6	18.4	18.3
5	13.3	16.3	15.8
6	11.0	12.5	12.3
7	7.9	8.5	8.4
8	3.6	5.0	4.8
9+	4.3	3.5	3.6
Total	**100.0**	**100.0**	**100.0**
Mean size of households	4.2	4.5	4.4
Percentage of households with orphans and foster children under 18 years of age			
Foster children[1]	22.1	21.8	21.9
Double orphans	3.8	3.2	3.3
Single orphans[2]	16.1	15.7	15.8
Foster and/or orphan children	29.5	30.3	30.2
Number of households	**1,759**	**10,781**	**12,540**

Note: Table is based on de jure household members, i.e., usual residents.
[1] Foster children are those under age 18 years of age living in households with neither their mother nor their father present.
[2] Includes children with one dead parent and an unknown survival status of the other parent.

2.3 EDUCATIONAL ATTAINMENT

Tables 2.3.1 and 2.3.2 show the percent distribution of the female and male household populations according to highest level of education attained, by age, residence, province, and household wealth quintile. Educational attainment is important; it contributes to improved living conditions not only for the individual household but for society as a whole. Reproductive behavior, the use of contraception, health habits, school attendance of household members, and habits relating to hygiene and nutrition are all influenced by educational attainment.

The data in these two tables show that 22 percent of women and 16 percent of men have never attended school. A comparison of these proportions to those of the previous survey shows slight improvement: at the time of

the previous survey, 29 percent of women and 22 percent of men had no education at all. The percentage of men and women who have completed primary school is nearly identical (9 percent for women and 10 percent for men,). As educational attainment increases, the percentage of both women and men in these categories decreases: only 2 percent of women and men have completed secondary level education; about 1 percent of women and 2 percent of men have attended any education beyond the secondary level.

The percentage of men and women who have completed primary school has increased, from 7 percent to 9 percent for women and from 8 percent to 10 percent for men. However, when compared with previous generations, the figures show significant gains. The proportion of women with no education at all has dropped from 79 percent for women age 65 and over to 2 percent for girls between the ages of 10 and 14. The percentage for males in these age groups has dropped from 43 percent to 2 percent. In addition, the gap in educational attainment between the sexes seems to be narrowing in the younger age groups. The percentage of women who have completed primary school is the same or close to that of men for all ages up to age 34: 14 percent of women between the ages of 15 and 19, compared with 12 percent of men said they had completed primary school. This narrowing of the gap in educational attainment between the sexes is also seen at the secondary level: between the ages of 20 and 24, 5 percent of women and 6 percent of men and have completed secondary school. This contrasts with the common situation of previous generations, when the proportion of women between the ages of 55 and 59 who had completed primary school was 5 percent, while that of men was 17 percent.

Table 2.3.1 Educational attainment of the female household population

Percent distribution of the de facto female household populations age 6 and over by highest level of schooling attended or completed and median years completed, according to background characteristics, Rwanda 2010

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 completed
Age										
6-9	28.4	71.4	0.1	0.1	0.0	0.0	0.0	100.0	3,328	0.0
10-14	1.8	94.2	2.6	1.4	0.0	0.0	0.0	100.0	3,637	2.3
15-19	3.3	59.2	13.5	23.3	0.6	0.1	0.0	100.0	2,966	4.4
20-24	9.5	55.6	13.0	14.5	5.4	1.8	0.1	100.0	2,687	3.9
25-29	14.4	57.8	16.9	4.4	3.8	2.5	0.1	100.0	2,502	3.4
30-34	16.5	50.1	21.6	5.9	3.3	2.4	0.1	100.0	1,827	4.2
35-39	20.9	55.8	8.9	9.2	2.8	2.2	0.2	100.0	1,458	4.2
40-44	32.7	46.1	9.1	9.2	1.4	1.2	0.3	100.0	1,168	3.0
45-49	39.9	41.2	11.6	5.4	1.0	0.7	0.2	100.0	1,111	1.4
50-54	49.6	33.4	12.6	3.1	0.6	0.3	0.5	100.0	996	0.0
55-59	61.4	29.7	4.5	2.7	0.5	0.4	0.9	100.0	737	0.0
60-64	63.3	28.4	5.5	1.7	0.6	0.0	0.4	100.0	485	0.0
65+	79.4	18.0	1.0	0.8	0.0	0.0	0.7	100.0	1,104	0.0
Residence										
Urban	12.3	51.3	10.0	16.0	5.6	4.6	0.2	100.0	3,178	4.0
Rural	23.5	59.9	9.2	5.8	1.1	0.3	0.2	100.0	20,834	2.1
Province										
Kigali City	10.6	47.5	10.3	17.7	7.6	6.2	0.1	100.0	2,281	4.5
South	20.9	61.3	9.5	6.7	1.0	0.2	0.3	100.0	5,841	2.3
West	25.5	59.4	8.0	5.5	0.9	0.6	0.2	100.0	5,979	1.9
North	23.6	58.0	11.1	6.0	1.1	0.2	0.1	100.0	4,239	2.1
East	23.0	60.6	8.6	6.1	1.3	0.3	0.1	100.0	5,672	2.0
Wealth quintile										
Lowest	32.2	60.1	5.3	2.0	0.0	0.0	0.4	100.0	4,876	1.0
Second	27.2	61.1	8.1	3.5	0.1	0.0	0.0	100.0	4,884	1.5
Middle	22.5	62.1	10.1	4.9	0.3	0.0	0.1	100.0	4,756	2.2
Fourth	17.8	61.4	12.1	7.8	0.8	0.0	0.1	100.0	4,775	2.8
Highest	10.0	49.0	10.9	18.1	7.2	4.5	0.2	100.0	4,719	4.4
Total	**22.0**	**58.8**	**9.3**	**7.2**	**1.7**	**0.9**	**0.2**	**100.0**	**24,012**	**2.3**

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

By residence, the data show significant gaps in educational attainment. In rural areas, 24 percent of women and 17 percent of men have no education at all, compared with 9 percent of men and 12 percent of women in urban areas.

There are also variations among provinces. The City of Kigali has the lowest percentage of residents with no education (11 percent of women and 7 percent of men). Conversely, the West province has the highest percentage of women and men with no education (26 percent and 17 percent, respectively). As the level of educational attainment increases, the gaps between the provinces widen: in the City of Kigali, 8 percent of women have completed secondary school compared with 1 percent in other provinces; among men, 7 percent have completed secondary school, compared with 1 to 2 percent in other provinces.

Results by wealth quintile show that the proportions of both women and men with no education decrease as the household standard of living increases. Conversely, educational level increases with household wealth. In households in the highest wealth quintile, there is practically no gap in educational attainment between women and men up to the secondary level.

Table 2.3.2 Educational attainment of the male household population

Percent distribution of the de facto male household populations, age 6 and over, by highest level of schooling attended or completed and median years completed, according to background characteristics, Rwanda 2010

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 completed
Age										
6-9	31.1	68.6	0.1	0.1	0.0	0.0	0.1	100.0	3,456	0.0
10-14	2.3	94.0	2.2	1.5	0.0	0.0	0.0	100.0	3,572	2.1
15-19	3.4	62.1	11.6	22.4	0.3	0.2	0.1	100.0	2,850	4.2
20-24	7.2	54.2	12.4	17.8	5.8	2.6	0.1	100.0	2,271	4.3
25-29	11.9	53.8	18.7	6.5	4.8	4.2	0.0	100.0	2,085	3.9
30-34	12.0	48.4	21.5	10.0	3.8	4.2	0.2	100.0	1,468	4.8
35-39	18.8	52.1	10.3	11.2	4.1	3.5	0.1	100.0	1,032	4.5
40-44	19.2	50.6	10.3	13.6	2.3	3.8	0.1	100.0	861	4.7
45-49	30.5	43.8	13.4	8.5	2.2	1.5	0.1	100.0	786	2.5
50-54	28.8	44.0	18.2	4.4	2.4	1.3	0.9	100.0	759	2.5
55-59	29.5	45.9	16.5	5.1	1.7	1.3	0.0	100.0	519	2.4
60-64	37.1	40.5	14.0	5.0	1.8	0.6	0.9	100.0	318	2.0
65+	43.4	47.1	5.9	2.2	0.6	0.6	0.2	100.0	632	0.7
Residence										
Urban	9.0	52.2	11.5	15.7	5.4	6.1	0.1	100.0	2,988	4.2
Rural	16.7	64.2	9.4	7.4	1.4	0.8	0.1	100.0	17,622	2.3
Province										
Kigali City	6.6	49.7	12.1	17.8	6.8	7.0	0.0	100.0	2,197	4.7
South	17.0	64.9	9.0	6.9	1.3	0.5	0.4	100.0	4,977	2.2
West	17.3	64.5	7.6	7.6	1.7	1.3	0.1	100.0	4,889	2.3
North	15.4	62.0	11.9	8.2	1.2	1.1	0.1	100.0	3,469	2.6
East	16.4	64.1	10.0	7.4	1.3	0.7	0.0	100.0	5,078	2.3
Wealth quintile										
Lowest	25.0	66.1	5.3	3.0	0.1	0.1	0.4	100.0	3,640	1.2
Second	20.0	67.6	7.4	4.6	0.3	0.1	0.1	100.0	3,883	1.8
Middle	15.9	67.0	10.5	5.9	0.5	0.2	0.1	100.0	4,150	2.3
Fourth	12.3	63.1	12.5	10.1	1.6	0.4	0.0	100.0	4,317	3.0
Highest	7.0	50.8	12.0	17.3	6.6	6.1	0.2	100.0	4,621	4.5
Total	**15.5**	**62.5**	**9.7**	**8.6**	**2.0**	**1.5**	**0.1**	**100.0**	**20,610**	**2.6**

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

2.4 SCHOOL ATTENDANCE

The level of school attendance of children is the primary indicator of a population's access to education and, indirectly, its socioeconomic development. The 2010 RDHS asked questions concerning school attendance of all respondents between age 5 and age 24. Table 2.4 shows net attendance ratios (NARs) and gross attendance ratios (GARs) by sex and level of schooling, according to background characteristics.

Net school attendance ratios (NARs) measure school attendance in children who have reached the official school age. At the primary school level, the NAR is the percentage of the primary-school-age population (age 7-12 in Rwanda) that actually attend primary school. Table 2.4 shows that the primary level NAR is 87 percent for

Rwanda, which means that almost 9 in 10 children between the ages of 7 and 12 attend primary school. The ratio is higher for urban areas than for rural areas (92 percent compared with 87 percent). In the provinces, the ratio ranges from a high of 92 percent in the City of Kigali to a low of 85 percent in West province. Household wealth also affects the NAR, which is 80 percent at the lowest wealth quintile compared with 94 percent at the highest one. The NAR is also higher for female children (88 percent) than for male children (86 percent), regardless of urban/rural residence, and household wealth quintile.

At the secondary level, where children are age 13-18, the NAR is much lower (15 percent), which means that only 15 percent of the official secondary-school-age population actually attends school. There is practically no gap between the sexes (16 percent for women compared with 15 percent for men). However, the NAR is much higher in urban areas than in rural areas (27 percent compared with 13 percent), which may explain the major gap between the City of Kigali, with a NAR of 27 percent, and the other provinces, whose NARs are between 12 percent (East) and 15 percent (North, West, South provinces).

Table 2.4 School attendance ratios

Net attendance ratios (NAR) and gross attendance ratios (GAR) for the de facto household population by sex and level of schooling; and the Gender Parity Index (GPI), according to background characteristics, Rwanda 2010

Background characteristic	Net attendance ratio[1]				Gross attendance ratio[2]			
	Male	Female	Total	Gender Parity Index[3]	Male	Female	Total	Gender Parity Index[3]
PRIMARY SCHOOL								
Residence								
Urban	90.3	93.6	91.9	1.04	138.1	140.1	139.1	1.01
Rural	85.7	87.7	86.7	1.02	141.1	146.4	143.7	1.04
Province								
Kigali City	91.4	92.8	92.1	1.01	133.7	138.2	135.7	1.03
South	85.0	88.9	86.8	1.05	141.8	151.0	146.3	1.06
West	84.8	85.5	85.2	1.01	138.0	141.7	139.9	1.03
North	90.6	91.5	91.1	1.01	144.5	148.6	146.6	1.03
East	84.3	87.4	85.8	1.04	142.3	144.6	143.4	1.02
Wealth quintile								
Lowest	78.0	81.3	79.7	1.04	126.6	134.4	130.5	1.06
Second	84.5	86.9	85.7	1.03	141.0	144.5	142.8	1.02
Middle	87.3	88.5	87.9	1.01	143.3	153.2	148.0	1.07
Fourth	88.5	91.3	90.0	1.03	147.9	150.6	149.3	1.02
Highest	93.4	94.6	94.0	1.01	145.1	145.9	145.5	1.01
Total	**86.3**	**88.4**	**87.3**	**1.02**	**140.7**	**145.6**	**143.2**	**1.03**
SECONDARY SCHOOL								
Residence								
Urban	23.7	29.0	26.5	1.23	47.8	48.8	48.3	1.02
Rural	13.3	13.6	13.4	1.02	24.7	22.0	23.3	0.89
Province								
Kigali City	25.4	28.1	26.9	1.10	55.0	53.1	53.9	0.96
South	13.1	15.8	14.5	1.20	24.1	24.4	24.3	1.02
West	15.2	14.4	14.8	0.95	27.0	22.3	24.5	0.82
North	14.6	14.9	14.8	1.02	28.1	23.8	25.9	0.85
East	12.1	12.2	12.2	1.01	23.1	20.7	21.9	0.90
Wealth quintile								
Lowest	7.3	5.8	6.5	0.80	13.0	8.8	10.8	0.68
Second	10.0	8.8	9.3	0.88	17.6	14.0	15.8	0.80
Middle	11.7	11.3	11.5	0.97	22.1	18.0	20.0	0.81
Fourth	15.7	18.0	16.8	1.15	32.0	28.4	30.2	0.89
Highest	25.6	32.2	28.9	1.26	47.8	55.0	51.4	1.15
Total	**14.6**	**15.6**	**15.1**	**1.07**	**27.6**	**25.5**	**26.5**	**0.93**

[1] The NAR for primary school is the percentage of the primary-school-age (7-12 years) population that is attending primary school. The NAR for secondary school is the percentage of the secondary-school age (13-18 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 NAR(GAR) for females to the NAR(GAR) for males. The Gender Parity Index for secondary school is the ratio of the secondary school NAR(GAR) for females to the NAR(GAR) for males.

Table 2.4 also shows gross school attendance ratios (GARs). Unlike a NAR, a GAR measures school attendance in young people regardless of age. The GAR for primary school is the total number of students of any

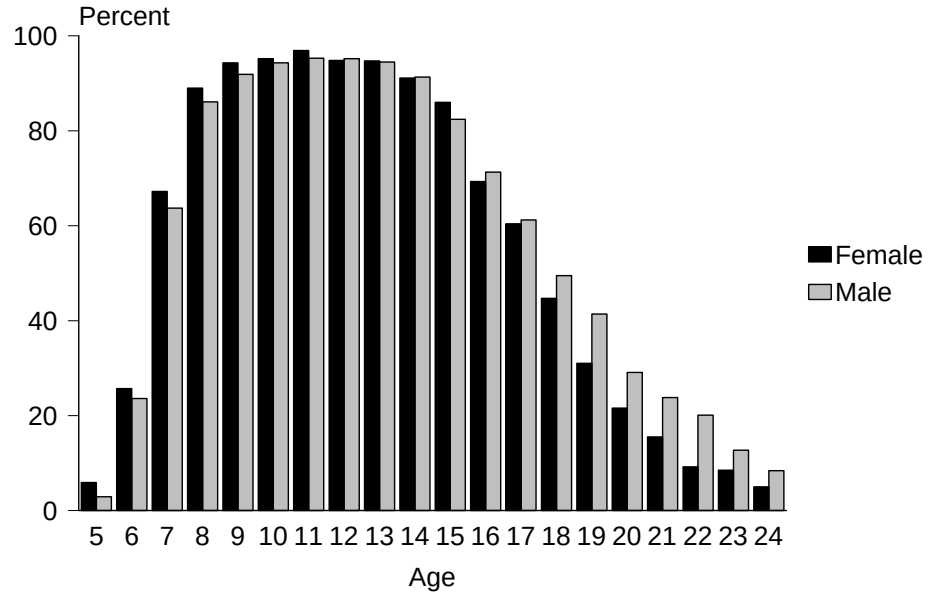
age attending primary school, expressed as a percentage of the official primary-school-age population, which is 7 to 12 years in Rwanda. Unless there are significant numbers of over-age and under-age students at a given level of schooling, the GAR is always higher than the NAR and can, in some cases, exceed 100 percent. In Rwanda, the GAR is 143 percent, which means that a significant proportion of children who do not fall into the official primary-school-age category are attending school at the primary level. These are likely to be children over age 12 or under age 7 who are attending primary school; in fact, a program exists to reintegrate children who drop out of primary school for any reason. In addition, the GAR is higher for girls than for boys (146 percent for girls compared with 141 percent for boys). Moreover, there is practically no difference by residence.

At the secondary level, the GAR is low. Slightly more than one-quarter (27) percent of all children of official secondary school age actually attend school. The GAR is low either because official secondary-school-age children are still in primary school or because they have dropped out of secondary school or have never attended at all. The ratio is nearly the same for girls (26) and boys (28). However, it is higher in urban areas than in rural areas (48 percent compared with 23 percent). Similarly, there is a pronounced difference by province: at 54 percent, the GAR for the City of Kigali stands out from the other provinces, while the GAR varies from a maximum of 22 percent in the East province to 26 percent in the North province. The GAR increases with wealth; 11 percent of the potential student population from the lowest quintile actually attends secondary school while this proportion is 51 percent for students in the highest quintile.

The table also includes a third school attendance indicator: the gender parity index (GPI), which is the ratio of the GAR for females to the GAR for males. The narrower the gap between the sexes, the closer the index is to 1. The GPI for primary school is just above 1, and this situation doesn't change with residence, province, or wealth quintile. This indicates an absence of disparity between the sexes.

The GPI for secondary school is below one (0.93); this indicates that girls are educationally disadvantaged at this level. The inequality is more pronounced in rural areas, which have a GPI of only 0.89 compared with 1.02 in urban areas. South province, has the highest GPI (1.02) while in other provinces it varies from 0.96 (City of Kigali) to 0.85 (North province). The GPI changes with the wealth quintile, rising from 0.68 percent at the lowest quintile to 1.15 at the highest quintile.

Figure 2.2 Age-Specific Attendance Rates of the De Facto Population Age 5-24



Note: Figure shows percentage of the de facto household population age 5-24 attending school

RDHS 2010

Figure 2.2 shows that the rate of school attendance, which is low at age 5, begins to increase at age 6, and reaches a high level between age 10 and age 13. This period corresponds to the primary school years for children in classes four, five, and six in the normal primary cycle and to the first year of the secondary school. After age 13, the age at the beginning of the secondary cycle, the curve declines steadily, reaching its lowest point at age 24. It should also be noted that the proportion of women who attend is higher than the proportion of men who attend between age 5 and age 11 while the situation balances at ages 12-14 before reversing itself up to age 24. The only exception to this pattern is at age 15 paradoxically, where we observe an imbalance in favor of female students.

2.5 HOUSEHOLD CONDITIONS

The household survey gathered information on certain household characteristics: access to electricity, source of drinking water, type of toilet facilities, and type of roofing and flooring materials. Information was also sought concerning ownership of various modern durable goods, including a radio, television, mobile phone, refrigerator, bicycle, motorcycle/scooter, and car/truck. Household characteristics and ownership of durable goods were used to evaluate the socioeconomic conditions of the household.

2.5.1 Household Drinking Water

With respect to drinking water, Table 2.5 shows, at the national level, that 74 percent of households have access to an improved source of drinking water. The most common source of drinking water used by the households is protected spring water, which accounts for 38 percent of usage, followed by public tap/standpipe (26 percent). Only 5 percent of the households have running water in their dwelling or courtyard. Overall, 25 percent of households use unimproved sources of water, which is considered unhealthy. For example, 14 percent of the households use an unprotected spring as a water source, which increases the household members' risk of contracting diarrhea and other waterborne diseases.

With respect to residence, it appears that the urban households are more likely than rural households to use improved drinking water (90 percent versus 71 percent). In contrast, 28 percent of the households in rural areas use unsafe drinking water compared with 7 percent of those in urban areas. In fact, 16 percent of these households collect their water from an unprotected spring, 10 percent collect it from surface water, and 2 percent retrieve it from an unprotected dug well.

Regarding the time spent in roundtrip travel to obtain drinking water, Table 2.5 shows that slightly more than half of the households (53 percent) spend 30 minutes or longer to get to the water source, and only two in five (42 percent) spend fewer than 30 minutes. Only 5 percent of the households have water on their premises. In rural areas, 57 percent of the households take 30 minutes or longer to get to the source of water compared with 29 percent in urban areas. The proportions of households who spend fewer than 30 minutes to get to a source of water vary slightly between rural areas (41 percent) and urban areas (45 percent).

With respect to the treatment of water prior to drinking, 49 percent of the households use an appropriate treatment method prior to drinking, while the other 51 percent of the households do not treat their water prior to drinking.

Table 2.5 Household drinking water

Percent distribution of households and de jure population by source, time to collect, and treatment of drinking water, according to residence, Rwanda 2010

Characteristic	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Source of drinking water						
Improved source	89.6	71.2	73.8	89.1	71.2	73.6
Piped water into dwelling/yard/plot	23.7	1.4	4.5	26.7	1.6	5.0
Public tap/standpipe	40.9	23.4	25.8	38.1	23.6	25.5
Tubewell/borehole	1.6	2.4	2.3	1.5	2.3	2.2
Protected dug well	2.1	2.5	2.5	2.1	2.4	2.4
Protected spring	20.3	41.0	38.1	20.0	40.8	38.0
Rainwater	0.2	0.4	0.4	0.0	0.4	0.4
Bottled water	0.8	0.0	0.1	0.7	0.0	0.1
Nonimproved source	7.0	27.9	25.0	7.4	27.9	25.2
Unprotected dug well	0.5	2.2	1.9	0.6	2.1	1.9
Unprotected spring	5.4	15.7	14.2	5.6	15.9	14.5
Tanker truck/cart with drum	0.0	0.0	0.0	0.0	0.0	0.0
Surface water	1.1	10.0	8.8	1.2	10.0	8.8
Other	3.4	0.9	1.2	3.4	0.8	1.2
Missing	0.0	0.1	0.0	0.0	0.1	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Percentage using any improved source of drinking water	89.6	71.2	73.8	89.1	71.2	73.6
Time to obtain drinking water (round trip)						
Water on premises	25.7	2.1	5.4	28.9	2.2	5.8
Less than 30 minutes	45.4	40.9	41.5	42.7	40.0	40.4
30 minutes or longer	28.7	56.7	52.8	28.1	57.6	53.6
Don't know/missing	0.3	0.3	0.3	0.2	0.2	0.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Water treatment prior to drinking[1]						
Boiled	58.5	38.4	41.2	61.8	39.1	42.2
Bleach/chlorine added	10.3	13.7	13.2	11.2	14.6	14.2
Strained through cloth	1.5	0.5	0.6	1.6	0.5	0.6
Ceramic, sand or other filter	0.8	0.2	0.3	1.2	0.2	0.3
Solar disinfection	0.0	0.0	0.0	0.0	0.0	0.0
Other	1.4	1.3	1.4	1.1	1.3	1.3
No treatment	34.7	53.1	50.5	31.2	51.9	49.1
Percentage using an appropriate treatment method[2]	64.4	46.1	48.7	68.1	47.3	50.1
Number	**1,759**	**10,781**	**12,540**	**7,444**	**48,142**	**55,585**

[1] Respondents may report multiple treatment methods, so the sum of treatment may exceed 100 percent.
[2] Appropriate water treatment methods include boiling, bleaching, straining, filtering, and solar disinfecting.

The most common method to treat water prior to drinking is boiling (41 percent), followed by adding bleach/chlorine (13 percent). Households in rural areas are more likely to drink untreated water (53 percent) than those in urban areas (35 percent).

2.5.2 Household Sanitation Facilities

With respect to type of toilet facilities, Table 2.6 shows 55 percent of households have access to an improved/not shared pit latrine with slab (57 percent in rural areas compared with 42 percent in urban areas). Less than 1 percent of households have flush/pour flush to piped sewer system. Data show also that 2 percent of households use a ventilated improved pit (VIP) latrine. However, 16 percent of households use an improved pit latrine with slab but share the latrine with other households (37 percent in urban areas compared with 13 percent in rural areas).

One in four households (26 percent) uses an unimproved facility, with the majority (23 percent) using a pit latrine without a slab/open pit. Twenty-five percent of rural households and 11 percent of urban households use this type of facility. It should be noted that, about 1 percent of households in Rwanda have no sanitation facility at all (1 percent in urban areas and 2 percent in rural areas). The number of households with no facility has decreased from 5 percent since 2005. The pit latrine with or without a slab is the most common sanitation facility in Rwanda.

Table 2.6 Household sanitation facilities

Percent distribution of households and de jure population by type of toilet/latrine facilities, according to residence, Rwanda 2010

	Households			Population		
Type of toilet/latrine facility	Urban	Rural	Total	Urban	Rural	Total
Improved, not shared facility						
Flush/pour flush to piped sewer system	3.1	0.1	0.6	3.6	0.2	0.6
Flush/pour flush to septic tank	0.3	0.0	0.1	0.3	0.0	0.1
Flush/pour flush to pit latrine	1.7	0.1	0.4	2.1	0.2	0.4
Ventilated improved pit (VIP) latrine	1.8	1.4	1.5	2.3	1.5	1.6
Pit latrine with slab	42.2	56.8	54.8	47.9	60.5	58.8
Composting toilet	0.1	0.4	0.4	0.1	0.4	0.3
Shared facility[1]						
Flush/pour flush to piped sewer system	0.1	0.0	0.0	0.1	0.0	0.0
Flush/pour flush to septic tank	0.0	0.0	0.0	0.0	0.0	0.0
Flush/pour flush to pit latrine	0.0	0.0	0.0	0.0	0.0	0.0
Ventilated improved pit (VIP) latrine	1.2	0.3	0.4	1.0	0.2	0.3
Pit latrine with slab	36.7	12.8	16.1	30.5	10.3	13.0
Composting toilet	0.1	0.1	0.1	0.1	0.1	0.1
Nonimproved facility						
Flush/pour flush not to sewer/septic tank/pit latrine	0.3	0.4	0.4	0.4	0.4	0.4
Pit latrine without slab/open pit	10.7	25.1	23.0	10.1	24.4	22.5
Bucket	0.0	0.0	0.0	0.0	0.0	0.0
No facility/bush/field	0.9	1.5	1.4	0.8	1.2	1.1
Other	0.5	0.8	0.8	0.5	0.6	0.6
Missing	0.2	0.0	0.1	0.2	0.0	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Number	**1,759**	**10,781**	**12,540**	**7,444**	**48,142**	**55,585**

[1] Shared facility of an otherwise improved type.

2.5.3 Households with Hand Washing Places

Washing hands with water and soap before eating, while preparing food, and after leaving the toilet is a simple and inexpensive good practice that protects against many diseases. During the survey, the interviewers asked and observed each household to see if there were a place used for hand washing and if water and soap or some other cleansing agent was available.

Table 2.7 shows that only 10 percent of the households have a place for hand washing. Among those households, one in five (21 percent) has water and soap for hand washing. Nearly one in four of them (23 percent) has water only, and in 3 percent of the households there is soap but no water. In urban areas, 13 percent of the households have a place for hand washing compared with 10 percent of the households in rural areas. In urban areas, 47 percent of households have soap and water available at a hand washing place, but only 15 percent of the rural

households have it available. A higher percentage of households in rural areas have no water, no soap, and no other cleansing agent available than do those in urban areas (58 percent compared with 26 percent).

Among the provinces, 17 percent of the households in East province and 11 percent of the households in South province have a place for hand washing; however, in West province, only 4 percent of the households have such a place. Among households where a place for hand washing was observed, a high proportion of households in Kigali City (69 percent) have soap and water compared with only 9 percent of households in South province. A large proportion of the households in the other provinces have no water, soap, or other cleansing agent at a place for hand washing (68 percent in the South, 57 percent in the East, and 53 percent in North province) compared with the Kigali City (7 percent). The proportion of households with a place for hand washing increases with the level of wealth index; it rises from 8 percent among households in the lowest and second quintiles to 16 percent among those in the highest quintile. More than three quarters of households in the lowest wealth quintile (77 percent) have no water, soap, or other cleansing agent available at a place for hand washing. This same finding was observed in only 26 percent of the households in the highest quintile.

Table 2.7 Hand washing

Percentage of households in which the place most often used for washing hands was observed, and among households in which the place for hand washing was observed, percent distribution by availability of water, soap and other cleansing agents, Rwanda 2010

		Among households where place for hand washing was observed								
Background characteristics	Percentage of households where place for washing hands was observed	Number of households	Soap and water[1]	Water only	Soap but no water[3]	Cleansing agent other than soap only[2]	No water, no soap, no other cleansing agent	Missing	Total	Number of households with place for hand washing observed
Residence										
Urban	12.7	1,759	47.3	22.0	4.2	0.5	25.7	0.4	100.0	224
Rural	10.0	10,781	14.9	23.5	2.8	0.1	58.0	0.7	100.0	1,083
Province										
Kigali City	9.7	1,284	69.0	20.2	3.0	0.0	7.0	0.7	100.0	125
South	10.6	3,136	9.1	18.2	4.9	0.0	67.5	0.3	100.0	334
West	4.2	2,967	20.6	35.7	2.3	0.0	39.9	1.6	100.0	126
North	9.3	2,120	18.6	22.6	4.6	1.0	53.2	0.0	100.0	197
East	17.3	3,033	16.8	24.4	1.4	0.0	56.5	0.9	100.0	525
Wealth quintile										
Lowest	7.9	2,838	5.0	13.4	2.7	0.5	77.1	1.3	100.0	224
Second	7.7	2,600	6.0	17.9	3.9	0.0	71.4	0.7	100.0	200
Middle	9.9	2,448	10.2	28.3	3.3	0.0	56.8	1.4	100.0	242
Fourth	11.9	2,287	14.7	30.6	3.3	0.3	51.0	0.0	100.0	271
Highest	15.6	2,367	48.6	23.4	2.2	0.0	25.5	0.2	100.0	370
Total	**10.4**	**12,540**	**20.5**	**23.2**	**3.0**	**0.2**	**52.5**	**0.7**	**100.0**	**1,307**

[1] Soap includes soap or detergent in bar, liquid, powder, or paste form. This column includes households with soap and water only as well as those that had soap and water and another cleansing agent.
[2] Cleansing agents other than soap include locally available materials such as ash, mud, or sand.
[3] Includes households with soap only as well as those with soap and another cleansing agent

2.5.4 Household Characteristics

The survey collected household information on access to electricity, type of flooring materials, number of sleeping rooms, places for cooking, types of cooking fuel, and presence of tobacco smoking inside the house. These characteristics and others are used to evaluate the socioeconomic and living conditions of the household.

Table 2.8 shows that only 1 in 10 households in Rwanda has access to electricity. The situation has improved since 2005 when only 5 percent, or 1 in 20 households, had access to electricity. The results show large disparities between urban and rural areas. In rural areas, only 4 percent of households have electricity; which compares with 45 percent of households in urban areas.

The type of material used for flooring is extremely important. Some materials propagate disease-causing germs and parasites. The large majority (81 percent) of floors in Rwandan houses are earth or sand. This proportion is higher in rural areas (87 percent) than in urban areas (43 percent). Sixteen percent of households have cement floors. However, this type of flooring is more commonly observed in urban than in rural areas (53 percent compared

with 11 percent). In 2005, 86 percent of the surveyed households' floors were earth/sand and 13 percent were cement.

Table 2.8 shows that 43 percent of households have two rooms for sleeping (44 percent in urban areas compared with 36 percent in rural areas). It should be noted that in about 1 in 4 households (26 percent) all household members sleep together in a single room. This proportion is more or less the same in both rural areas and urban areas (26 percent compared with 29 percent).

More than half (52 percent) of the households cook their meals in a separate building. There is no significant difference between rural and urban areas (52 percent and 51 percent respectively). Nevertheless, 27 percent of the households cook in the same house that is used for sleeping (29 percent of rural households and 14 percent of urban households).

Table 2.8 shows that, 77 percent of households use wood as cooking fuel. More rural households than urban households use wood as cooking fuel (83 percent compared with 36 percent). The second most common cooking fuel is straw/shrubs/grass, which is used by 12 percent. One in 10 households in Rwanda uses charcoal for cooking, including 50 percent of those in urban areas but only 3 percent in rural areas. Most of the households use a solid fuel such as coal/lignite, charcoal, wood, straw, shrubs, grass, agricultural crops, or animal dung for cooking (98 percent). There is no significant difference between rural and urban areas.

Twenty-two percent of the households report that someone has smoked inside the house; in 20 percent of all households, this happens on a daily basis (21 percent in rural areas compared with 16 percent in urban areas).

Table 2.8 Household characteristics

Percent distribution of households by housing characteristics and percentage using solid fuel for cooking; and percentage distribution by frequency of smoking in the home, according to residence, Rwanda 2010

Housing characteristic	Residence		
	Urban	Rural	Total
Electricity			
Yes	44.5	4.0	9.7
No	55.5	95.9	90.3
Missing	0.0	0.0	0.0
Total	**100.0**	**100.0**	**100.0**
Flooring material			
Earth, sand	42.5	87.3	81.0
Dung	0.5	0.8	0.8
Wood/planks	0.0	0.0	0.0
Ceramic tiles	2.9	0.1	0.5
Cement	52.8	10.5	16.4
Other	1.2	1.3	1.3
Missing	0.0	0.0	0.0
Total	**100.0**	**100.0**	**100.0**
Rooms used for sleeping			
One	29.2	25.8	26.2
Two	36.4	43.7	42.7
Three or more	34.1	30.0	30.6
Missing	0.3	0.5	0.4
Total	**100.0**	**100.0**	**100.0**
Place for cooking			
In the house	14.0	28.9	26.8
In a separate building	50.7	52.2	52.0
Outdoors	32.0	18.0	20.0
Other	0.2	0.0	0.1
Missing	3.1	0.9	1.2
Total	**100.0**	**100.0**	**100.0**

Continued…

Table 2.8—*Continued*

Housing characteristic	Residence		
	Urban	Rural	Total
Cooking fuel			
Electricity	0.1	0.0	0.0
LPG/natural gas/biogas	0.2	0.0	0.1
Kerosene	0.5	0.0	0.1
Charcoal	50.1	3.0	9.6
Wood	36.4	83.3	76.7
Straw/shrubs/grass	9.1	12.4	12.0
Agricultural crop	0.0	0.2	0.2
Animal dung	0.0	0.0	0.0
Other	0.4	0.1	0.2
No food cooked in household	3.1	0.9	1.2
Missing	0.0	0.0	0.0
Total	**100.0**	**100.0**	**100.0**
Percentage using solid fuel for cooking[1]	95.6	98.9	98.4
Frequency of smoking in the home			
Daily	16.1	20.7	20.0
Weekly	1.4	2.0	1.9
Monthly	0.3	0.3	0.3
Less than monthly	0.2	0.1	0.1
Never	82.1	76.9	77.6
Missing	0.0	0.0	0.0
Total	**100.0**	**100.0**	**100.0**
Number	**1,759**	**10,781**	**12,540**

LPG = Liquid petroleum gas
[1] Includes coal/lignite, charcoal, wood/straw/shrubs/grass, agricultural crops, and animal dung

2.5.5 Household Possession of Durable Goods

To evaluate households' socioeconomic level, the survey gathered information on the possession of various household durable goods, the means of transportation used by household members, and ownership of agricultural land and livestock/farm animals.

Table 2.9 shows that, overall, the most frequently owned household good is the radio (63 percent), which is more often reported by households in urban areas than in rural areas (76 percent compared with 60 percent). The proportion of households owning radios has increased significantly since 2005, when only 46 percent of households owned a radio. The second household effect is the mobile telephone (40 percent), which is found more often in urban households than in rural households (72 percent compared to 35 percent). Also the proportion of households owning a mobile telephone has significantly increased since 2005 when it was only 5 percent. In addition, in urban areas, 28 percent of households own a television, and 7 percent own a refrigerator; in rural areas, these goods are more or less nonexistent. Bicycles are used as a means of transportation in 16 percent of households in rural areas and in 11 percent of households in urban areas.

Overall, 82 percent of households own agricultural land. The proportion varies significantly by urban-rural residence: 87 percent of rural households own agricultural land compared with 49 percent of urban households. Fifty-seven percent of households possess farm animals (61 percent of households in rural areas compared with 38 percent of those in urban areas).

Table 2.9 Household possessions

Percentage of households possessing various household effects, means of transportation, agricultural land and livestock/farm animals by residence, Rwanda 2010

Possession	Residence		
	Urban	Rural	Total
Household effects			
Radio	75.9	60.4	62.6
Television	27.6	1.6	5.3
Mobile telephone	71.8	35.1	40.3
Non-mobile telephone	1.4	0.1	0.3
Refrigerator	7.0	0.3	1.2
Means of transport			
Bicycle	11.0	15.9	15.2
Animal drawn cart	0.1	0.0	0.0
Motorcycle/scooter	2.6	0.9	1.1
Car/truck	4.8	0.2	0.8
Boat with a motor	0.0	0.0	0.0
Ownership of agricultural land	48.6	86.8	81.5
Ownership of farm animals[1]	37.7	60.6	57.4
Number	**1,759**	**10,781**	**12,540**

[1] Cattle, cows, bulls, horses, donkeys, goats, sheep, or chickens

2.5.6 Household Wealth Quintile

Table 2.10 shows the percent distribution of the de jure population by wealth quintile and Gini coefficient. The wealth index was developed on the basis of de jure population goods data, using principal components analysis. The information on household goods comes from responses to questions about ownership of certain durable goods (television, radio, car, mobile telephone, etc.) and questions about certain housing characteristics (access to electricity, source of drinking water, type of toilet facilities, type of flooring material, number of rooms used for sleeping, and type of cooking fuel. The index was developed using the following steps:

- Each durable goods or housing characteristic was assigned a weight (score or coefficient) generated by principal components analysis.
- The resulting scores for durable goods are standardized according to a normal distribution that assumes a mean of 0 and a standard deviation of 1 (Gwatkin et al., 2000).
- Each household is assigned a score for each durable good, and these scores are added together to obtain a total for each household.
- The households are classified in increasing order of total score and divided into 5 equal categories, or quintiles. This yields a scale from 1 (the poorest quintile) to 5 (the richest quintile).
- The score for each household is assigned to the individuals in that household. The individuals are thus distributed among the categories.

The results show that in urban areas, 68 percent of the de jure population falls into the richest quintile, while in rural areas only 13 percent falls into this quintile. The proportion of rich households is highest in Kigali City (80 percent). Conversely, in urban areas, only 15 percent of households fall into the poorest quintile. In fact, the preceding tables showing ownership of durable goods, housing characteristics, and source of drinking water have already established that the population of Rwanda is generally poor. Table 2.6 confirms the previous results and explains the relative lack of variation among provinces.

Table 2.10 Wealth quintiles

Percent distribution of the de jure population by wealth quintiles, and the Gini Coefficient, according to residence and province, Rwanda 2010

Residence/Province	Wealth quintile							
	Lowest	Second	Middle	Fourth	Highest	Total	Number of population	Gini coefficient
Residence								
Urban	15.0	2.7	3.7	11.0	67.6	100.0	7,444	18.8
Rural	20.8	22.7	22.5	21.4	12.6	100.0	48,142	5.2
Province								
Kigali City	2.2	2.1	5.9	9.6	80.2	100.0	5,459	12.7
South	32.5	21.9	18.3	15.3	12.1	100.0	13,534	8.1
West	23.2	25.5	21.6	17.1	12.7	100.0	13,624	6.0
North	18.5	23.2	25.0	21.6	11.7	100.0	9,413	4.1
East	12.6	17.6	22.4	30.7	16.8	100.0	13,555	5.6
Total	**20.0**	**20.0**	**20.0**	**20.0**	**20.0**	**100.0**	**55,585**	**12.4**

2.6 BIRTH REGISTRATION WITH CIVIL AUTHORITIES

Registering a child with civil authorities establishes the child's legal family ties and his or her right to a name and nationality prior to the age of majority. It confers on the child the right to be recognized by his or her parents and the right to state protection if his or her rights are abused by parents. It gives the child access to social assistance through the parents, including health insurance, and establishes family lineage. Registration is therefore an essential formality.

Registration of a child with civil authorities, if performed correctly, also provides a reliable source of socio-demographic statistics. For this reason, the survey asked all children in each household whether the children had been registered with the civil authorities. Table 2.11 shows that 63 percent of the children have been registered with the civil authorities and 37 percent have not been registered. The percentage registered has dropped significantly since the 2005 survey when 82 percent were registered. Of those children who were registered with the civil authorities at the time of the survey, only 7 percent possess birth certificates. Those children who are age 2-4 are registered more often than those who are younger than age 2 (71 percent compared with 49 percent, respectively). Gender has little to do with whether or not the children are registered with the civil authorities. Also, level of household wealth does not seem to influence the prevalence of birth registration. Children in the fourth and middle wealth quintiles showed the highest levels of registration (67 percent and 65 percent respectively). There is some discrepancy by urban/rural residence because the rural areas show a higher percentage of birth registrations (64 percent compared with 60 percent in urban areas). Results by province show that households in the North and South provinces are the most likely to have declared their children with the civil authorities (79 percent and 66 percent, respectively).

Table 2.11 Birth registration of children under age 5

Percentage of de jure children under age 5 whose births are registered with the civil authorities, according to background characteristics, Rwanda 2010

Background characteristic	Children whose births are registered			
	Percentage who had birth certificate	Percentage who did not have birth certificate	Percentage registered	Number of children
Age				
<2	6.2	43.1	49.3	3,210
2-4	6.8	64.2	71.0	5,760
Sex				
Male	6.8	56.8	63.6	4,578
Female	6.4	56.5	62.9	4,393
Residence				
Urban	8.2	52.2	60.4	1,052
Rural	6.4	57.2	63.6	7,918
Province				
Kigali City	5.5	52.9	58.5	826
South	8.0	57.5	65.5	2,185
West	8.4	52.6	60.9	2,239
North	7.7	71.4	79.2	1,386
East	3.3	52.2	55.6	2,335
Wealth quintile				
Lowest	5.6	52.8	58.4	2,086
Second	5.2	57.2	62.3	1,924
Middle	6.6	58.8	65.4	1,800
Fourth	6.8	60.3	67.1	1,668
Highest	9.5	54.7	64.2	1,492
Total	**6.6**	**56.6**	**63.2**	**8,971**

2.7 CHILDREN'S LIVING ARRANGEMENTS AND ORPHANHOOD

Because the family is the primary safety net for children, any strategy aimed at protecting children must place a high priority on strengthening the family's capacities to care for children. It is therefore essential to identify orphaned children and find out whether those who have one or both parents alive are living with either or both surviving parents. Table 2.12 presents these two types of information for children under age 18, according to background characteristics.

The data show that 61 percent of Rwandan children under the age of 18 live with both their parents. This proportion declines steadily with age, from a high of 76 percent under age 2 and 70 percent at age 2 to age 4 years, to a low of 40 percent at age 15 to 17. The results show practically no difference, according to the child's sex. The proportion of children living with their parents is higher in rural areas (62 percent) than in urban areas (57 percent). The lowest proportion of children living with both parents is in the South province (56 percent); the highest proportion is in the North province (64 percent). Twenty-three percent of children under age 18 live with their mother only, whether their father is alive (16 percent) or deceased (7 percent) and 2 percent live with their father only. Thirteen percent (13 percent) do not live with either parent.

Overall, 13 percent of children under age 18 have lost one or both parents: 2 percent have lost both parents, 9 percent have lost their father, and 3 percent have lost their mother. Because a parent's risk of dying increases with time, the proportion of children who have lost their father and/or mother increases significantly with the age of the child, from 1 percent at age less than 2 years, to 3 percent at age 2 to 4 years, and to 9 percent at age 5 to 9 years. This proportion jumps very high level among children age 10 to 14 (21 percent) and 15 to 17 (35 percent), largely due to the effects of the 1994 genocide.

Table 2.12 Children's living arrangements and orphanhood

Percent distribution of de jure children under age 18 by living arrangements and survival status of parents, the percentage of children not living with a biological parent, and the percentage of children with one or both parents dead, according to background characteristics, Rwanda 2010

Background characteristic	Living with both parents	Living with mother but not with father		Living with father but not with mother		Not living with either parent					Total	Percentage not living with a biological parent	Percentage with one or both parents dead[1]	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														
0-4	72.3	19.0	1.9	0.8	0.2	4.4	0.2	0.2	0.1	0.9	100.0	4.9	2.6	8,971
<2	75.8	21.5	1.2	0.2	0.1	0.6	0.0	0.0	0.0	0.5	100.0	0.7	1.4	3,210
2-4	70.4	17.6	2.2	1.2	0.3	6.6	0.3	0.2	0.2	1.1	100.0	7.3	3.3	5,760
5-9	64.2	15.4	5.1	1.6	0.9	8.9	1.0	1.1	0.9	0.9	100.0	11.9	9.1	8,549
10-14	53.7	13.6	11.6	1.6	1.9	9.1	1.7	2.9	2.7	1.2	100.0	16.4	20.9	7,244
15-17	40.2	10.6	18.3	1.4	2.2	10.2	3.1	5.6	6.1	2.4	100.0	25.0	35.4	3,670
Sex														
Male	61.4	15.4	7.2	1.5	1.1	7.2	1.3	1.7	1.9	1.2	100.0	12.1	13.4	14,311
Female	60.6	15.5	7.6	1.1	1.1	8.3	1.0	2.0	1.7	1.2	100.0	13.0	13.5	14,121
Residence														
Urban	57.0	15.8	8.0	2.1	1.0	7.7	1.7	2.9	2.2	1.7	100.0	14.5	16.0	3,336
Rural	61.5	15.4	7.4	1.2	1.1	7.7	1.1	1.7	1.7	1.1	100.0	12.3	13.1	25,097
Province														
Kigali City	58.6	16.6	6.1	2.0	1.5	6.9	1.7	2.9	2.1	1.7	100.0	13.5	14.5	2,336
South	56.1	18.8	7.6	1.3	1.0	8.7	1.2	1.8	1.9	1.6	100.0	13.6	13.7	6,957
West	63.1	14.2	8.2	1.0	1.1	6.9	1.1	1.7	2.0	0.7	100.0	11.7	14.1	7,223
North	64.4	13.3	6.7	0.8	0.8	8.4	1.4	1.4	1.6	1.1	100.0	12.9	12.2	4,856
East	62.2	14.6	7.4	1.9	1.2	7.5	0.9	1.9	1.5	1.0	100.0	11.8	12.9	7,061
Wealth quintile														
Lowest	51.3	21.9	11.1	1.5	1.1	7.8	1.2	1.1	1.4	1.5	100.0	11.6	16.0	5,995
Second	58.4	17.5	8.7	0.9	1.2	7.5	1.1	1.5	2.1	1.1	100.0	12.2	14.6	5,913
Middle	66.0	12.8	6.8	1.2	1.1	7.2	1.1	1.4	1.3	1.1	100.0	11.0	11.8	5,635
Fourth	69.5	11.0	5.5	1.0	0.9	6.7	1.1	1.8	1.7	0.8	100.0	11.3	11.1	5,704
Highest	60.5	13.4	4.7	2.1	1.1	9.5	1.5	3.4	2.5	1.3	100.0	16.9	13.3	5,185
Total <15	**64.1**	**16.2**	**5.8**	**1.3**	**0.9**	**7.4**	**0.9**	**1.3**	**1.1**	**1.0**	**100.0**	**10.7**	**10.2**	**24,763**
Total <18	**61.0**	**15.5**	**7.4**	**1.3**	**1.1**	**7.7**	**1.2**	**1.8**	**1.8**	**1.2**	**100.0**	**12.5**	**13.4**	**28,433**

Note: Table is based on de jure members, i.e., usual residents.
[1] Includes children with father dead, mother dead, both dead, and one parent dead but missing information on survival status of the other parent.

2.8 SCHOOL ATTENDANCE BY SURVIVORSHIP OF PARENTS

Access to education is considered an "essential service" and is included among the key components of national responses to guarantee orphans access to services on an equal basis with other children.

To assess whether orphans are educationally disadvantaged in relation to other children, an indicator was devised to compare school attendance among orphans and non-orphans. The results are presented in Table 2.13 for children age 10 to 14, the age group in which school attendance is generally assumed for all children.

The data show a clear relationship between parent survivorship and school attendance of children age 10 to 14. Although 96 percent of children whose parents are both alive and who are living with one of their parents attend school, only 88 percent of children who have lost both parents attend school. The ratio of school attendance for orphaned and non-orphaned children is less than 1 (0.91), indicating an educational disadvantage for orphans. By sex, results on parent survivorship and school attendance of children age 10 to 14 show that female children with deceased parents are disadvantaged compared with their male counterparts (84 percent compared with 91 percent), which explains the low ratio for females (0.87 compared with 0.95 for males). By residence, surprisingly, the ratio of school attendance by survivorship shows a disadvantage for urban area children (0.80) compared with their rural counterparts (0.93). This is reflected also by province results, with the City of Kigali showing the lowest school attendance ratio for vulnerable children (0.79) compared with the other provinces. The vulnerable children in the lowest-wealth-quintile household are surprisingly advantaged, with a ratio of 1.04 compared with those in upper wealth quintiles with, for example, a ratio of 0.87 for the highest wealth quintile.

Table 2.13 School attendance by survivorship of parents

For de jure children age 10-14, the percentage attending school, by parental survival, and the ratio of the percentage attending school, by parental survival, according to background characteristics, Rwanda 2010

Background characteristic	Percentage attending school by survivorship of parents: Both parents deceased	Both parents alive and living with at least one parent: Number	Both parents alive and living with at least one parent	Number	Ratio[1]
Sex					
Male	91.2	101	96.2	2,502	0.95
Female	83.8	92	96.0	2,491	0.87
Residence					
Urban	*	21	97.3	544	0.80
Rural	88.8	172	96.0	4,449	0.93
Province					
City of Kigali	*	16	96.8	374	0.79
South	83.8	51	96.5	1,210	0.87
West	(95.5)	51	96.2	1,257	0.99
North	(96.3)	31	96.7	942	1.00
East	(81.0)	44	95.0	1,209	0.85
Wealth quintile					
Lowest	(96.9)	34	92.9	922	1.04
Second	81.6	55	95.7	935	0.85
Middle	(95.5)	29	96.2	1,038	0.99
Fourth	(84.8)	31	97.0	1,124	0.87
Highest	(85.1)	44	98.3	974	0.87
Total	**87.7**	**193**	**96.1**	**4,993**	**0.91**

Note: Table is based only on children who usually live in the household. 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.
[1] Ratio of the percentage with both parents deceased to the percentage with both parents alive and living with a parent

2.9 CHILD LABOR

The government of Rwanda has actively tackled the problem of child labor. Article 32 of the UN Convention on the Rights of the Child recognizes the right of children to be protected from economic exploitation and from performing any work that is hazardous, interferes with their education, or is harmful to their health or physical, mental, spiritual, moral, or social development.

To assess how much children are working in Rwanda, the 2010 RDHS included a set of questions on participation by each child age 5-14 years in household work. The types of work asked about included work for persons other than members of the household, work in a household business, and work doing household chores. The number of hours worked in the seven days preceding the survey was recorded for all children engaged in any type of work. For work that was done for any person who was not a member of the household, a question was also asked to determine whether the child was paid or not paid for the work. Table 2.14 presents the percentage of de jure children age 5-14 years, who were engaged in different activities in the seven days preceding the interview, by background characteristics. A child worker is defined by UNICEF as any child, age 5-11, who, in the seven days preceding the survey, (1) worked for someone who was not a member of the household, with or without pay, (2) did household chores for 28 or more hours, or (3) engaged in any family business. A child worker is also any child, age 12-14, who, in the seven days preceding the survey (1) worked for someone who was not a member of the household, with or without pay, for 14 or more hours, (2) did household chores for 28 or more hours, or (3) engaged in any other family work for 14 or more hours.

Table 2.14 shows that 88 percent of children age 5-14 in households worked in a week prior to the survey, either for their own household or for somebody else. Nearly 8 percent of children age 5-14 worked for someone who was not member of the household; among them 2 percent are engaged in paid work, 5 percent are engaged in unpaid

work. The results also show that 83 percent of children age 5-14 are engaged in fetching water or collecting fire wood for household use, 10 percent perform any other family work, and 63 percent are helping with household chores for 28 or more hours in a week.

The work participation rate for children who are working for someone who is not member of their household is the same for boys and girls (8 percent for both). The age-specific work participation rate shows an increasing trend in work participation with age, from 6 percent among children age 5-9 years to 11 percent among boys age 10-14 years. The work participation rate is slightly higher in rural areas compared with urban areas (8 percent and 6 percent respectively), while by province it is highest in the South province (14 percent) and the lowest in Kigali City (2 percent). According to wealth quintile, children in the lowest quintile have the highest work participation rate at 12 percent, which compares with the highest wealth quintile at 4 percent. Children who are orphans experience the highest work participation rate at 10 percent, which compares with 8 percent of those who are not orphans.

Table 2.14 Child labor

Percentage of children 5-14 years old who worked in the week prior to the survey for someone who was not a member of this household, who fetched water or collected firewood for household use, who did any other family work, or helped with household chores such as shopping, cleaning, washing clothes, cooking, or caring for children or sick people, according to the number of hours, by selected background characteristic, Rwanda 2010

	Worked for someone who is not member of the household						Fetched water or collected firewood for household use				Did any other family work				Help with household chores				Total				
	Paid, less than 4 hours per day	Paid 4+ hours per day	Unpaid less than 4 hours per day	Unpaid 4+ hours per day	Worked, hours missing	Total	Less than 4 hours per day	4+ hours per day	Worked, hours missing	Total	Less than 4 hours per day	4+ hours per day	Worked, hours missing	Total	Less than 4 hours per day	4+ hours per day	Worked, hours missing	Total	Less than 4 hours per day	4+ hours per day	Worked, hours missing	Total	No. of children
Age																							
5-9	0.7	0.0	4.2	0.1	0.8	5.8	72.5	2.4	0.1	75.0	3.0	0.1	0.0	3.2	44.4	3.3	0.1	47.7	65.2	14.7	0.1	80.0	8,653
10-14	2.7	0.5	6.1	0.2	0.9	10.5	81.8	9.7	0.1	91.7	15.2	2.1	0.0	17.3	73.2	8.0	0.1	81.2	55.7	40.4	0.5	96.6	7,375
Sex																							
Male	1.9	0.3	5.0	0.1	0.9	8.1	76.3	5.7	0.1	82.1	8.1	0.9	0.0	9.0	51.9	4.2	0.0	56.2	61.8	24.3	0.3	86.4	8,035
Female	1.3	0.2	5.2	0.2	0.8	7.8	77.3	5.8	0.1	83.2	9.2	1.2	0.0	10.4	63.4	6.7	0.1	70.2	59.8	28.9	0.3	88.9	7,993
Residence																							
Urban	1.6	0.0	3.4	0.2	0.6	5.9	59.0	3.7	0.0	62.8	6.0	0.4	0.1	6.4	54.7	3.8	0.2	58.7	58.6	17.6	0.1	76.4	1,815
Rural	1.6	0.3	5.3	0.2	0.9	8.2	79.0	6.0	0.1	85.2	9.0	1.1	0.0	10.1	58.0	5.6	0.0	63.7	61.1	27.7	0.3	89.1	14,213
Province																							
Kigali City	0.6	0.1	1.0	0.0	0.0	1.7	51.5	2.6	0.1	54.1	2.0	0.3	0.1	2.4	52.7	3.6	0.0	56.2	57.8	12.9	0.1	70.8	1,216
South	2.5	0.2	9.3	0.3	2.1	14.4	85.5	5.4	0.0	90.9	10.2	0.6	0.0	10.9	59.7	5.2	0.0	64.9	68.0	25.1	0.3	93.3	3,967
West	1.6	0.2	4.1	0.2	0.4	6.6	78.8	6.0	0.2	85.0	11.0	1.2	0.0	12.1	57.9	3.8	0.0	61.7	60.0	27.8	0.3	88.2	4,064
North	1.4	0.5	5.4	0.1	0.3	7.7	76.1	7.4	0.2	83.8	8.9	1.1	0.0	10.1	57.1	8.6	0.2	65.9	56.3	32.1	0.6	88.9	2,871
East	1.2	0.1	3.0	0.1	0.7	5.0	74.1	5.7	0.1	80.0	6.4	1.4	0.1	7.9	57.2	5.7	0.0	62.9	58.5	27.0	0.1	85.6	3,910
Wealth quintile																							
Lowest	3.1	0.4	7.2	0.3	1.2	12.3	80.9	7.1	0.0	88.0	9.3	1.0	0.0	10.3	58.7	6.4	0.0	65.1	59.4	30.9	0.4	90.6	3,314
Second	1.9	0.4	6.2	0.2	0.9	9.5	79.9	6.9	0.3	87.1	9.9	0.9	0.0	10.8	58.9	6.3	0.0	65.2	60.7	29.0	0.3	90.0	3,328
Middle	1.2	0.1	4.7	0.2	0.8	7.0	81.6	5.7	0.1	87.4	9.6	1.4	0.0	11.0	59.2	4.8	0.1	64.0	63.7	27.3	0.2	91.1	3,149
Fourth	1.2	0.2	4.3	0.1	0.5	6.3	79.0	6.0	0.0	85.0	8.6	1.2	0.1	10.0	57.1	5.5	0.1	62.7	60.7	27.5	0.1	88.4	3,318
Highest	0.4	0.0	2.9	0.0	0.7	4.1	60.7	3.0	0.1	63.8	5.4	0.6	0.0	6.0	53.9	4.1	0.2	58.1	59.5	17.0	0.3	76.8	2,920
Orphans																							
Yes	3.1	0.4	5.7	0.3	0.9	10.4	80.2	7.9	0.3	88.4	11.5	1.7	0.0	13.2	64.1	6.7	0.0	70.8	58.2	34.0	0.5	92.6	2,335
No	1.3	0.2	5.0	0.1	0.8	7.5	76.2	5.4	0.1	81.7	8.1	0.9	0.0	9.1	56.6	5.2	0.1	61.8	61.3	25.3	0.2	86.8	13,545
Missing	0.6	0.8	5.2	0.0	1.4	8.0	77.7	5.8	0.0	83.5	9.0	0.0	0.0	9.0	53.4	8.4	0.0	61.8	56.2	30.4	0.0	86.6	148
Total	**1.6**	**0.2**	**5.1**	**0.2**	**0.8**	**8.0**	**76.8**	**5.8**	**0.1**	**82.7**	**8.6**	**1.0**	**0.0**	**9.7**	**57.6**	**5.4**	**0.1**	**63.1**	**60.8**	**26.6**	**0.3**	**87.6**	**16,028**

2.10 HEALTH INSURANCE COVERAGE

Information on health insurance coverage of household members was collected during the survey. The household coverage is shown in Table 2.15 by type of health insurance, urban-rural residence, province, and household wealth quintile. Overall, 78 percent of Rwandan households have health insurance. This proportion is higher than that in the RIDHS 2007-08 (68 percent). There is almost no variation by residence (78 percent in both urban and rural areas). There is significant difference by province, with proportions varying from the low of 71 percent in the East province to the high of 86 percent in the North province. Households in the higher wealth quintiles are generally better insured than those in the lower wealth quintiles. Concerning the type of health insurance used by households, nearly all households with a least one member insured are insured by Mutual Health Insurance (98 percent). Other types of insurances reported by households are *La Rwandaise d'Assurance Maladie* (RAMA), Military Medical Insurance (MMI), and private insurance. These insurances are commonly reported by households in urban areas, in the city of Kigali, and in the highest wealth quintile.

Table 2.15 Health insurance

Percentage of households in which at least one member is covered by health insurance, and percentage of households with specific types of health insurance, according to residence and province, Rwanda 2010

Background characteristics	Percentage of households with at least one member covered by health insurance	Number of households	Type of insurance				Number of households with at least one member covered by health insurance
			Mutual	RAMA	MMI	Private	
Residence							
Urban	78.4	1,759	93.9	9.7	1.9	2.5	1,379
Rural	77.7	10,781	98.3	2.7	0.3	0.1	8,377
Province							
Kigali City	71.7	1,284	91.8	13.0	2.5	4.0	921
South	77.2	3,136	98.4	2.2	0.2	0.0	2,420
West	82.7	2,967	98.7	3.0	0.4	0.0	2,454
North	85.6	2,120	98.3	2.5	0.5	0.1	1,815
East	70.8	3,033	97.7	3.0	0.5	0.1	2,146
Wealth quintile							
Lowest	67.8	2,838	99.4	0.1	0.0	0.0	1,924
Second	76.1	2,600	99.6	0.0	0.1	0.0	1,978
Middle	79.8	2,448	98.6	0.6	0.1	0.0	1,954
Fourth	84.5	2,287	98.5	1.9	0.6	0.0	1,932
Highest	83.1	2,367	92.2	15.5	2.0	2.1	1,968
Total	**77.8**	**12,540**	**97.7**	**3.7**	**0.6**	**0.4**	**9,756**

Individual health insurance coverage is presented in Table 2.16 by type of health insurance, according to selected background characteristics. Overall, 71 percent of women and 66 percent of men are insured. Young women age 15-19 (64 percent) and young men age 15-19 (62 percent) are less likely to be insured than the older women and men (70 percent or higher and 67 percent or higher, respectively). According to marital status, currently married women and men are better insured than those in other categories. Women and men in the North province have higher coverage than those in the other provinces. However, there is no variation by urban-rural residence for women or men. The proportion of coverage among women increases as the level of education increases; from 66 percent among those who have no education to 80 percent for secondary education or higher. Among men, these figures are 59 percent and 75 percent respectively. Women and men in the higher wealth quintiles are generally better insured than those in the lower wealth quintiles. Concerning the type of health insurance used by households, nearly all insured household members are insured by Mutual Health Insurance (95 percent for women and 96 percent for men). Other types of insurances are RAMA, MMI, and private insurance. These insurances are commonly reported by women and men who are currently married, live in urban areas, reside in the city of Kigali, have secondary education and higher, and are in the highest wealth quintile.

Table 2.16 Health insurance

Percentage of respondents covered by health insurance, and percent distribution of respondents with specific types of health insurance, according to selected background characteristics, Rwanda 2010

Background characteristic	Percentage of respondents covered by health insurance	Number of respondents	Type of insurance						Number of respondents covered by health insurance
			Mutual	RAMA	MMI	Private	Don't know/missing	Total	
					WOMEN				
Age									
15-19	64.4	2,945	97.2	1.3	0.1	0.3	1.1	100.0	1,897
20-24	73.1	2,683	96.8	1.8	0.3	0.3	0.8	100.0	1,961
25-29	75.3	2,494	95.1	3.1	0.6	0.4	0.8	100.0	1,877
30-34	75.0	1,822	92.7	5.7	0.5	0.5	0.6	100.0	1,366
35-39	73.2	1,447	91.7	5.2	1.4	0.5	1.2	100.0	1,058
40-44	70.2	1,168	95.2	3.2	0.1	0.8	0.6	100.0	820
45-49	70.2	1,112	96.3	2.1	0.1	0.5	1.0	100.0	781
Marital status									
Never married	68.1	5,285	96.3	2.2	0.1	0.3	1.1	100.0	3,597
Married	80.3	4,799	92.7	4.9	1.0	0.7	0.7	100.0	3,854
Living together	65.6	2,098	98.3	1.0	0.0	0.1	0.5	100.0	1,377
Divorced/separated	58.7	746	97.5	1.2	0.0	0.1	1.1	100.0	438
Widowed	66.5	743	97.3	1.4	0.0	0.2	1.1	100.0	494
Residence									
Urban	71.4	2,057	86.7	8.3	1.2	2.4	1.5	100.0	1,469
Rural	71.4	11,614	96.8	2.1	0.3	0.1	0.8	100.0	8,291
Province									
Kigali City	65.6	1,596	83.3	9.5	1.4	3.7	2.1	100.0	1,047
South	70.1	3,212	96.9	1.9	0.2	0.0	1.1	100.0	2,251
West	76.1	3,305	96.6	2.5	0.2	0.0	0.7	100.0	2,515
North	80.5	2,278	96.9	1.9	0.5	0.1	0.6	100.0	1,834
East	64.4	3,280	96.5	2.5	0.5	0.0	0.5	100.0	2,113
Education									
No education	66.2	2,119	98.9	0.2	0.1	0.0	0.8	100.0	1,402
Primary	70.5	9,337	98.6	0.5	0.2	0.1	0.7	100.0	6,583
Secondary and higher	80.1	2,216	80.1	14.6	1.5	2.1	1.6	100.0	1,776
Wealth quintile									
Lowest	59.8	2,622	99.4	0.1	0.0	0.0	0.6	100.0	1,568
Second	68.8	2,661	99.4	0.0	0.1	0.0	0.5	100.0	1,829
Middle	73.4	2,736	98.7	0.3	0.1	0.0	0.9	100.0	2,008
Fourth	77.6	2,677	97.8	1.0	0.4	0.0	0.8	100.0	2,076
Highest	76.6	2,976	83.8	11.6	1.4	1.8	1.4	100.0	2,279
Total 15-49	**71.4**	**13,671**	**95.3**	**3.0**	**0.4**	**0.4**	**0.9**	**100.0**	**9,761**
					MEN				
Age									
15-19	62.1	1,449	98.9	0.2	0.1	0.2	0.4	100.0	899
20-24	61.7	1,159	97.0	1.8	0.0	0.2	1.0	100.0	715
25-29	70.2	1,038	95.6	2.8	0.4	0.4	0.9	100.0	729
30-34	73.5	710	94.3	4.5	0.2	0.7	0.2	100.0	522
35-39	67.3	490	91.4	5.9	0.8	0.9	1.1	100.0	330
40-44	70.3	430	91.8	5.0	1.6	0.6	1.1	100.0	302
45-49	67.0	412	95.5	2.4	0.2	0.6	1.3	100.0	276
Marital status									
Never married	62.3	2,873	96.6	2.0	0.2	0.2	0.9	100.0	1,790
Married	76.2	1,938	94.1	4.0	0.5	0.6	0.7	100.0	1,478
Living together	60.7	761	97.7	0.9	0.3	0.5	0.6	100.0	462
Divorced/separated	35.2	92	97.7	2.3	0.0	0.0	0.0	100.0	32
Widowed	46.0	22	100.0	0.0	0.0	0.0	0.0	100.0	10
Residence									
Urban	66.1	939	88.8	6.4	1.1	1.5	2.2	100.0	621
Rural	66.4	4,748	97.2	1.9	0.2	0.2	0.5	100.0	3,152
Province									
Kigali City	58.4	739	85.2	8.4	1.6	2.5	2.2	100.0	432
South	64.4	1,308	97.7	1.5	0.2	0.0	0.6	100.0	842
West	73.9	1,307	96.8	1.9	0.2	0.3	0.8	100.0	966
North	77.7	899	97.5	2.1	0.2	0.2	0.2	100.0	698
East	58.2	1,435	96.8	2.3	0.1	0.1	0.7	100.0	836

Continued…

Table 2.16—*Continued*

Background characteristic	Percentage of respondents covered by health insurance	Number of respondents	Type of insurance						Number of respondents covered by health insurance
			Mutual	RAMA	MMI	Private	Don't know/missing	Total	
Education									
No education	58.8	583	99.8	0.2	0.0	0.0	0.0	100.0	343
Primary	65.0	3,916	99.1	0.2	0.2	0.0	0.6	100.0	2,544
Secondary and higher	74.6	1,189	84.9	10.8	1.0	1.8	1.5	100.0	887
Wealth quintile									
Lowest	54.4	854	99.8	0.0	0.0	0.0	0.2	100.0	464
Second	64.2	986	99.2	0.0	0.0	0.0	0.8	100.0	633
Middle	65.8	1,139	99.3	0.4	0.0	0.0	0.3	100.0	749
Fourth	72.8	1,235	97.4	1.7	0.2	0.0	0.7	100.0	899
Highest	69.7	1,474	87.9	8.0	1.1	1.6	1.4	100.0	1,028
Total 15-49	**66.3**	**5,687**	**95.8**	**2.7**	**0.3**	**0.4**	**0.8**	**100.0**	**3,773**
50-59	69.7	642	96.0	2.9	0.1	0.3	0.7	100.0	447
Total 15-59	**66.7**	**6,329**	**95.8**	**2.7**	**0.3**	**0.4**	**0.8**	**100.0**	**4,220**

2.11 UTILIZATION OF HEALTH SERVICES AND OUT-OF-POCKET EXPENDITURE FOR HEALTH CARE

The 2010 RDHS collected data on the utilization of health services by household members. Information on outpatient visits by each household member to a health care facility, provider, pharmacy, or traditional healer four weeks preceding the interview and information on inpatient admissions 6 months preceding the interview was collected. The survey also collected all out-of-pocket expenditures for visits and admissions during those reference periods. Utilization of health services was assessed in the Household Questionnaire. The questions were asked of all households in the sample.

The analysis was carried out to estimate the number of annual outpatient visits (per capita) and inpatient admissions (per 1,000 population), with separate data for women and men.

Table 2.17 Annual outpatient visits and inpatient admissions for de facto population

Average number of annual outpatient visits and inpatient admissions to health facilities for women and men by background characteristics, Rwanda 2010

Background characteristic	Women			Men		
	Outpatient visits (per capita)	Inpatient admissions (per 1,000 population)	De facto population	Outpatient visits (per capita)	Inpatient admissions (per 1,000 population)	De facto population
Age						
<5	2.7	68	4,390	2.9	88	4,561
5-14	0.9	17	7,827	0.9	23	7,885
15-49	1.8	159	13,719	1.1	43	11,353
50-64	2.5	90	2,218	1.7	59	1,595
65+	2.7	118	1,104	2.6	92	632
Don't know/missing	0.0	0	5	5.3	0	2
Residence						
Urban	2.2	95	3,796	1.7	38	3,628
Rural	1.8	102	25,468	1.4	48	22,400
Province						
Kigali City	2.2	108	2,743	1.9	33	2,713
South	2.1	91	7,127	1.9	43	6,273
West	1.7	131	7,276	1.3	58	6,246
North	1.7	81	5,069	1.2	55	4,305
East	1.6	90	7,049	1.2	40	6,491
Total	**1.8**	**101**	**29,264**	**1.5**	**47**	**26,029**

Table 2.17 shows that in Rwanda the number of annual outpatient visits in 2010 is 1.8 visits per capita for women and 1.5 visits per capita for men. The number of visits is higher among children under 5 (2.7 visits for girls and 2.9 visits for boys) and among the elderly age 65 and older (2.7 visits for women and 2.6 visits for men). In both populations, the number of visits is higher in urban areas than in rural areas and higher in the city of Kigali and in South province than in other provinces.

On average, the annual number of inpatient admissions is 101 admissions (per 1,000 population) for women and 47 admissions (per 1,000 population) for men. For men, the number of annual admissions is higher among young children and the elderly. Among women, the number of annual admission peaks among three age groups: young children (under age 5), women of reproductive age (age 15-49), and the elderly (age 65 and older). For both women and men, the number of inpatient admissions is higher in rural areas than in urban areas.

Table 2.18 indicates that the total annual out-of-pocket expenditure for the female population is US$4.14 per capita; that includes US$3.36 in outpatient expenditure and US$0.79 in inpatient expenditure. For the male population, the total annual out-of-pocket expenditure is US$4.37 per capita; that includes US$3.79 in outpatient expenditure and US$0.58 in inpatient expenditure. The total expenditure has a U-shape in relation to age. In the female population, the annual expense is US$3.46 among children under age 5, drops to US$1.40 among girls age 5-14, then shapely increases to US$4.82 among those age 15-49, and reaches the highest level of US$10.01 among those age 65 or older. A similar pattern is observed among men, except the highest level for men is US$12.74 among those age 50-64.

Table 2.18 Annual per capita expenditure (in US $) on outpatient visits and inpatient admissions for de facto population

Average annual per capita expenditure for outpatient visits and inpatient admissions for women and men by background characteristics, Rwanda 2010

	Women				Men			
Background characteristic	Per capita expenditure for outpatient	Per capita expenditure for inpatient	Total per capita expenditure	De facto population	Per capita expenditure for outpatient	Per capita expenditure for inpatient	Total per capita expenditure	De facto population
Age								
<5	3.05	0.41	3.46	4,390	5.32	0.38	5.70	4,561
5-14	1.23	0.17	1.40	7,827	1.54	0.28	1.82	7,885
15-49	3.82	1.00	4.82	13,719	3.61	0.67	4.28	11,353
50-64	6.14	1.96	8.10	2,218	10.70	2.04	12.74	1,595
65+	8.29	1.72	10.01	1,104	6.47	0.49	6.96	632
Don't know/missing	0.00	0.00	0.00	5	2.68	0.00	2.68	2
Residence								
Urban	10.90	2.74	13.64	3,796	8.19	0.68	8.87	3,628
Rural	2.23	0.50	2.73	25,468	3.07	0.56	3.64	22,400
Province								
Kigali City	12.27	3.75	16.03	2,743	13.56	0.73	14.29	2,713
South	2.19	0.44	2.62	7,127	2.55	0.67	3.22	6,273
West	2.35	0.59	2.93	7,276	2.52	0.54	3.06	6,246
North	1.57	0.36	1.92	5,069	1.53	0.28	1.82	4,305
East	3.39	0.51	3.91	7,049	3.61	0.66	4.27	6,491
Education								
No education	2.98	0.46	3.44	10,433	3.75	0.33	4.08	8,523
Primary	2.87	0.61	3.48	16,426	3.23	0.58	3.81	14,949
Secondary and higher	8.45	3.51	11.96	2,344	7.24	1.46	8.70	2,493
Missing	3.50	0.00	3.50	60	3.37	0.06	3.43	63
Wealth quintile								
Lowest	2.07	0.38	2.45	6,119	1.60	0.45	2.05	4,861
Second	2.01	0.46	2.47	5,984	2.42	0.31	2.72	5,081
Middle	1.61	0.43	2.04	5,806	2.34	0.42	2.76	5,212
Fourth	1.95	0.58	2.53	5,776	3.05	0.26	3.32	5,311
Highest	9.48	2.18	11.66	5,578	9.00	1.39	10.39	5,563
Total	**3.36**	**0.79**	**4.14**	**29,264**	**3.79**	**0.58**	**4.37**	**26,029**

The total out-of- pocket expenditure is higher in urban areas than in rural areas (US$13.64 versus US$2.73 for women and US$8.87 versus US$3.64 for men. The expenditure is significantly higher in the city of Kigali (US$16.03 for women and US$14.29 for men) than in other provinces (US$3.91 or less for women and US$4.27 or

less for men). On average, people with secondary education and higher spend more for health care than people with primary education or lower. Similarly, out-of-pocket spending of people in the highest wealth quintile (US$11.66 for women and US$10.39 for men) is significantly higher than for those in others quintiles (US$2.53 or less for women and US$3.32 or less for men).

RESPONDENT CHARACTERISTICS 3

This chapter provides a sociodemographic profile of women age 15-49 and men age 15-59 who responded to the survey questions. The information that the women and men provided is important for understanding the behavior of the population with respect to contraception, sexually transmitted infections (STIs), HIV/AIDS, and fertility preferences. Like the Household Questionnaire, the individual questionnaire gathered information concerning respondents' age, place of residence, marital status, and educational attainment. This chapter also presents level of literacy, exposure to mass media, employment and occupation, and tobacco use of the men and women interviewed. These characteristics are used to interpret findings elsewhere in the report.

3.1 BACKGROUND CHARACTERISTICS OF RESPONDENTS

Given the importance of age in analyzing demographic characteristics, special attention was paid to making sure this statistic was accurately recorded in the survey. Prior to recording any information, the interviewer asked respondents to gather all official documents with information about themselves and other members of the household. If no official documents were available, the interviewer confirmed the age provided by the respondent through reference to major life events (age at the time of marriage, age of first child, etc.) or well-known national or regional events.

Table 3.1 shows no major disparities in the distribution of women and men age 15-49 grouped by five-year age increments. Proportions in each age group decline with increasing age. For women, the percentages range from 22 percent for the age group 15-19 to 8 percent for the age group 45-49. For men, the percentages range from 26 percent for age group 15-19 to 7 percent for age group 45-49.

Table 3.1 Background characteristics of respondents

Percent distribution of women and men age 15-49 by selected background characteristics, Rwanda 2010

Background characteristic	Women			Men		
	Weighted percent	Weighted number	Unweighted number	Weighted percent	Weighted number	Unweighted number
Age						
15-19	21.5	2,945	2,963	25.5	1,449	1,436
20-24	19.6	2,683	2,692	20.4	1,159	1,159
25-29	18.2	2,494	2,495	18.3	1,038	1,046
30-34	13.3	1,822	1,822	12.5	710	726
35-39	10.6	1,447	1,442	8.6	490	488
40-44	8.5	1,168	1,155	7.6	430	434
45-49	8.1	1,112	1,102	7.2	412	406
Religion						
Catholic	42.7	5,842	5,854	47.7	2,710	2,727
Protestant	41.2	5,627	5,586	35.9	2,044	2,031
Adventist	13.0	1,781	1,792	11.9	680	682
Muslim	1.3	179	197	1.9	106	111
Traditional	0.0	0	0	0.0	1	1
Other	0.9	129	131	0.9	50	50
No religion	0.7	92	91	1.7	96	93
Missing	0.2	21	20	0.0	0	0
Marital status						
Never married	38.7	5,285	5,362	50.5	2,873	2,900
Married	35.1	4,799	4,757	34.1	1,938	1,930
Living together	15.3	2,098	2,077	13.4	761	751
Divorced/separated	5.5	746	746	1.6	92	93
Widowed	5.4	743	729	0.4	22	21
Residence						
Urban	15.0	2,057	2,367	16.5	939	1,082
Rural	85.0	11,614	11,304	83.5	4,748	4,613

Continued…

Table 3.1—*Continued*

Background characteristic	Women			Men		
	Weighted percent	Weighted number	Unweighted number	Weighted percent	Weighted number	Unweighted number
Province						
City of Kigali	11.7	1,596	1,890	13.0	739	876
South	23.5	3,212	3,340	23.0	1,308	1,373
West	24.2	3,305	3,138	23.0	1,307	1,243
North	16.7	2,278	2,199	15.8	899	859
East	24.0	3,280	3,104	25.2	1,435	1,344
Education						
No education	15.5	2,119	2,061	10.3	583	580
Primary	68.3	9,337	9,277	68.8	3,916	3,884
Secondary	14.7	2,008	2,090	18.7	1,064	1,089
More than secondary	1.5	207	243	2.2	125	142
Wealth quintile						
Lowest	19.2	2,622	2,569	15.0	854	850
Second	19.5	2,661	2,603	17.3	986	968
Middle	20.0	2,736	2,663	20.0	1,139	1,102
Fourth	19.6	2,677	2,621	21.7	1,235	1,203
Highest	21.8	2,976	3,215	25.9	1,474	1,572
Total 15-49	**100.0**	**13,671**	**13,671**	**100.0**	**5,687**	**5,695**
50-59	na	na	na	na	642	634
Total 15-59	**na**	**na**	**na**	**na**	**6,329**	**6,329**

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

All men and women in the sample were asked their marital status. For the 2010 RDHS, all men and women were considered married if they were in union with a partner, whether the union was formal (legally married) or informal (living together). According to this definition, Table 3.1 shows that nearly 2 in 5 women (39 percent) had never been married at the time of the survey, while half of the women were married (35 percent were legally married and 15 percent were living together with a man). In addition, 6 percent of women were divorced or separated and 5 percent were widowed at the time of the survey. About half of the men age 15-49 (51 percent) were single, 47 percent were married (34 percent were legally married, and 13 percent were living with a woman). Slightly under 2 percent were separated or divorced, and less than 1 percent were widowed.

The distribution of respondents by residence shows that the majority of the Rwandan population is living in rural areas (85 percent of women and 84 percent of men). Similarly, distribution of respondents by province shows no significant disparities between men and women. The City of Kigali, with 12 percent of women and 13 percent of men, has the lowest proportion of respondents; next is North province with 17 percent of women and 16 percent of men.

The tabulation of respondents by religion indicates a majority of Catholic adherents (43 percent of women and 48 percent of men), with Protestant religions coming in second in popularity (41 percent of women and 36 percent of men). The Adventist faith is the next most common religion (13 percent of women and 12 percent of men), followed by the Muslim faith (1 percent of women and 2 percent of men). Table 3.1 also shows the distribution of men and women according to household wealth quintile. The development of this index is explained in Chapter 2.

Table 3.1 provides educational attainment data for the respondents. The proportion of women with no education is significantly higher than that of men (16 percent of women, 10 percent of men). Inversely, the proportion of women with secondary education is lower than that of men (15 percent of women, 19 percent of men). The gap between men and women is not very wide at the primary and tertiary levels, however.

3.2 EDUCATIONAL ATTAINMENT

Tables 3.2.1 and 3.2.2 show the distributions of female and male respondents by highest level of education attained. The proportion of men who received completed primary education or received some primary education is equal to that of women: 68 percent each. At the secondary level, the proportions are 15 percent for women and

18 percent for men. It is noteworthy that proportions for both men and women drop significantly from primary to secondary and from secondary to postsecondary levels.

Table 3.2.1 Educational attainment: Women

Percent distribution of women age 15-49 by highest level of schooling attended or completed, and median years completed, according to background characteristics, Rwanda 2010

Background characteristic	Highest level of schooling						Total	Median years completed	Number of women
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Age									
15-24	6.1	57.5	13.1	19.6	2.9	0.9	100.0	4.2	5,628
,,.15-19	2.9	59.0	13.4	24.1	0.6	0.0	100.0	4.4	2,945
…20-24	9.5	55.9	12.9	14.6	5.4	1.8	100.0	3.9	2,683
25-29	14.0	58.5	16.8	4.6	3.6	2.5	100.0	3.4	2,494
30-34	16.4	50.9	21.0	6.1	3.1	2.4	100.0	4.2	1,822
35-39	21.1	56.0	8.9	9.0	2.8	2.2	100.0	4.0	1,447
40-44	32.7	46.8	8.4	9.7	1.4	1.0	100.0	2.9	1,168
45-49	39.8	41.5	11.6	5.4	1.0	0.7	100.0	1.4	1,112
Residence									
Urban	6.7	42.8	13.0	22.9	8.0	6.6	100.0	5.4	2,057
Rural	17.1	56.5	14.0	10.0	1.8	0.6	100.0	3.6	11,614
Province									
City of Kigali	6.2	39.3	12.5	23.5	10.2	8.3	100.0	5.7	1,596
South	13.4	58.6	14.3	11.7	1.6	0.4	100.0	3.8	3,212
West	19.9	55.4	12.6	9.5	1.5	1.1	100.0	3.4	3,305
North	16.3	53.9	17.3	10.2	1.8	0.4	100.0	3.8	2,278
East	17.1	57.2	12.9	10.2	2.1	0.5	100.0	3.4	3,280
Wealth quintile									
Lowest	26.1	61.5	8.5	3.7	0.1	0.0	100.0	2.3	2,622
Second	20.4	60.4	13.2	6.0	0.1	0.0	100.0	3.0	2,661
Middle	16.2	59.9	15.1	8.3	0.5	0.0	100.0	3.6	2,736
Fourth	11.2	56.2	17.6	13.4	1.5	0.1	100.0	4.3	2,677
Highest	5.0	36.2	14.7	26.5	10.7	6.9	100.0	5.8	2,976
Total	**15.5**	**54.4**	**13.9**	**11.9**	**2.8**	**1.5**	**100.0**	**3.8**	**13,671**

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

Table 3.2.2 Educational attainment: Men

Percent distribution of men age 15-49 by highest level of schooling attended or completed, and median years completed, according to background characteristics, Rwanda 2010

Background characteristic	Highest level of schooling						Total	Median years completed	Number of men
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Age									
15-24	3.8	59.3	11.3	22.0	2.6	1.1	100.0	4.3	2,607
…15-19	2.5	62.1	11.1	24.2	0.2	0.0	100.0	4.3	1,449
…20-24	5.3	55.9	11.5	19.3	5.6	2.4	100.0	4.2	1,159
25-29	11.6	55.4	17.5	6.7	4.9	3.9	100.0	3.6	1,038
30-34	10.7	52.4	18.3	11.3	3.6	3.8	100.0	4.6	710
35-39	17.5	53.6	9.9	12.1	4.0	2.9	100.0	4.5	490
40-44	18.8	51.8	10.2	12.9	3.4	2.8	100.0	4.8	430
45-49	29.5	43.2	15.0	9.4	2.0	0.9	100.0	2.7	412
Residence									
Urban	5.6	43.4	12.7	23.0	8.2	7.0	100.0	5.3	939
Rural	11.2	57.9	13.5	13.9	2.3	1.2	100.0	3.9	4,748
Province									
City of Kigali	3.9	38.3	14.3	26.2	9.8	7.6	100.0	5.8	739
South	11.2	61.0	12.6	12.1	2.3	0.8	100.0	3.7	1,308
West	11.8	58.9	9.7	14.5	2.8	2.3	100.0	3.9	1,307
North	9.7	51.9	17.8	16.3	2.6	1.7	100.0	4.3	899
East	11.6	58.5	14.1	13.2	1.8	0.9	100.0	3.8	1,435
Wealth quintile									
Lowest	18.5	67.1	8.3	5.8	0.2	0.0	100.0	2.5	854
Second	15.0	62.4	12.1	9.7	0.5	0.3	100.0	3.2	986
Middle	10.7	62.0	13.8	12.0	0.8	0.6	100.0	3.7	1,139
Fourth	6.8	55.3	17.0	17.4	2.5	0.9	100.0	4.5	1,235
Highest	4.8	39.3	13.7	25.7	9.5	7.1	100.0	5.7	1,474
Total 15-49	**10.3**	**55.5**	**13.3**	**15.4**	**3.3**	**2.2**	**100.0**	4.1	**5,687**
50-59	27.2	46.6	16.9	6.3	1.9	1.3	100.0	2.4	642
Total 15-59	**12.0**	**54.6**	**13.7**	**14.5**	**3.1**	**2.1**	**100.0**	**4.0**	**6,329**

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

The data by age show that the proportions of men and women with no education have decreased significantly in the younger generation. For men, the proportion with no education is 30 percent in the 45-49 age group but only 4 percent in the 15-24 age group. For women, the proportions for these age groups are 40 percent and 6 percent, respectively. The gap between men and women in the previous generations has narrowed significantly: Among women and men age 45 to 49 years, the gap is about 10 percent; for those age 15-19 years, the gap is about 2 percent. Similarly, in the 15-24 age group, the proportion of girls who have attended or completed primary school is exactly equal to that of boys (71 percent for girls and boys). In addition, 25 percent of young women age 15-19 have attended or completed secondary school compared with 24 percent of young men. The educational attainment of respondents varies by residence. The proportion of men and women with no education is higher in rural areas (17 percent for women, 11 percent for men) than in urban areas (7 percent for women, 6 percent for men). Urban areas also have the highest proportions of men and women at every level of education except primary.

Results by province show a wide gap between the City of Kigali and the rest of the country. In the City of Kigali, 6 percent of women and 4 percent of men have no education; in the other provinces the proportions vary from 13 percent (South) to 20 percent (West) for women and from 10 percent (North) to 12 percent (West and East) for men.

The data in this table show a positive relationship between educational attainment and household wealth: the proportions of men and women with no education decrease as household wealth increases.

3.3 LITERACY

For this survey, literacy was established by asking respondents who reported not having attended school or having attended only primary school to read a sentence that was presented to them. Respondents were then classified into one of the following three levels: cannot read at all, can read part of a sentence, and can read a whole sentence. The test was given only to men and women who had less than a secondary education; those with secondary or postsecondary educations (16 percent of women and 21 percent of men) were considered literate and not in need of testing.

Tables 3.3.1 and 3.3.2 show that the proportion of men and women who cannot read at all has decreased from previous generations, especially among women. For women, this proportion drops from 46 percent in the 45-49 age group to 10 percent in the 15-19 age group. For men, the proportions for these age groups are 28 percent and 18 percent, respectively.

The data show also that a higher proportion of women than men cannot read (23 percent of women; 18 percent of men). Conversely, 77 percent of women and 82 percent of men are considered literate; that is, they have attended secondary school or, if they have attended only primary school, they are able to read all or part of a sentence.

The level of illiteracy varies appreciably by residence. Illiteracy is higher in rural areas than in urban areas (11 percent in urban areas versus 25 percent in rural areas, for women, and 11 percent in urban areas versus 19 percent in rural areas, for men).

The results by province show a gap between the City of Kigali and the rest of the country: in Kigali, 91 percent of women and 92 percent of men are literate. In other provinces, the proportion varies from 73 percent (West) to 78 percent (South) for women and from 79 percent (East) to 84 percent (North) for men. In addition, results by wealth quintile show that the level of illiteracy decreases considerably from the poorest to the richest quintile, dropping for women from 38 percent in the lowest quintile to 8 percent in the highest quintile and for men from 33 percent in the lowest quintile to 9 percent in the highest quintile.

Table 3.3.1 Literacy: Women

Percent distribution of women age 15-49 by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Rwanda 2010

Background characteristic	Secondary school or higher	No schooling or primary school: Can read a whole sentence	No schooling or primary school: Can read part of a sentence	No schooling or primary school: Cannot read at all	No schooling or primary school: No card with required language	No schooling or primary school: Blind/ visually impaired	Missing	Total	Percentage literate[1]	Number of women
Age										
15-24	23.3	54.2	7.4	14.9	0.0	0.0	0.1	100.0	85.0	5,628
…15-19	24.7	58.3	6.5	10.4	0.0	0.0	0.1	100.0	89.5	2,945
…20-24	21.8	49.8	8.5	19.8	0.0	0.1	0.0	100.0	80.1	2,683
25-29	10.8	56.3	9.8	23.0	0.0	0.1	0.0	100.0	76.9	2,494
30-34	11.6	57.7	8.7	21.6	0.0	0.2	0.2	100.0	78.1	1,822
35-39	14.0	50.8	9.1	25.7	0.0	0.1	0.2	100.0	73.9	1,447
40-44	12.2	43.2	8.6	35.3	0.0	0.7	0.1	100.0	63.9	1,168
45-49	7.2	35.4	9.5	46.2	0.1	1.4	0.2	100.0	52.1	1,112
Residence										
Urban	37.5	45.3	5.9	11.0	0.0	0.2	0.1	100.0	88.8	2,057
Rural	12.4	53.5	9.0	24.8	0.0	0.3	0.1	100.0	74.8	11,614
Province										
City of Kigali	42.0	42.8	5.5	9.3	0.0	0.3	0.0	100.0	90.4	1,596
South	13.7	56.4	8.2	21.2	0.0	0.4	0.1	100.0	78.3	3,212
West	12.1	50.9	9.7	27.1	0.0	0.1	0.1	100.0	72.7	3,305
North	12.5	54.3	8.9	23.9	0.0	0.2	0.2	100.0	75.7	2,278
East	12.8	52.6	8.8	25.4	0.0	0.4	0.0	100.0	74.2	3,280
Wealth quintile										
Lowest	3.8	45.9	11.7	38.1	0.0	0.3	0.1	100.0	61.4	2,622
Second	6.1	53.4	10.4	29.9	0.0	0.1	0.1	100.0	69.9	2,661
Middle	8.8	57.7	9.1	23.8	0.0	0.4	0.1	100.0	75.7	2,736
Fourth	15.0	61.6	6.9	16.2	0.0	0.2	0.1	100.0	83.5	2,677
Highest	44.1	43.3	4.8	7.5	0.0	0.2	0.0	100.0	92.2	2,976
Total	**16.2**	**52.2**	**8.5**	**22.7**	**0.0**	**0.3**	**0.1**	**100.0**	**76.9**	**13,671**

[1] Refers to women who attended secondary school or higher and women who can read a whole sentence or part of a sentence

Table 3.3.2 Literacy: Men

Percent distribution of men age 15-49 by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Rwanda 2010

Background characteristic	Secondary school or higher	No schooling or primary school: Can read a whole sentence	No schooling or primary school: Can read part of a sentence	No schooling or primary school: Cannot read at all	No schooling or primary school: No card with required language	No schooling or primary school: Blind/ visually impaired	Missing	Total	Percentage literate[1]	Number of men
Age										
15-24	25.6	50.8	8.8	14.5	0.0	0.0	0.2	100.0	85.3	2,607
…15-19	21.7	52.7	8.8	13.9	0.0	0.0	0.3	100.0	85.9	1,449
…20-24	27.3	48.5	8.9	15.4	0.0	0.0	0.0	100.0	84.6	1,159
25-29	15.5	54.4	8.0	21.8	0.0	0.1	0.2	100.0	78.0	1,038
30-34	18.7	56.0	7.9	17.1	0.2	0.0	0.1	100.0	82.6	710
35-39	19.1	53.5	6.9	20.5	0.0	0.0	0.0	100.0	79.5	490
40-44	19.1	56.1	7.7	17.1	0.0	0.0	0.0	100.0	82.9	430
45-49	12.3	51.2	7.7	27.6	0.0	1.2	0.0	100.0	71.2	412
Residence										
Urban	38.3	44.3	6.3	11.0	0.0	0.0	0.2	100.0	88.9	939
Rural	17.5	54.5	8.6	19.2	0.0	0.1	0.1	100.0	80.6	4,748
Province										
City of Kigali	43.6	44.1	4.3	7.8	0.0	0.0	0.2	100.0	92.0	739
South	15.2	52.2	12.0	20.3	0.0	0.2	0.1	100.0	79.4	1,308
West	19.6	54.5	6.9	18.7	0.0	0.2	0.0	100.0	81.1	1,307
North	20.6	56.2	7.2	16.0	0.0	0.0	0.1	100.0	83.9	899
East	15.8	54.1	8.7	21.0	0.1	0.1	0.2	100.0	78.6	1,435
Wealth quintile										
Lowest	6.1	50.6	10.5	32.6	0.0	0.3	0.0	100.0	67.1	854
Second	10.5	53.8	10.8	24.7	0.0	0.2	0.1	100.0	75.0	986
Middle	13.5	60.0	8.2	18.3	0.0	0.0	0.0	100.0	81.7	1,139
Fourth	20.8	58.4	8.5	11.9	0.1	0.1	0.3	100.0	87.7	1,235
Highest	42.3	43.2	5.0	9.2	0.0	0.0	0.2	100.0	90.6	1,474
Total 15-49	**20.9**	**52.8**	**8.2**	**17.8**	**0.0**	**0.1**	**0.1**	**100.0**	**81.9**	**5,687**
50-59	9.4	48.8	8.7	31.1	0.0	1.7	0.3	100.0	66.9	642
Total 15-59	**19.7**	**52.4**	**8.3**	**19.2**	**0.0**	**0.3**	**0.1**	**100.0**	**80.4**	**6,329**

[1] Refers to men who attended secondary school or higher and men who can read a whole sentence or part of a sentence

3.4 EXPOSURE TO MASS MEDIA

Data on the exposure of men and women to mass media are especially important to the development of education programs and the dissemination of all types of information, particularly information about health and family planning. Tables 3.4.1 and 3.4.2 present data on the exposure of men and women to mass media (print or broadcast). It should be stated at the outset that it is not necessary for a household to own a radio or television or to buy a newspaper to have access to these media because many people listen to the radio or watch television at the homes of friends and neighbors.

Table 3.4.1 Exposure to mass media: Women

Percentage of women age 15-49 who are exposed to specific media on a weekly basis, by background characteristics, Rwanda 2010

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	Accesses all three media at least once a week	Accesses none of the three media at least once a week	Number of women
Age						
15-19	4.4	11.9	70.6	1.1	27.1	2,945
20-24	3.7	11.8	70.8	1.5	27.7	2,683
25-29	3.1	9.1	67.6	1.4	31.1	2,494
30-34	3.3	8.9	66.0	1.4	32.8	1,822
35-39	3.0	8.5	64.8	1.5	34.2	1,447
40-44	2.6	5.3	66.3	0.8	33.0	1,168
45-49	2.7	4.5	66.4	0.9	33.2	1,112
Residence						
Urban	7.8	41.0	80.0	5.5	15.5	2,057
Rural	2.7	3.8	66.1	0.5	33.1	11,614
Province						
City of Kigali	9.0	50.8	82.6	7.0	11.7	1,596
South	2.3	3.2	66.3	0.4	33.1	3,212
West	2.3	4.8	55.1	0.5	43.9	3,305
North	3.5	4.0	75.9	0.8	23.5	2,278
East	3.1	3.7	70.8	0.5	28.3	3,280
Education						
No education	0.0	2.0	52.0	0.0	47.8	2,119
Primary	2.0	6.0	67.6	0.4	31.2	9,337
Secondary and higher	12.7	30.8	85.9	6.3	10.9	2,216
Wealth quintile						
Lowest	1.3	1.2	36.4	0.1	62.6	2,622
Second	1.6	1.2	57.4	0.2	42.0	2,661
Middle	2.3	1.8	73.3	0.2	26.0	2,736
Fourth	2.9	2.8	82.8	0.3	16.7	2,677
Highest	8.5	37.0	87.9	5.1	8.4	2,976
Total	**3.4**	**9.4**	**68.2**	**1.3**	**30.5**	**13,671**

Table 3.4.1 shows that, at the national level, 31 percent of women and approximately 12 percent of men are not exposed to any media. However, improvement has occurred since the 2005 RDHS, which reported that 44 percent of women and 19 percent of men were not exposed to any media. Radio is the most common form of media exposure: 68 percent of women and 87 percent of men report listening to the radio at least once a week. Men watch television more frequently than women: Almost one in ten women (9 percent) and one quarter of men (24 percent) watch television at least once a week. Only 3 percent of women, compared with 8 percent of men, report reading a newspaper at least once a week, however. The proportions of men and women who are exposed to all three media are very low: only 1 percent of women and 5 percent of men.

The data by age show that the younger women receive relatively more exposure to mass media than older women. In fact, the proportions of women who are not exposed to any media vary from 27 percent for women age 15-19 to 33 percent for women age 45-49. For men, the age differences are narrow and uneven.

Table 3.4.2 Exposure to mass media: Men

Percentage of men age 15-49 who are exposed to specific media on a weekly basis, by background characteristics, Rwanda 2010

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	Accesses all three media at least once a week	Accesses none of the three media at least once a week	Number of men
Age						
15-19	6.9	25.7	86.5	3.1	12.5	1,449
20-24	8.3	30.3	90.5	4.8	8.2	1,159
25-29	7.6	28.0	86.0	4.9	12.7	1,038
30-34	7.3	24.0	87.6	5.1	11.0	710
35-39	8.1	18.5	84.2	5.8	14.1	490
40-44	10.4	19.9	88.6	6.6	11.2	430
45-49	7.7	15.2	86.5	5.4	12.8	412
Residence						
Urban	16.8	58.7	93.7	14.6	4.8	939
Rural	6.0	18.4	86.1	2.7	12.9	4,748
Province						
City of Kigali	19.5	67.1	95.2	17.3	2.8	739
South	5.0	15.2	85.5	1.5	13.8	1,308
West	5.2	24.8	83.2	3.5	14.5	1,307
North	9.8	16.9	89.4	3.9	9.9	899
East	5.4	17.6	87.3	2.6	12.2	1,435
Education						
No education	0.3	9.6	76.5	0.0	23.0	583
Primary	4.0	21.2	86.6	1.6	12.2	3,916
Secondary and higher	24.0	45.1	95.0	17.1	3.8	1,189
Wealth quintile						
Lowest	2.2	11.1	67.1	0.8	30.5	854
Second	3.1	13.4	81.9	1.1	17.3	986
Middle	5.3	17.5	88.3	1.8	10.5	1,139
Fourth	6.8	19.1	94.3	2.4	5.2	1,235
Highest	16.9	51.8	96.1	13.4	2.7	1,474
Total 15-49	**7.8**	**25.0**	**87.3**	4.7	11.5	**5,687**
50-59	4.7	13.1	84.9	2.9	14.5	642
Total 15-59	**7.5**	**23.8**	**87.1**	4.5	11.8	**6,329**

Results by residence reveal significant differentials: in urban areas, 16 percent of women are not exposed to any media compared with 33 percent in rural areas. The differential is also wide for men: the proportion of men not exposed to any media varies from 5 percent in urban areas to 13 percent in rural areas.

Results by province show significant differences between the City of Kigali and other provinces: the percentage of women who are not exposed to any media is estimated to be 12 percent in the City of Kigali, while in other provinces this proportion varies from 44 percent (West) to 24 percent (North). For men, the proportion is 3 percent in the City of Kigali, while in other provinces it varies from 15 percent (West) to 10 percent (North). Educational attainment has a significant impact on the level of media exposure. For both men and women, those who have secondary education and higher are the most likely to be exposed to all three media: 6 percent of women who have secondary education and higher compared with less than 1 percent of women who have primary education and none of those who have no education. Similarly, 17 percent of men who have secondary education and higher are exposed to all three media compared with 2 percent of men who have primary education and none of those who have no education. The results show that 48 percent of women with no education are not exposed to any media compared with 11 percent of women with secondary education or higher. For men, 23 percent of those with no education are unexposed to any media, compared with only 4 percent of those with secondary or higher education.

As in the case of educational attainment, there is a positive relationship between household wealth and media exposure. Men and women in the richest households have the highest levels of exposure to all three media: 5 percent of women and 13 percent of men, compared with less than 1 percent of women and men in the poorest households.

3.5 EMPLOYMENT

The 2010 RDHS asked both men and women whether they were employed at the time of the survey. Respondents who reported having held a job, paid or unpaid, in any sector during the 12 months preceding the survey were considered employed.

Table 3.5.1 shows that, at the national level, 11 percent of women were not working at the time of the survey even if they reported working in the preceding 12 months. More than three in five women (73 percent) were employed at the time of the survey. The percentage of women working at the time of the survey increases steadily with age, rising from 52 percent at age 15-19 to 80-83 percent at age 30 and older. Women who were separated, divorced, or widowed (81 percent) and married women (80 percent) were more likely than women never married to be working at the time of the survey. The number of children also affects a woman's level of employment. As the number of children increases, the proportion of women who work also increases, from 60 percent among women with no children, to 78 percent among women with one or two children, to 82 percent among women with three children or more.

Data by residence show that rural areas had the highest proportion of women working at the time of the survey (74 percent compared with 65 percent in urban areas). North province followed by the City of Kigali had the lowest percentages of women working (60 percent and 61 percent, respectively). In other provinces, the proportion of employed women ranged from 72 percent in West province, to 79 percent in East province, to a maximum of 81 percent in South province. Results by educational attainment show that women with no education (80 percent) are proportionally more likely to be employed than women who have primary education (75 percent) and women who have secondary education and higher (55 percent). Finally, women in households in the two poorest wealth quintiles are more likely to be employed (76 percent and 77 percent) than women in the richest households (63 percent).

The results for men show that 91 percent of men had some form of employment at the time of the survey. As with women, the percentage of men working at the time of the survey increases with age, from 73 percent for those age 15-19 to 91 percent or more for those age 20 to 49. With respect to marital status, the results show that currently married men are proportionally more likely to be working (99 percent) than separated, divorced, or widowed men (97 percent) and those who have never been married (81 percent respectively). With respect to residence, rural areas had the highest proportion of men working at the time of the survey: 91 percent, compared with 85 percent in rural areas.

Table 3.5.1 Employment status: Women

Percent distribution of women age 15-49 by employment status, according to background characteristics, Rwanda 2010

Background characteristic	Employed in the 12 months preceding the survey: Currently employed[1]	Employed in the 12 months preceding the survey: Not currently employed	Not employed in the 12 months preceding the survey	Total	Number of women
Age					
15-19	52.2	11.7	36.2	100.0	2,945
20-24	70.8	13.0	16.2	100.0	2,683
25-29	78.3	11.7	10.0	100.0	2,494
30-34	80.0	10.8	9.2	100.0	1,822
35-39	83.1	9.1	7.8	100.0	1,447
40-44	80.4	10.3	9.3	100.0	1,168
45-49	82.9	9.0	8.2	100.0	1,112
Marital status					
Never married	60.6	12.1	27.3	100.0	5,285
Married or living together	79.8	10.5	9.7	100.0	6,897
Divorced/separated/widowed	81.0	11.2	7.8	100.0	1,489

Continued…

Table 3.5.1—*Continued*

Background characteristic	Employed in the 12 months preceding the survey: Currently employed[1]	Employed in the 12 months preceding the survey: Not currently employed	Not employed in the 12 months preceding the survey	Total	Number of women
Number of living children					
0	60.0	12.2	27.8	100.0	5,207
1-2	77.7	11.7	10.5	100.0	3,552
3-4	82.0	10.1	7.9	100.0	2,704
5+	81.7	9.6	8.6	100.0	2,209
Residence					
Urban	64.6	12.6	22.8	100.0	2,057
Rural	73.9	11.0	15.1	100.0	11,614
Province					
City of Kigali	61.3	17.6	21.1	100.0	1,596
South	80.6	7.3	12.1	100.0	3,212
West	72.1	5.6	22.3	100.0	3,305
North	60.1	27.1	12.8	100.0	2,278
East	79.0	6.5	14.4	100.0	3,280
Education					
No education	79.6	10.0	10.4	100.0	2,119
Primary	75.0	10.8	14.2	100.0	9,337
Secondary and higher	55.1	14.1	30.9	100.0	2,216
Wealth quintile					
Lowest	76.3	10.0	13.7	100.0	2,622
Second	77.0	10.0	13.0	100.0	2,661
Middle	75.1	10.9	14.0	100.0	2,736
Fourth	72.6	11.0	16.4	100.0	2,677
Highest	62.7	13.8	23.5	100.0	2,976
Total	**72.5**	**11.2**	**16.3**	**100.0**	**13,671**

[1] "Currently employed" is defined as having done work in the past seven days. Includes persons who did not work in the past seven days but who are regularly employed and were absent from work for leave, illness, vacation, or any other such reason.

Table 3.5.2 Employment status: Men

Percent distribution of men age 15-49 by employment status, according to background characteristics, Rwanda 2010

Background characteristic	Employed in the 12 months preceding the survey: Currently employed[1]	Employed in the 12 months preceding the survey: Not currently employed	Not employed in the 12 months preceding the survey	Total	Number of men
Age					
15-19	72.5	2.9	24.6	100.0	1,449
20-24	90.7	2.9	6.4	100.0	1,159
25-29	97.4	1.3	1.3	100.0	1,038
30-34	97.9	1.4	0.6	100.0	710
35-39	98.5	1.1	0.4	100.0	490
40-44	98.1	1.4	0.5	100.0	430
45-49	98.4	0.6	1.0	100.0	412
Marital status					
Never married	81.3	3.2	15.5	100.0	2,873
Married or living together	98.9	0.8	0.3	100.0	2,699
Divorced/separated/widowed	97.3	0.0	2.7	100.0	115
Number of living children					
0	82.2	2.9	14.9	100.0	2,987
1-2	98.0	1.5	0.5	100.0	1,177
3-4	99.0	0.6	0.4	100.0	841
5+	99.2	0.5	0.3	100.0	683
Residence					
Urban	85.3	7.5	7.2	100.0	939
Rural	90.9	0.9	8.2	100.0	4,748
Province					
Kigali City	85.1	9.4	5.5	100.0	739
South	92.0	2.0	6.0	100.0	1,308
West	93.8	1.0	5.3	100.0	1,307
North	90.1	0.2	9.6	100.0	899
East	87.1	0.2	12.7	100.0	1,435
Education					
No education	98.5	1.0	0.5	100.0	583
Primary	92.0	1.0	6.9	100.0	3,916
Secondary and higher	79.1	5.6	15.3	100.0	1,189
Wealth quintile					
Lowest	93.3	1.2	5.5	100.0	854
Second	91.9	0.6	7.5	100.0	986
Middle	91.6	0.4	8.0	100.0	1,139
Fourth	90.0	0.9	9.1	100.0	1,235
Highest	85.5	5.5	9.0	100.0	1,474
Total 15-49	**90.0**	**2.0**	8.0	**100.0**	**5,687**
50-59	96.5	0.6	3.0	100.0	642
Total 15-59	**90.6**	**1.8**	**7.5**	**100.0**	**6,329**

[1] "Currently employed" is defined as having done work in the past seven days. Includes persons who did not work in the past seven days but who are regularly employed and were absent from work for leave, illness, vacation, or any other such reason.

With respect to educational attainment, the results show men with no education (99 percent) being proportionally more likely to be employed than men with primary education (92 percent) and men with secondary education and higher (79 percent). By province, the data show that the City of Kigali had the lowest proportion of the population that was working at the time of the survey (85 percent); the highest proportion was located in West province (94 percent). Finally, similar to findings for women, the proportion of men working was lower in the richest households than in the poorest households (86 percent compared with 93 percent). Also, the proportion of men who were working at the time of the survey exceeded the proportion of women who were working at any level of background characteristics. Compared with the previous survey, the proportion of women and men who worked at the time of the survey has increased from 64 percent to 73 percent among women and from 52 percent to 91 percent among men. Similarly, we see that during the 2005 RDHS, women were more likely than men to work at the time of the survey (64 percent of women compared with 52 percent of men in 2005), while today the situation is reversed in favor of men (73 percent of women compared with 91 percent of men).

Table 3.6.1 shows women's occupations. The majority of women who were employed at the time of the survey, or who had worked during the 12 months preceding it, were employed in agriculture (77 percent compared with 86 percent in 2005). Among those working in other occupations (23 percent), 8 percent performed unskilled manual labor, 7 percent worked in sales and services, 3 percent worked in domestic services, and 2 percent performed skilled manual labor. Only 2 percent reported working in a technical, professional, or managerial occupation. Results by age show that the older women are more likely to work in agriculture than the younger ones (89 percent at age group 45-49, 59 percent at age group 15-19). As expected, the data by residence show that the proportion of women working in agriculture is higher in rural areas (85 percent, 32 percent in urban areas). This proportion is much lower in the City of Kigali (24 percent) than in other provinces where the proportion of women working in agriculture varies from 80 percent (South) to 89 percent (East). With respect to educational attainment, 92 percent of women with no education and 82 percent of women with primary education work in agriculture compared with 35 percent of women with secondary education and higher.

Table 3.6.2 shows men's occupations. Like women, the majority of men work in agriculture (60 percent compared with 62 percent in 2005). Almost one in seven men performs unskilled manual labor (14 percent), and 11 percent perform skilled manual labor. Those proportions have remained stable since 2005. As for women, results by age show that the old men are more likely to work in agriculture than the young ones (72 percent at age group 45-49, 51 percent at age group 15-19). The results by province show that more than one quarter (28 percent) of men in the City of Kigali work in skilled manual sectors, 19 percent work in sales and services sectors, 18 percent in unskilled manual sectors, and only 15 percent in agriculture. In other provinces, the agricultural occupations dominate. As expected, the proportion of men working in agriculture is higher in the rural areas (68 percent compared with 20 percent in urban areas). Conversely, it appears that men with other occupations are more likely to work in urban areas than in rural areas. In particular, the proportion of men performing skilled manual labor and sales and services is significantly higher in urban areas than in rural areas (25 percent compared with 9 percent in rural areas for skilled manual labor, and 18 percent compared with 5 percent in rural areas for sales and services). For unskilled manual labor, the difference is not big (18 percent in urban areas, 13 percent in rural areas). With respect to educational attainment, the results show that, like women, the majority of men with no education work in agriculture (80 percent compared with 27 percent of those with secondary education and higher). However, of those with secondary education or higher, 14 percent work in professional/technical/managerial occupations. Results by wealth quintile show that a majority of men in the poorest households work in agriculture (77 percent). Twenty-eight percent of men in the richest quintile work in agriculture, and 20 percent work in skilled manual labor capacities.

Table 3.6.1 Occupation: Women

Percent distribution of women age 15-49 employed in the 12 months preceding the survey by occupation, according to background characteristics, Rwanda 2010

Background characteristic	Professional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Domestic service	Agriculture	Missing	Total	Number of women
Age										
15-19	0.4	0.1	5.7	1.6	26.6	6.9	58.5	0.3	100.0	1,880
20-24	1.9	0.9	7.4	3.5	8.3	3.9	74.0	0.1	100.0	2,250
25-29	2.6	0.6	7.9	2.8	4.1	1.6	80.0	0.3	100.0	2,245
30-34	3.5	0.7	7.8	2.1	3.0	0.8	82.0	0.1	100.0	1,654
35-39	3.3	0.3	7.6	2.7	2.9	0.8	82.2	0.2	100.0	1,334
40-44	2.3	0.2	4.8	1.3	2.3	1.2	87.7	0.2	100.0	1,059
45-49	1.5	0.2	5.2	1.2	2.1	0.9	88.9	0.0	100.0	1,022
Marital status										
Never married	2.2	0.8	6.7	3.3	18.1	6.4	62.3	0.3	100.0	3,840
Married or living together	2.3	0.3	6.9	1.9	2.8	0.4	85.2	0.2	100.0	6,231
Divorced/separated/widowed	1.5	0.2	7.1	2.0	3.4	2.2	83.7	0.0	100.0	1,373
Number of living children										
0	2.5	0.7	6.7	3.4	18.0	6.1	62.3	0.3	100.0	3,759
1-2	2.5	0.6	8.0	2.4	4.0	1.5	80.9	0.1	100.0	3,177
3-4	2.2	0.3	6.5	1.7	2.5	0.7	85.9	0.1	100.0	2,490
5+	1.2	0.0	5.8	1.1	2.5	0.2	88.9	0.2	100.0	2,018
Residence										
Urban	7.0	2.6	21.9	6.1	16.5	13.8	31.6	0.6	100.0	1,588
Rural	1.4	0.1	4.4	1.8	6.6	0.8	84.7	0.1	100.0	9,857
Province										
Kigali City	8.0	3.4	25.2	6.5	15.3	17.5	23.7	0.4	100.0	1,259
South	1.5	0.1	3.5	2.2	11.3	1.1	80.2	0.1	100.0	2,824
West	1.3	0.1	7.8	1.2	5.3	0.4	83.6	0.3	100.0	2,569
North	1.8	0.1	3.9	2.3	8.2	0.7	83.1	0.1	100.0	1,986
East	1.4	0.2	3.3	1.8	3.7	0.8	88.7	0.1	100.0	2,807
Education										
No education	0.1	0.0	3.6	0.7	2.5	0.7	92.2	0.1	100.0	1,899
Primary	0.2	0.0	6.3	2.4	5.9	3.2	81.8	0.1	100.0	8,014
Secondary and higher	15.2	3.3	13.8	4.2	25.7	2.1	35.2	0.5	100.0	1,532
Wealth quintile										
Lowest	0.2	0.0	2.4	1.2	7.1	0.2	88.9	0.2	100.0	2,263
Second	0.1	0.0	3.0	1.1	5.8	0.5	89.4	0.0	100.0	2,314
Middle	0.4	0.0	3.9	1.5	6.2	0.4	87.4	0.1	100.0	2,352
Fourth	0.7	0.1	5.1	2.7	6.1	0.4	84.7	0.1	100.0	2,237
Highest	9.6	2.2	20.0	5.3	14.9	11.7	35.9	0.5	100.0	2,278
Total	**2.2**	**0.5**	**6.9**	**2.4**	**8.0**	**2.6**	**77.3**	**0.2**	**100.0**	**11,444**

Table 3.6.2 Occupation: Men

Percent distribution of men age 15-49 employed in the 12 months preceding the survey by occupation, according to background characteristics, Rwanda 2010

Background characteristic	Professional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Domestic service	Agriculture	Missing	Total	Number of men
Age										
15-19	0.0	0.1	4.7	3.9	32.4	8.1	50.6	0.3	100.0	1,092
20-24	3.5	0.4	8.4	12.5	16.7	3.8	54.7	0.0	100.0	1,084
25-29	3.2	0.9	8.9	13.7	9.4	1.2	62.6	0.1	100.0	1,024
30-34	4.4	0.7	10.2	17.1	5.6	0.5	61.2	0.4	100.0	706
35-39	5.6	0.5	6.1	8.8	5.5	0.2	73.0	0.4	100.0	488
40-44	4.8	1.0	8.9	12.6	4.4	0.4	67.7	0.2	100.0	428
45-49	3.2	0.7	5.0	13.2	5.0	0.3	72.1	0.4	100.0	408
Marital status										
Never married	3.0	0.4	7.2	10.5	22.8	5.8	50.0	0.3	100.0	2,427
Married or living together	3.3	0.7	7.8	11.7	6.4	0.2	69.6	0.2	100.0	2,692
Divorced/separated/widowed	0.6	0.0	6.2	18.0	7.9	1.7	65.6	0.0	100.0	112
Number of living children										
0	3.0	0.5	7.2	9.9	22.3	5.5	51.4	0.2	100.0	2,541
1-2	3.0	0.8	8.3	14.5	9.0	0.6	63.7	0.1	100.0	1,171
3-4	3.1	0.7	8.3	12.0	3.6	0.2	71.6	0.5	100.0	837
5+	3.8	0.3	6.2	10.0	4.9	0.2	74.5	0.2	100.0	681
Residence										
Urban	7.1	2.3	17.8	25.0	18.4	8.4	20.1	0.9	100.0	872
Rural	2.3	0.2	5.4	8.5	13.2	1.7	68.4	0.1	100.0	4,359

Continued…

Table 3.6.2—*Continued*

Background characteristic	Professional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Domestic service	Agriculture	Missing	Total	Number of men
Province										
City of Kigali	7.1	2.6	19.2	27.8	18.1	8.7	15.4	1.0	100.0	698
South	2.3	0.1	5.1	8.1	11.5	3.7	68.9	0.2	100.0	1,229
West	2.9	0.5	7.0	9.1	18.4	1.9	60.2	0.1	100.0	1,238
North	2.7	0.6	5.3	9.9	16.7	0.4	64.2	0.2	100.0	812
East	2.1	0.0	5.2	8.2	8.3	1.3	74.8	0.1	100.0	1,252
Education										
No education	0.2	0.3	4.0	5.9	7.8	2.1	79.5	0.2	100.0	580
Primary	0.6	0.2	7.5	9.9	11.9	3.2	66.5	0.1	100.0	3,644
Secondary and higher	13.9	2.0	9.5	19.3	25.5	2.0	27.2	0.7	100.0	1,007
Wealth quintile										
Lowest	0.2	0.0	2.3	5.4	13.1	1.1	77.4	0.4	100.0	807
Second	0.6	0.2	3.0	7.0	13.9	0.7	74.6	0.0	100.0	912
Middle	1.1	0.1	3.6	8.4	12.3	0.7	73.8	0.0	100.0	1,048
Fourth	1.9	0.4	7.5	11.5	13.6	1.5	63.4	0.1	100.0	1,122
Highest	9.1	1.6	16.7	19.8	16.5	8.2	27.5	0.6	100.0	1,341
Total 15-49	**3.1**	**0.6**	**7.5**	**11.3**	**14.1**	**2.9**	**60.4**	**0.2**	**100.0**	**5,230**
50-59	3.0	0.4	2.3	10.0	4.8	0.3	79.0	0.1	100.0	622
Total 15-59	**3.1**	**0.5**	**7.0**	**11.1**	**13.1**	**2.6**	**62.4**	**0.2**	**100.0**	**5,853**

Table 3.7 shows the distribution of women employed during the 12 months preceding the survey by type of earnings, type of employer, and continuity of employment. Overall, 55 percent of women in agricultural occupations were paid in cash and in-kind, 18 percent were paid in-kind only, 16 were not paid for their work, and only 11 percent were paid in cash only. Women in nonagricultural occupations were more likely to be paid in cash (63 percent) than those working in agriculture (11 percent). Slightly more than one quarter (27 percent) of women in nonagricultural occupations were not paid for their work.

In the majority of cases, women are self-employed, regardless of their occupations (68 percent of women in agricultural occupations, 66 percent of those in nonagricultural occupations). Women who work in agriculture are more likely to work for a family member than women in nonagricultural occupations (16 percent compared with 4 percent). Note also that about a third (30 percent) of women working in nonagricultural occupations are employed by a nonfamily member, while this proportion is about 17 percent for women working in agricultural occupations. Finally, 73 percent of all women work all year, and about one in five (20 percent in nonagricultural, 19 percent in agricultural occupations) works occasionally.

Table 3.7 Type of employment: Women

Percent distribution of women age 15-49 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 nonagricultural), Rwanda 2010

Employment Characteristic	Agricultural work	Nonagricultural work	Missing	Total
Type of earnings				
Cash only	10.9	62.5	52.7	22.6
Cash and in-kind	54.8	8.5	9.2	44.3
In-kind only	18.2	1.5	5.6	14.4
Not paid	15.9	26.5	27.2	18.3
Missing	0.1	1.0	5.3	0.3
Total	**100.0**	**100.0**	**100.0**	**100.0**
Type of employer				
Employed by family member	15.5	3.7	0.0	12.8
Employed by nonfamily member	16.5	29.6	33.5	19.5
Self-employed	68.0	65.6	61.2	67.4
Missing	0.0	1.0	5.3	0.3
Total	**100.0**	**100.0**	**100.0**	**100.0**
Continuity of employment				
All year	72.6	72.0	80.9	72.5
Seasonal	8.6	7.0	0.0	8.2
Occasional	18.8	20.0	13.7	19.0
Missing	0.1	1.0	5.3	0.3
Total	**100.0**	**100.0**	**100.0**	**100.0**
Number of women employed during the last 12 months	8,849	2,574	21	11,444

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

3.6 USE OF TOBACCO

The consumption of tobacco has a negative impact on children's health, because it affects not only the health of those who consume it but also the health of those in proximity to people who consume it. For this reason, the 2010 RDHS asked questions to determine the level of tobacco consumption among the women surveyed. Table 3.8.1 shows percentages of women age 15-49 who smoke cigarettes or a pipe or use other tobacco products, according to their background characteristics and maternity status. The results show that the vast majority of women in Rwanda do not smoke tobacco (96 percent). The proportion of women who smoke cigarettes or a pipe is very low: less than 1 percent reported smoking cigarettes or a pipe, although 3 percent consume other tobacco products.

Although the proportion of women who smoke tobacco is low, it appears that the oldest women age 45-49 are more likely to use other tobacco products (9 percent) or to smoke a pipe (4 percent). Four percent of breastfeeding women reported using other tobacco products, and this proportion was 2 percent for pregnant women. Women in rural areas consume other tobacco products more frequently than those in urban areas (3 percent, 1 percent in rural areas). By province we find that the women in South province are most likely to consume other tobacco products (5 percent), followed by East province (4 percent), and other provinces (2 percent in North and in City of Kigali and less than 1 percent in West). Finally, women with no education and those who are in the lowest wealth quintile are proportionally more likely than other women to smoke other tobacco products (7 percent and 6 percent, respectively).

Table 3.8.1 Use of tobacco: Women

Percentage of women age 15-49 who smoke cigarettes or a pipe or use other tobacco products, according to background characteristics and maternity status, Rwanda 2010

Background characteristic	Uses tobacco			Does not use tobacco	Number of women
	Cigarettes	Pipe	Other tobacco		
Age					
15-19	0.0	0.0	0.1	99.8	2,945
20-24	0.2	0.0	0.8	99.0	2,683
25-29	0.3	0.0	1.9	97.8	2,494
30-34	0.5	0.5	2.6	96.5	1,822
35-39	0.3	1.3	5.1	93.5	1,447
40-44	1.2	1.6	6.7	91.2	1,168
45-49	0.8	3.7	9.3	87.4	1,112
Maternity status					
Pregnant	0.1	0.2	2.0	97.8	956
Breastfeeding (not pregnant)	0.4	0.5	3.7	95.6	4,178
Neither	0.4	0.7	2.4	96.7	8,536
Residence					
Urban	0.8	0.2	1.2	97.8	2,057
Rural	0.3	0.7	3.0	96.2	11,614
Province					
City of Kigali	0.7	0.1	1.5	97.7	1,596
South	0.6	0.1	4.8	94.7	3,212
West	0.1	0.3	0.7	99.1	3,305
North	0.3	2.4	2.2	95.5	2,278
East	0.3	0.6	3.8	95.5	3,280
Education					
No education	0.6	2.5	7.2	90.3	2,119
Primary	0.3	0.4	2.3	97.1	9,337
Secondary and higher	0.4	0.0	0.2	99.3	2,216
Wealth quintile					
Lowest	0.7	0.9	6.0	93.0	2,622
Second	0.2	0.8	3.4	95.6	2,661
Middle	0.2	1.0	2.5	96.4	2,736
Fourth	0.2	0.5	1.6	97.8	2,677
Highest	0.5	0.1	0.5	99.0	2,976
Total	**0.4**	**0.6**	**2.8**	**96.4**	**13,671**

Table 3.8.2 shows the percentage of men age 15-49 who smoke cigarettes or a pipe or use other tobacco products and the percent distribution of cigarette smokers by number of cigarettes smoked in preceding 24 hours, according to background characteristics. The results show that 86 percent of men in Rwanda do not smoke tobacco. Eleven percent of men reported smoking cigarettes, and 5 percent reported consuming other tobacco products.

Table 3.8.2 Use of tobacco: Men

Percentage of men age 15-49 who smoke cigarettes or a pipe or use other tobacco products and the percent distribution of cigarette smokers by number of cigarettes smoked in preceding 24 hours, according to background characteristics, Rwanda 2010

Background characteristic	Uses tobacco			Does not use tobacco	Number of men	Number of cigarettes in the last 24 hours						Total	Number of cigarette smokers
	Cigarettes	Pipe	Other tobacco			0	1-2	3-5	6-9	10+	Don't know/ missing		
Age													
15-19	1.7	0.0	0.5	98.2	1,449	8.5	31.2	45.7	10.4	4.2	0.0	100.0	25
20-24	10.3	0.2	1.8	89.1	1,159	9.7	27.6	41.6	11.4	9.6	0.0	100.0	119
25-29	14.7	0.1	3.6	83.9	1,038	8.5	24.4	40.3	11.8	13.6	1.5	100.0	153
30-34	15.2	0.1	3.7	82.6	710	5.4	33.1	30.7	9.8	21.0	0.0	100.0	108
35-39	16.5	0.4	8.5	78.6	490	10.6	35.4	26.6	13.8	11.8	1.9	100.0	81
40-44	14.9	1.0	12.5	76.3	430	14.7	23.2	36.4	12.3	13.5	0.0	100.0	64
45-49	20.6	2.2	18.2	67.3	412	19.7	34.7	27.9	9.3	6.9	1.5	100.0	85
Residence													
Urban	13.2	0.2	2.1	85.9	939	9.9	18.7	30.3	15.7	24.8	0.6	100.0	124
Rural	10.7	0.4	5.1	86.3	4,748	10.7	32.0	36.6	10.2	9.7	0.8	100.0	510

Continued…

Table 3.8.2—*Continued*

Background characteristic	Uses tobacco			Does not use tobacco	Number of men	Number of cigarettes in the last 24 hours						Total	Number of cigarette smokers
	Cigarettes	Pipe	Other tobacco			0	1-2	3-5	6-9	10+	Don't know/ missing		
Province													
Kigali City	13.6	0.0	2.0	85.8	739	7.0	19.0	31.2	16.9	25.1	0.7	100.0	100
South	14.9	0.0	7.7	81.1	1,308	17.6	24.0	32.5	11.2	14.3	0.4	100.0	195
West	6.7	0.0	1.9	92.7	1,307	10.2	28.6	38.6	11.5	11.2	0.0	100.0	88
North	8.9	1.6	4.9	87.4	899	12.2	37.0	36.3	6.7	6.5	1.4	100.0	80
East	11.9	0.3	5.4	84.3	1,435	4.2	38.5	38.8	10.1	7.0	1.4	100.0	171
Education													
No education	20.3	1.2	15.1	69.5	583	15.9	28.9	34.4	10.1	10.7	0.0	100.0	118
Primary	11.6	0.3	4.2	86.1	3,916	9.5	30.1	36.6	10.5	12.4	0.9	100.0	455
Secondary and higher	5.1	0.0	0.8	94.7	1,189	8.6	25.1	27.9	19.4	17.6	1.3	100.0	61
Wealth quintile													
Lowest	16.5	0.7	11.4	77.0	854	18.0	29.4	37.8	7.7	7.2	0.0	100.0	141
Second	11.0	0.2	5.5	84.9	986	9.5	35.7	35.9	5.9	12.9	0.0	100.0	108
Middle	11.6	0.7	5.2	85.8	1,139	6.1	34.1	38.2	10.6	9.1	1.8	100.0	132
Fourth	8.8	0.1	2.7	89.7	1,235	11.5	33.5	29.0	12.9	12.1	1.0	100.0	108
Highest	9.9	0.1	1.3	89.8	1,474	7.5	17.4	34.6	18.3	21.2	1.0	100.0	145
Total 15-49	**11.2**	**0.3**	**4.6**	**86.2**	**5,687**	**10.6**	**29.4**	**35.3**	**11.3**	**12.6**	**0.8**	**100.0**	**634**
50-59	19.5	6.7	19.2	63.4	642	13.9	29.0	35.8	13.0	5.0	3.2	100.0	125
Total 15-59	**12.0**	**1.0**	**6.1**	**83.9**	**6,329**	**11.1**	**29.3**	**35.4**	**11.6**	**11.4**	**1.2**	**100.0**	**760**

The proportion of men who smoke cigarettes increases as age increases (from 2 percent at age 15-19 to 10 percent at age 20-24 and to 21 percent at age group 45-49). The proportion of men who use other tobacco products follows a similar pattern (from 2 percent at age group 20-24 to 18 percent at age group 45-49). There is no big difference between urban areas and rural areas concerning consumption of cigarettes or other tobacco products among men: 13 percent in urban areas and 11 percent in rural areas smoke cigarettes. By province, we find that the men in South province, the City of Kigali, and East province are likely to smoke cigarettes (15 percent, 14 percent, and 12 percent, respectively). The proportions in the West and North provinces are only 7 percent and 9 percent, respectively. As for women, men with no education (20 percent) and those classified in the lowest wealth quintile (17 percent) are more likely to smoke cigarettes and other tobacco products than others.

Among the men who smoke cigarettes, 35 percent reported smoking from 3 to 5 cigarettes in the 24 hours preceding the survey, 29 percent smoked from 1 to 2 cigarettes, 13 percent smoked 10 or more cigarettes, and 11 percent smoked from 6 to 9 cigarettes. Note also that 11 percent of the men who smoke did not smoke a cigarette 24 hours before the interview.

PROXIMATE DETERMINANTS OF FERTILITY 4

This chapter addresses the key factors that define the risk of becoming pregnant. These include age at first marriage, age at first sexual intercourse, sexual activity, and postpartum abstinence and amenorrhea.

4.1 MARITAL STATUS

In Rwanda, formal unions (married) or informal unions (living together) between men and women are the sole socially permissible context for sexual activity. Marital status can therefore be considered the primary factor initiating exposure to the risk of pregnancy. In the data discussed in this section, the term *married* refers to men and women bound together legally, while *living together* refers to couples cohabiting in informal unions. People are considered *never married* if they are not currently married, living together, widowed, separated, or divorced.

Table 4.1 shows the distribution of men and women by marital status and according to age at the time of the survey. Of the 13,671 women interviewed, 51 percent were in union. This proportion has remained relatively stable since the 2005 RDHS when the proportion was 49 percent. The proportion of women in formal marriages, however, has increased from 29 percent to 35 percent during this period, while the proportion of women in informal union has declined from 20 percent in 2005 to 15 percent in 2010. Similarly, the proportion of divorced women has increased since the 2005 RDHS, rising from 1 percent to 5 percent, while the proportion of separated women has decreased since the 2005 RDHS, from 9 percent to 1 percent. The proportion of widows has remained relatively stable since the last survey at 5 percent. The proportion of never-married women makes up 39 percent, a percentage that has remained stable since 2005 when it was 38 percent. The largest proportion of never-married women is observed in the age group 15 to 19, of whom 96 percent had never been married in 2010. This proportion was 90 percent in 1992, 93 percent in 2000, and 97 percent in 2005.

Table 4.1 Current marital status

Percent distribution of women and men age 15-49 , by current marital status, according to age, Rwanda 2010

Age	Marital status						Total	Percentage of respondents currently in union	Number of respondents
	Never married	Married	Living together	Divorced	Separated	Widowed			
				WOMEN					
Age									
15-19	96.4	0.4	2.7	0.4	0.2	0.0	100.0	3.0	2,945
20-24	58.8	15.8	21.4	2.4	1.2	0.4	100.0	37.2	2,683
25-29	22.1	48.5	22.6	4.9	1.0	1.0	100.0	71.1	2,494
30-34	8.7	62.4	17.7	6.7	1.2	3.4	100.0	80.0	1,822
35-39	5.3	59.0	17.9	9.1	0.4	8.4	100.0	76.9	1,447
40-44	5.3	51.4	15.3	8.2	0.8	19.0	100.0	66.8	1,168
45-49	1.9	50.8	11.0	8.0	1.0	27.3	100.0	61.8	1,112
Total 15-49	**38.7**	**35.1**	**15.3**	**4.7**	**0.8**	**5.4**	**100.0**	**50.5**	**13,671**
				MEN					
Age									
15-19	99.8	0.0	0.2	0.0	0.0	0.0	100.0	0.2	1,449
20-24	79.9	6.5	12.7	0.8	0.2	0.0	100.0	19.1	1,159
25-29	35.3	40.0	22.2	1.6	0.7	0.2	100.0	62.2	1,038
30-34	11.0	64.6	21.7	1.5	0.9	0.3	100.0	86.3	710
35-39	6.2	69.1	20.5	2.7	0.8	0.7	100.0	89.6	490
40-44	4.3	75.0	17.3	1.7	0.6	1.1	100.0	92.3	430
45-49	2.2	79.7	12.6	1.9	1.0	2.5	100.0	92.4	412
Total 15-49	**50.5**	**34.1**	**13.4**	**1.1**	**0.5**	**0.4**	**100.0**	**47.5**	**5,687**
50-59	0.9	77.1	14.5	1.4	1.0	4.9	100.0	91.7	642
Total 15-59	**45.5**	**38.4**	**13.5**	**1.2**	**0.5**	**0.9**	**100.0**	**51.9**	**6,329**

Among the 5,687 men surveyed, 51 percent were never married compared with 46 percent in 2005, 48 percent were in union compared with 52 percent in 2005, and 34 percent were in formal marriages, the same as in 2005. Thirteen percent were living together, compared with 18 percent in 2005. In addition, 1 percent was either separated or divorced (0.5 percent separated, 1.1 percent divorced). This status was relatively the same in 2005. Less than 1 percent of the men were widowed (0.4). A comparison of these data with the results of the previous survey shows no change in proportions of separated or divorced men, while there is a decrease in the proportion of men living together and the proportion of men that never married.

4.2 POLYGAMY

The survey asked currently married women (in formal or informal union) whether their partners had other wives. Table 4.2.1 shows the percent distribution of married women by number of co-wives, according to background characteristics. Polygamy is not very common in Rwanda. However, although it's illegal, it affects 8 percent of women in union. This proportion has decreased since 2005 when it was 12 percent. However, the proportion of women with only one co-wife has increased at the expense of women with more than one co-wife (0.1 percent in 2005 compared with 7.1 percent in 2010 for those whose husbands had only one co-wife and 11.5 percent in 2005 compared with 1.2 percent for those whose husbands had more than one co-wife).

The proportion of women with one co-wife increases steadily with age, from 4 percent at age 15-19, to 12 percent at age 45-49. The extent of polygamy differs by residence; the percentage of married women living in polygamous unions with one co-wife is 4 percent in urban areas compared with 8 percent in rural areas. Variations between the provinces are few except in City of Kigali where the proportion of women with one co-wife falls to 4 percent. However, women's level of education does affect the frequency of this practice: the percentage of married women with one co-wife is four times higher among women with no education (12 percent) than among women with a secondary education or higher (3 percent). The proportion of women with one co-wife decreases with wealth quintile, going from 8 percent for the lowest quintile to 4 percent for the highest quintile.

Table 4.2.1 Number of women's co-wives

Percent distribution of currently married women age 15-49 by number of co-wives, according to background characteristics, Rwanda 2010

Background characteristic	Number of co-wives				Total	Number of women
	0	1	2+	DK		
Age						
15-19	95.2	3.5	1.4	0.0	100.0	89
20-24	96.5	3.1	0.3	0.1	100.0	998
25-29	94.0	5.0	0.7	0.4	100.0	1,773
30-34	92.2	6.4	1.1	0.2	100.0	1,458
35-39	88.7	9.5	1.0	0.8	100.0	1,112
40-44	85.1	10.9	3.0	1.1	100.0	780
45-49	85.2	11.8	2.5	0.5	100.0	688
Residence						
Urban	94.8	4.2	0.8	0.2	100.0	926
Rural	90.7	7.5	1.3	0.5	100.0	5,971
Province						
City of Kigali	95.8	3.8	0.2	0.2	100.0	726
South	91.2	7.2	1.1	0.5	100.0	1,614
West	89.4	8.2	1.6	0.7	100.0	1,675
North	92.9	5.7	0.9	0.6	100.0	1,151
East	90.2	8.1	1.6	0.2	100.0	1,731
Education						
No education	85.4	11.9	2.1	0.7	100.0	1,355
Primary	92.1	6.3	1.1	0.4	100.0	4,816
Secondary and higher	96.6	3.0	0.1	0.2	100.0	727
Wealth quintile						
Lowest	89.2	8.3	1.6	0.8	100.0	1,352
Second	89.3	9.0	0.9	0.8	100.0	1,388
Middle	90.8	7.6	1.4	0.3	100.0	1,394
Fourth	91.9	6.7	1.3	0.1	100.0	1,415
Highest	95.2	3.7	0.8	0.2	100.0	1,348
Total	**91.3**	**7.1**	**1.2**	**0.5**	**100.0**	**6,897**

Table 4.2.2 shows polygamy for men. The proportion of polygamous married men is very low (2 percent compared with 5 percent in 2005). Results by age show that the proportion of polygamous married men increases with age, climbing from 0 percent at age 20-24 to 4 percent at age 45-49. Also, polygamy is more common in rural areas than in urban areas (respectively, 2.3 and 0.6 percent). The influence of education on polygamy is also visible. Men without education are more likely to be polygamous than those with primary or higher education (3.1 percent for men with no education compared with 1.4 percent for those with a secondary or higher level of education). West and East provinces have the highest proportions of polygamous married men (3 percent). There is no steady trend of polygamous by wealth quintile for men in one direction but it is twice as high than average (4 percent) for men in middle quintile.

Table 4.2.2 Number of men's wives

Percent distribution of currently married men age 15-49 by number of wives, according to background characteristics, Rwanda 2010

Background characteristic	Number of wives		Total	Number of men
	1	2+		
Age				
15-19	*	*	*	3
20-24	100.0	0.0	100.0	222
25-29	99.1	0.9	100.0	646
30-34	97.8	2.2	100.0	613
35-39	97.4	2.6	100.0	439
40-44	97.4	2.6	100.0	397
45-49	96.1	3.9	100.0	380
Residence				
Urban	99.4	0.6	100.0	391
Rural	97.7	2.3	100.0	2,308
Province				
City of Kigali	98.8	1.2	100.0	307
South	98.2	1.8	100.0	624
West	97.2	2.8	100.0	623
North	99.0	1.0	100.0	430
East	97.3	2.7	100.0	715
Education				
No education	96.9	3.1	100.0	438
Primary	98.0	2.0	100.0	1,893
Secondary and higher	98.6	1.4	100.0	368
Wealth quintile				
Lowest	98.5	1.5	100.0	467
Second	98.1	1.9	100.0	523
Middle	96.1	3.9	100.0	558
Fourth	98.1	1.9	100.0	580
Highest	98.9	1.1	100.0	572
Total 15-49	**97.9**	**2.1**	**100.0**	**2,699**
50-59	94.5	5.5	100.0	588
Total 15-59	**97.3**	**2.7**	**100.0**	**3,287**

Note: An asterisk indicates that the figure is based on fewer than 25 unweighted cases and has been suppressed.

4.3 AGE AT FIRST UNION

Marriage remains the legally sanctioned context for sexual intercourse in Rwanda. Therefore, despite the existence of prenuptial intercourse, age at first marriage constitutes the beginning of exposure to the risk of pregnancy. For this reason, analysis of the age at first union is very important.

Table 4.3 and Table 4.4 show the percentage of currently married men and women by age at first marriage, according to current age. The proportion of women who were age 25-49 during the survey and who reported being married at age 15 is very low (2 percent). At age 18, the proportion is significantly higher (17 percent). At age 20, more than three in ten women (36 percent) are married; at age 22, slightly more than half of women are married (56 percent); at age 25, three quarters of women have already celebrated their first marriage (76 percent). The median

age at first union is 21.4 years, which is relatively late. This has remained more or less unchanged since 2005, when the median age at first union was 20.7. Based on the 2005 RDHS, it appears that women are marrying progressively later: 82 percent of women were married at age 25 in 2005, while this proportion has fallen to 76 percent in the current survey.

According to the data, men marry at a later age than women. At age 25, half of men are in union (51 percent). The median age at first union is 24.9 years for men age 25-59 and is nearly identical to the estimate from the preceding survey (24.6 years).

Table 4.3 Age at first marriage

Percentage of women and men age 15-49 who were first married by specific exact ages and median age at first marriage, according to current age, Rwanda 2010

Current age	Percentage first married by exact age: 15	18	20	22	25	Percentage never married	Number of respondents	Median age at first marriage
				WOMEN				
Age								
15-19	0.2	na	na	na	na	96.4	2,945	a
20-24	0.8	8.1	20.1	na	na	58.8	2,683	a
25-29	1.7	12.9	27.7	47.1	69.0	22.1	2,494	22.3
30-34	1.5	18.8	40.9	59.1	75.2	8.7	1,822	20.9
35-39	2.2	17.1	37.2	61.7	83.7	5.3	1,447	20.9
40-44	3.0	18.6	35.5	56.3	78.3	5.3	1,168	21.4
45-49	3.2	20.9	42.8	64.4	83.9	1.9	1,112	20.6
20-49	1.8	14.7	31.8	na	na	22.8	10,726	a
25-49	2.1	16.9	35.6	56.2	76.4	10.8	8,043	21.4
				MEN				
Age								
15-19	0.0	na	na	na	na	99.8	1,449	a
20-24	0.0	1.5	5.1	-	na	79.9	1,159	a
25-29	0.0	2.3	9.4	20.8	47.6	35.3	1,038	a
30-34	0.3	3.9	13.3	28.4	51.4	11.0	710	24.8
35-39	0.5	2.9	7.9	22.3	53.1	6.2	490	24.6
40-44	0.0	2.5	7.2	14.4	38.7	4.3	430	25.8
25-49	0.2	2.9	10.1	22.4	48.1	16.3	3,080	a
25-59	0.2	3.4	11.9	25.7	50.8	13.7	3,722	24.9

Note: The age at first marriage is defined as the age at which the respondent began living with her/his first spouse/partner

na = Not applicable due to censoring

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

Table 4.4 shows the median age at first union for men and women, according to background characteristics. In rural areas, the median age at first marriage for women is slightly lower than in urban areas: age 21.2 compared with age 23.0 in urban areas.

The data show variations by province: among women, the East province has the earliest age at first union (20.4 years), and the South province and City of Kigali have the latest ages (22.3 years and 23.3 years, respectively). The level of education is the variable that most affects age at first union: among women with no education, the median age is 20.1 years; it is 21.4 years for those with a primary education and 23.6 years for those with a secondary education. This indicates that remaining in the school system allows women to delay marriage. Results according to wealth quintile show virtually no differences among the four lowest quintiles; however, women in the richest quintile enter into first union later than women in the other quintiles (22.8 years compared with 21 years for the poorest quintile).

Table 4.4 Median age at first marriage by background characteristics

Median age at first marriage among women age 25-49, and median age at first marriage among men age 25-59, according to background characteristics, Rwanda 2010

Background characteristic	Women age 25-49	Men age 25-59
Residence		
Urban	23.0	a
Rural	21.2	24.8
Province		
City of Kigali	23.3	a
South	22.3	a
West	21.1	24.4
North	20.9	24.2
East	20.4	24.5
Education		
No education	20.1	24.1
Primary	21.4	24.8
Secondary and higher	23.6	a
Wealth quintile		
Lowest	21.0	24.7
Second	21.1	24.7
Middle	21.1	24.4
Fourth	21.2	24.7
Highest	22.8	a
Total	**21.4**	**24.9**

Note: The age at first marriage is defined as the age at which the respondent began living with her/his first spouse/partner
a = Omitted because less than 50 percent of the respondents began living with their spouse/partners for the first time before reaching the beginning of the age group

4.4 AGE AT FIRST SEXUAL INTERCOURSE

Although marriage is still considered the only socially sanctioned context for sexual activity, prenuptial sex is increasingly common. For this reason, the survey asked respondents their age at the time they first had sexual intercourse. Table 4.5 shows percentages for both women and men according to age at first sexual intercourse, and the median age at first intercourse for both sexes.

In Rwanda very few women have sexual intercourse at an early age (2.7 percent by exact age 15). Approximately one in five women (20.8 percent) first had sexual intercourse by age 18. At age 20, two in five (41.4 percent) women have had sexual intercourse. The median age at first sexual intercourse is estimated at 20.7 years. There has been virtually no change since the 2005 survey where median age at first sexual intercourse was 20.3 years. It appears that the median age at first intercourse is nearly identical to the median age at first union, which seems to confirm that the majority of Rwandan women have their first sexual intercourse at the time of their first union.

With respect to men, there are also very few who have sexual intercourse for the first time prior to age 15 (3.2 percent). However, nearly three-quarters of men have had sexual intercourse by age 25 (73.1 percent). The median age at first sexual intercourse is 21.6 years for men age 25-59. Unlike women, men's age at first sexual intercourse is 3.3 years younger than their age at first union. The finding was similar to the previous survey where the range between the age at first sexual intercourse and the age at first union was 3.7 years.

Table 4.5 Age at first sexual intercourse

Percentage of women and men age 15-49 who had first sexual intercourse by specific exact ages, percentage who never had intercourse, and median age at first intercourse, according to current age, Rwanda 2010

Current age	Percentage who had first sexual intercourse by exact age: 15	18	20	22	25	Percentage who never had intercourse	Number	Median age at first intercourse
				WOMEN				
Age								
15-19	4.8	na	na	na	na	85.3	2,945	a
20-24	2.8	16.0	34.2	na	na	42.2	2,683	a
25-29	2.4	18.2	36.3	57.3	78.2	12.5	2,494	21.3
30-34	2.1	22.3	45.6	65.0	80.2	4.5	1,822	20.4
35-39	2.8	21.4	43.9	67.7	87.0	2.1	1,447	20.4
40-44	3.7	22.1	40.0	60.9	81.1	1.8	1,168	20.9
45-49	2.9	21.9	44.5	65.9	84.3	0.4	1,112	20.5
20-49	2.7	19.6	39.6	na	na	14.8	10,726	a
25-49	2.7	20.8	41.4	62.6	81.5	5.6	8,043	20.7
				MEN				
Age								
15-19	13.3	na	na	na	na	78.5	1,449	a
20-24	8.8	26.4	41.3	na	na	39.4	1,159	a
25-29	4.3	17.2	32.5	49.7	74.5	11.3	1,038	22.0
30-34	2.5	15.7	33.6	52.2	71.3	1.5	710	21.7
35-39	1.9	12.0	32.8	51.1	72.3	1.0	490	21.8
40-44	2.0	13.8	29.6	45.4	67.4	1.5	430	22.8
45-49	3.0	17.0	35.3	53.4	69.4	0.4	412	21.2
25-49	3.0	15.5	32.8	50.4	71.7	4.6	3,080	21.9
25-59	3.2	16.4	34.6	52.6	73.1	3.8	3,722	21.6

na = Not applicable due to censoring
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 4.6 shows the median age at first sexual intercourse, according to background characteristics, for both men and women. Neither the area of residence nor the wealth quintile affects the age at first sexual intercourse among women and men. The greatest variation in median age at first intercourse is by level of education: for women and men alike, the higher the level of education, the later the median age at first sexual intercourse. Among women, this median age ranges from 19.8 years for those with no education to 22.6 years for those with secondary education or higher. Among men, it ranges from 21.2 to 22.3 years, respectively. In the provinces, the median age at first intercourse for women varies slightly, from 20.0 years in East province to 21.5 years in South province; for men it varies from 20.8 years in East province to 22.6 years in South province.

Table 4.6 Median age at first intercourse by background characteristics

Median age at first sexual intercourse among women age 25-49, and median age at first sexual intercourse among men age 25-59, according to background characteristics, Rwanda 2010

Background characteristic	Women age 25-49	Men age 25-59
Residence		
Urban	21.0	21.3
Rural	20.7	21.7
Province		
Kigali City	21.3	21.2
South	21.5	22.6
West	20.7	21.8
North	20.5	21.6
East	20.0	20.8
Education		
No education	19.8	21.2
Primary	20.8	21.5
Secondary and higher	22.6	22.3
Wealth quintile		
Lowest	20.5	22.2
Second	20.6	21.6
Middle	20.6	21.7
Fourth	20.7	21.4
Highest	21.3	21.4
Total	**20.7**	**21.6**

4.5 RECENT SEXUAL ACTIVITY

Frequency of sexual intercourse is a direct determinant of fertility. Therefore, the survey asked all men and women, regardless of marital status, how long it had been since they last had sexual intercourse. Table 4.7.1 shows the data on most recent sexual activity for women, according to background characteristics.

Forty-eight percent of all women age 15-49 had sexual intercourse in the four weeks preceding the survey. Recent sexual activity was most common among women age 30-34, three quarters (75 percent) of them reported being sexually active in the past four weeks. The results also show that married women are most likely to have been sexually active in the past four weeks (90.6 percent). Recent sexual activity decreases with marital duration, from a high of 95 percent for marital durations of 0-4 years, to a low of 82 percent for marital durations of 25 years or more.

Women in rural areas reported a higher level of sexual activity in the past four weeks (48 percent) than women in urban areas (44 percent).

Table 4.7.1 Recent sexual activity: Women

Percent distribution of women age 15-49 by timing of last sexual intercourse, according to background characteristics, Rwanda 2010

Background characteristic	Timing of last sexual intercourse: Within the past 4 weeks	Within 1 year[1]	One or more years	Missing	Never had sexual intercourse	Total	Number of women
Age							
15-19	4.3	3.5	6.8	0.0	85.3	100.0	2,945
20-24	37.6	8.4	11.8	0.0	42.2	100.0	2,683
25-29	68.9	9.2	9.4	0.0	12.5	100.0	2,494
30-34	75.2	9.4	10.9	0.0	4.5	100.0	1,822
35-39	68.5	11.2	18.1	0.1	2.1	100.0	1,447
40-44	59.4	10.2	28.6	0.0	1.8	100.0	1,168
45-49	52.7	9.7	36.9	0.2	0.4	100.0	1,112
Marital status							
Never married	2.6	6.1	13.8	0.0	77.5	100.0	5,285
Married or living together	90.6	6.7	2.7	0.0	0.0	100.0	6,897
Divorced/separated/widowed	7.1	22.5	70.3	0.1	0.0	100.0	1,489
Marital duration[2]							
0-4 years	95.0	4.5	0.4	0.0	0.0	100.0	1,686
5-9 years	92.6	5.7	1.7	0.0	0.0	100.0	1,410
10-14 years	90.3	7.5	2.2	0.0	0.0	100.0	1,117
15-19 years	86.6	9.0	4.3	0.1	0.0	100.0	922
20-24 years	89.2	5.6	5.0	0.2	0.0	100.0	505
25+ years	82.2	9.6	8.2	0.0	0.0	100.0	494
Married more than once	88.8	8.0	3.1	0.0	0.0	100.0	764
Residence							
Urban	43.5	9.2	16.1	0.1	31.0	100.0	2,057
Rural	48.2	8.0	14.0	0.0	29.8	100.0	11,614
Province							
City of Kigali	43.2	9.3	16.6	0.1	30.8	100.0	1,596
South	46.1	8.5	15.9	0.0	29.4	100.0	3,212
West	47.7	7.4	12.6	0.1	32.2	100.0	3,305
North	47.8	8.0	12.5	0.0	31.7	100.0	2,278
East	50.6	8.2	14.6	0.0	26.6	100.0	3,280
Education							
No education	58.0	10.0	24.1	0.0	7.8	100.0	2,119
Primary	49.1	8.0	12.6	0.0	30.3	100.0	9,337
Secondary and higher	30.7	7.1	12.4	0.1	49.7	100.0	2,216
Wealth quintile							
Lowest	46.8	10.2	19.6	0.1	23.3	100.0	2,622
Second	48.5	8.9	14.7	0.0	27.9	100.0	2,661
Middle	48.7	7.1	13.0	0.0	31.2	100.0	2,736
Fourth	51.1	6.2	10.8	0.0	31.9	100.0	2,677
Highest	42.9	8.6	13.7	0.1	34.8	100.0	2,976
Total	**47.5**	**8.2**	**14.3**	**0.0**	**30.0**	**100.0**	**13,671**

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

The percentage of women who had sexual intercourse during the past four weeks decreases as level of education increases (58 percent for those with no education, 49 percent for those with primary education, and 31 percent for those with secondary education or higher).

Table 4.7.2 presents information on recent sexual activity among men, according to background characteristics. The data indicate that 47 percent of men age 15-49 had sexual intercourse in the four weeks preceding the survey. The proportion of men who are sexually active increases with age and then begins to decline at age 45. Sexual activity peaks between age 30 and 44 (86 percent to 87 percent). Like women, married men are more sexually active (95 percent) than unmarried men. Results by marital duration show a slow increase of sexual activity between marital durations of 0 to 4 years (95 percent) and 10 to 14 years (96 percent) and then a decrease from durations of 15 to 19 years (94 percent) to durations of 25 years or more (89 percent).

Table 4.7.2 Recent sexual activity: Men

Percent distribution of men age 15-49 by timing of last sexual intercourse, according to background characteristics, Rwanda 2010

Background characteristic	Timing of last sexual intercourse: Within the past 4 weeks	Within 1 year[1]	One or more years	Missing	Never had sexual intercourse	Total	Number of men
Age							
15-19	1.0	4.4	16.1	0.0	78.5	100.0	1,449
20-24	21.6	14.1	24.8	0.1	39.4	100.0	1,159
25-29	63.1	11.7	13.9	0.1	11.3	100.0	1,038
30-34	85.7	6.6	5.8	0.3	1.5	100.0	710
35-39	86.6	7.7	4.8	0.0	1.0	100.0	490
40-44	87.4	7.6	3.3	0.2	1.5	100.0	430
45-49	83.9	10.1	5.5	0.0	0.4	100.0	412
Marital status							
Never married	3.4	11.3	25.0	0.0	60.3	100.0	2,873
Married or living together	94.8	4.8	0.2	0.2	0.0	100.0	2,699
Divorced/separated/widowed	16.1	45.9	38.0	0.0	0.0	100.0	115
Marital duration[2]							
0-4 years	95.0	4.8	0.1	0.0	0.2	100.0	772
5-9 years	95.7	3.8	0.2	0.4	0.0	100.0	586
10-14 years	96.2	3.5	0.3	0.0	0.0	100.0	444
15-19 years	94.4	5.6	0.0	0.0	0.0	100.0	340
20-24 years	92.0	8.0	0.0	0.0	0.0	100.0	162
25+ years	88.8	11.2	0.0	0.0	0.0	100.0	100
Married more than once	94.3	4.4	0.6	0.7	0.0	100.0	295
Residence							
Urban	42.6	15.0	14.5	0.3	27.7	100.0	939
Rural	47.9	7.7	13.3	0.1	31.1	100.0	4,748
Province							
City of Kigali	42.5	15.2	16.0	0.4	25.8	100.0	739
South	46.5	8.5	11.2	0.1	33.7	100.0	1,308
West	47.4	6.2	12.8	0.0	33.7	100.0	1,307
North	48.0	7.0	15.6	0.1	29.3	100.0	899
East	48.9	9.7	13.6	0.0	27.8	100.0	1,435
Education							
No education	71.7	8.3	7.7	0.0	12.3	100.0	583
Primary	47.8	8.8	12.8	0.1	30.4	100.0	3,916
Secondary and higher	32.3	9.5	18.5	0.1	39.6	100.0	1,189
Wealth quintile							
Lowest	52.9	7.7	11.8	0.1	27.5	100.0	854
Second	51.8	5.6	11.0	0.1	31.6	100.0	986
Middle	48.7	8.4	12.9	0.0	29.9	100.0	1,139
Fourth	46.4	8.0	12.4	0.0	33.3	100.0	1,235
Highest	39.7	13.1	17.4	0.2	29.6	100.0	1,474
Total 15-49	**47.0**	**8.9**	**13.5**	**0.1**	30.5	**100.0**	**5,687**
50-59	81.6	10.1	8.2	0.0	0.2	100.0	642
Total 15-59	**50.5**	**9.0**	**12.9**	**0.1**	**27.4**	**100.0**	**6,329**

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

Results by residence show a small differential in the proportion of sexual activity between rural (48 percent) and urban (43 percent) areas. By province, City of Kigali has the lowest proportion of men who had sexual intercourse in the four weeks before the survey (43 percent), while East province registers the largest proportion (49 percent). As for women, although in different proportions, the percentage of men who had sexual intercourse during the four weeks before the survey decreases as the level of education increases (72 percent for those with no education, 48 percent for those with primary education, and 32 percent for those with secondary education or higher). The data indicates also that the proportion of men who are sexually active decreases with wealth quintile. Fifty-three percent are active at the lowest wealth quintile, and 40 percent are active at the highest quintile.

FERTILITY 5

For more than 25 years, Rwanda has collected socio-demographic data to evaluate fertility levels and other general characteristics of its population. These efforts include the following surveys: the *1978 Rwanda General Population and Housing Census* (RGPH), the *1983 Enquête National sur la Fécondité* (ENF) *or National Fertility Survey*, the *1991 Rwanda General Population and Housing Census* (RGPH), the *1992 Rwanda Demographic and Health Survey* (RDHS), the *1996 Enquête Socio-Démographique* (ESD) *or Socio-demographic Survey*, the *2000 Rwanda Demographic and Health Survey* (RDHS), the *2002 Rwanda Demographic and Health Survey* (RGPH), the *2005 Rwanda Demographic and Health Survey*, the *2007-08 Rwanda Interim Demographic and Health Survey* (RIDHS), and the current survey, *the 2010 Rwanda Demographic and Health Survey* (RDHS).

Information on fertility obtained by the 2010 RDHS is used to estimate fertility levels, determine the timing of births, and describe the impact of variables, such as residence and educational attainment, on fertility. This information provides recent indicators of fertility rates and birth spacing not only at the national level but also by province and residence.

Fertility is one of the three principal components of population dynamics, the other two being mortality and migration (United Nations, 1973). The collection of data on fertility levels, trends, and differentials has been a prime objective of the Demographic and Health Surveys (DHS) program since its inception. The DHS surveys have contributed to the development of population policies in Rwanda and therefore have played an important role in the country's overall population growth.

This chapter analyzes the fertility data gathered by the 2010 RDHS, presents data on age at first birth and at birth intervals, and concludes with an analysis of teenage fertility. Teenage fertility is a special emphasis of Rwanda's National Reproductive Health Policy (MOH 2003).

Fertility data were obtained by posing a series of questions to all eligible female respondents. During the interview, interviewers recorded the total number of children born to each woman who had given birth, the gender of each child, the number of children currently living with the mother, the number of children living elsewhere, the number of children who had died, and the number of children still living. A complete birth history for each woman was compiled, from the earliest to the most recent birth. In addition, the following information was gathered for each birth: type of birth (single or multiple), sex of child, date of birth, and survival status. For living children, respondents were asked the current age of the child and whether the child was living with its mother or elsewhere. For children who had died, respondents were asked age at the time of death. At the end of the interview, the interviewer verified that the number of living and dead children reported by the mother initially was consistent with the number of children obtained from the birth history.

Because the DHS survey is a retrospective survey, the data can be used to estimate not only current fertility levels but also fertility trends over the past 25 years. Despite the organization and controls established to ensure the achievement of survey objectives (including training, instructions to field and data processing personnel, and quality controls at all levels), the data obtained may be subject to various types of errors, primarily errors inherent in all retrospective surveys, including:

- **Underreporting of births**, in particular, the omission of children living elsewhere and children who died very young (a few days or hours after birth), which can result in underestimation of fertility levels.

- **Misreporting of date of birth and/or age** and, in particular, the tendency to round off age or year of birth, which can result in under- or overestimation of fertility at certain ages and/or for certain periods.
- **Selective survival bias** or selectivity effect because the women surveyed are those who have survived. Assuming that the fertility of women who died prior to the survey differs from the fertility of the survivors, the fertility levels obtained by the survey may be slightly biased.

Finally, for the men's survey, as for the women's survey, information was gathered concerning total fertility by asking men a series of questions, including the number of children they had, the gender of each child, the number of children living with them, the number of children living elsewhere, the number of children who had died, and the number still living. The men were not asked to provide a complete birth history, however.

5.1 FERTILITY LEVELS AND DIFFERENTIALS

Current fertility levels are measured in terms of age-specific fertility rates (ASFRs) and total fertility rate (TFR). ASFRs are calculated by dividing the number of births to women in each specific age group by the number of women-years of exposure in that age group. The TFR, a common measurement of current fertility, is the average of all ASFRs. It indicates the average number of children a woman would bear in her lifetime if fertility rates were to remain constant at the level prevailing during the period under consideration, in this case, the three years preceding the survey.

Table 5.1 Current fertility

Age-specific and total fertility rate, the general fertility rate, and the crude birth rate for the three years preceding the survey, by residence, Rwanda 2010

	Residence		
Age group	Urban	Rural	Total
15-19	40	41	41
20-24	143	198	189
25-29	180	235	226
30-34	137	211	200
35-39	113	153	148
40-44	58	92	88
45-49	16	21	20
TFR(15-49)	3.4	4.8	4.6
GFR	115	157	151
CBR	30.6	35.0	34.4

Notes: Age-specific fertility rates are per 1,000 women. Rates for age group 45-49 may be slightly biased due to truncation. Rates are for the period 1-36 months prior to interview.
TFR: Total fertility rate is expressed per woman.
GFR: General fertility rate is expressed per 1,000 women, age 15-44.
CBR: Crude birth rate is expressed per 1,000 population.

Table 5.1, indicates that, at the national level, age-specific fertility rates (ASFRs) follow the classic pattern of countries with high fertility. This pattern is characterized by relatively high early fertility (41 births per 1,000 for women age 15-19), followed by a rapid increase to higher levels for women age 20-24 (189 per 1,000), age 25-29 (226 per 1,000), and age 30-34 (200 per 1,000). This high fertility is sustained over a long period (148 per 1,000 even at age 35-39) before declining precipitously at the very end of the childbearing years (20 per 1,000 at age 45-49). At the end of her childbearing years, a Rwandan woman has had an average of 4.6 children. Even though the current TFR is high, it has declined from an estimated TFR of 6.1 in the 2005 RDHS. The data in Table 5.1 also show clear differentials in fertility by residence: women in urban areas have lower fertility (3.4) than those in rural areas (4.8). This means that, if current fertility levels were to remain constant, by the end of her childbearing years a woman living in a rural area would have an average of 1.4 children more than a woman living in an urban area.

Table 5.1 also shows the crude birth rate (CBR), or average number of live births annually in the total population, estimated at 34 per 1,000 for the country as a whole, and shows the general fertility rate (GFR), or the average number of live births per 1,000 women of reproductive age (age 15-44), estimated here at 151 per 1,000. Like the TFR, these two indicators vary significantly by residence. Rural areas have a GFR of 157 per 1,000, which means that 1,000 women in rural areas are giving birth to an average of 42 more children annually than their urban counterparts (GFR of 115 per 1,000). Similarly, the CBR for rural areas (35 per 1,000) is four points higher than the CBR for urban areas (31 per 1,000).

Table 5.2 presents fertility rates by background characteristic. The TFR varies by province, ranging from a high of 5.0 children per woman in the West province to a low of 3.5 children per woman in the City of Kigali. In other words, women in the West province have an average of 1.5 more children than women in the City of Kigali.

The TFR relates to educational attainment, varying from a low of 3.0 children for women with secondary education and higher, to a high of 5.4 for women with no education. On average a woman with no education (TFR of 5.4) has 0.6 children more than a woman who has attended primary school (TFR of 4.8) and 2.4 more children than a woman who has attended secondary school and higher (3.0).

Table 5.2 Fertility by background characteristics

Total fertility rate for the three years preceding the survey, percentage of women age 15-49 currently pregnant, and mean number of children ever born to women age 40-49 years, by background characteristics, Rwanda 2010

Background characteristic	Total fertility rate	Percentage women age 15-49 currently pregnant	Mean number of children ever born to women age 40-49
Residence			
Urban	3.4	7.3	5.1
Rural	4.8	6.9	6.0
Province			
City of Kigali	3.5	7.2	5.1
South	4.6	6.2	5.3
West	5.0	7.4	6.4
North	4.1	6.5	6.2
East	4.9	7.7	6.3
Education			
No education	5.4	7.4	6.4
Primary	4.8	7.5	5.8
Secondary and higher	3.0	4.3	4.7
Wealth quintile			
Lowest	5.4	7.5	5.7
Second	5.2	7.3	5.9
Middle	4.5	7.3	6.1
Fourth	4.4	7.0	6.4
Highest	3.4	6.0	5.3
Total	**4.6**	**7.0**	**5.9**

Note: Total fertility rates are for the period 1-36 months prior to interview.

Table 5.2 shows the mean number of live births for women age 40 to 49. This figure is an indicator of completed, or cumulative, fertility. Unlike the TFR, which measures the current or recent fertility of women age 15 to 49, cumulative fertility shows the past fertility of women surveyed at the end of their childbearing years. In a population whose fertility does not change, the cumulative fertility rate more or less coincides with the TFR. But TFRs that are lower than the mean number of children ever born to women at the end of their childbearing years indicate a downward trend in fertility.

In Rwanda, the total cumulative fertility rate is estimated at 5.9 children. This is higher than the TFR (4.6). The difference, though small (1.3), suggests a substantial decline in fertility. In the 1992 RDHS, the difference between the two rates was 1.5 children; in the 2000 RDHS, it was 1 child, and in 2005 RDHS, it was 0.5.

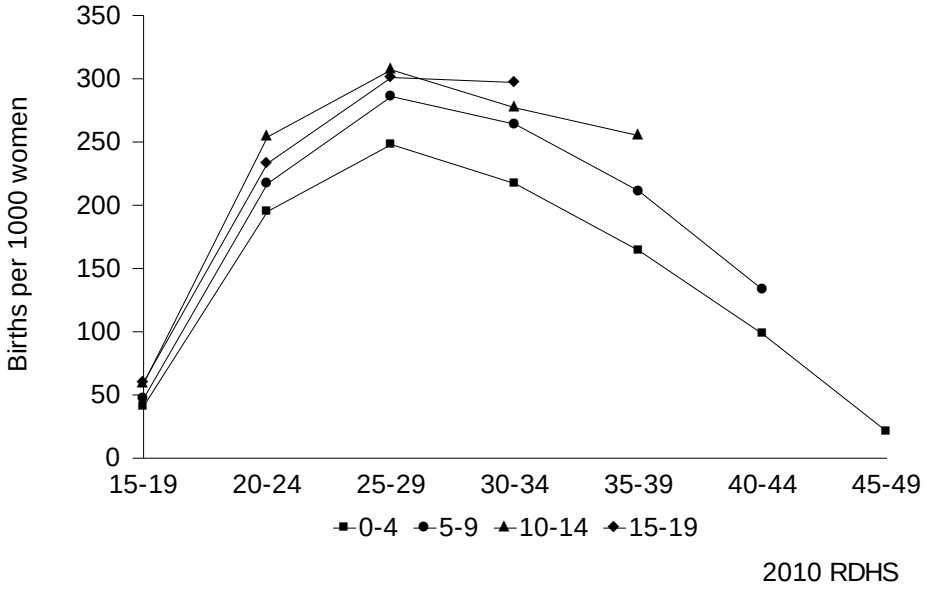
The fertility results by background characteristics show cumulative fertility rates above the TFR for all categories, indicating that fertility is declining for all women. However, the difference between the cumulative fertility (number of children ever born) and the TFR is greatest in the North province (2.1 children) and in the wealthiest households (1.9 children).

Table 5.2 shows the percentage of women who reported being pregnant at the time of the survey. At the national level, 7 percent of women age 15-49 reported being pregnant. This is likely an underestimate because women in the early stages of pregnancy may be unaware or unsure of their pregnancy status. Age, residence, culture, and/or beliefs may also affect a woman's willingness to report her condition. In Rwanda, women generally declare their pregnancies only when their condition becomes visible. For these reasons, the differentials in pregnancy rates shown here must be interpreted with a great deal of caution. It should be noted, however, that the findings are generally consistent with current fertility levels. In fact, the lowest pregnancy rates are observed for women with a secondary education and higher (4.3 percent), for women living in the wealthiest households (6.0 percent), and for women living in South province (6.2 percent). These groups also have among the lowest fertility levels, except for South province.

5.2 FERTILITY TRENDS

Two national demographic data collection efforts are conducted regularly in Rwanda: the General Population and Housing Census and the Demographic and Health Survey (DHS). The censuses of 1978, 1991, and 2002 gathered information on natural population dynamics and were used to estimate fertility levels for those years by asking questions about births that occurred in the 12 months preceding the survey. This method generally results in underestimates of fertility levels. The DHS surveys employ a more accurate method (women's birth histories), which yields more reliable results. Yet the various RDHS surveys (1992, 2000, 2005, and 2007-08) and the censuses of 1991 and 2002 have produced more or less similar results with respect to the TFR, which fluctuates around 6. This means that fertility during the period 1992-2008 remained relatively stable in Rwanda. Since 2007-08 the fertility level has declined considerably, and in 2010 the rate reached 4.6 children per woman.

Figure 5.1 Age-Specific Fertility Rates for Five-Year Periods Preceding the Survey



The data collected in the RDHS were used to track fertility trends over the course of five-year periods up to 20 years prior to the survey (Table 5.3.1 and Figure 5.1). Among young women, age 15-19, the ASFR declined progressively by age group. These women had an ASFR of 60 per thousand in the period 15-19 years before the survey. The ASFR for the same age group dropped to 41 per thousand in the period 0-4 years prior to the survey. For women age 20-49 at birth of their child, fertility rates have also declined over time. For instance, among mothers in age group 20-24 at birth, the ASFR fell from 254 per thousand during the 10-14 years preceding the survey to 195 per thousand during years 0-4 before the survey. The ASFR increased only briefly from 233 per thousand to 254 per thousand prior to the survey and then dropped again.

Table 5.3.1 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, Rwanda 2010

	Number of years preceding survey			
Mother's age at birth	0-4	5-9	10-14	15-19
15-19	41	47	59	60
20-24	195	217	254	233
25-29	248	286	307	301
30-34	217	264	277	[297]
35-39	164	211	[255]	-
40-44	98	[133]	-	-
45-49	[21]	-	-	-

Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated. Rates exclude the month of interview.

Table 5.3.2 shows age-specific fertility rates (ASFRs) for the five DHS surveys. Figure 5.2 examines past fertility trends based on the results of the 2005 RDHS, the 2007-2008 RIDHS, and the 2010 RDHS. The most recent three ASFR curves follow a similar pattern: they increase rapidly with age, peak between age 25 and age 29, and then taper off steadily as they move toward the age group 45 to 49.

Table 5.3.2 Trends in fertility

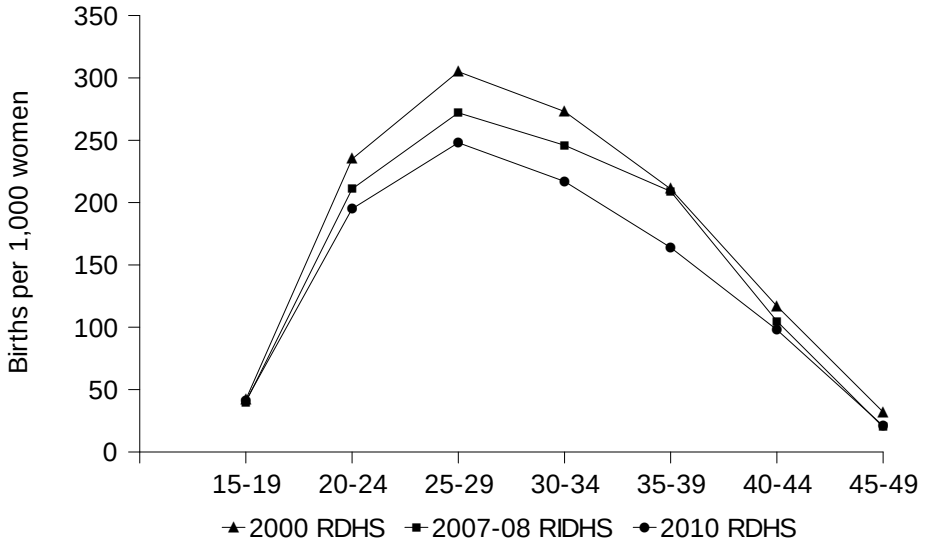
Age-specific fertility rates (per 1,000 women) and total fertility rates, 1992 RDHS, 2000 RDHS, 2005 RDHS, 2007-08 RIDHS, and 2010 RDHS.

Age group	1992 RDHS	2000 RDHS	2005 RDHS	2007-08 RIDHS	2010 RDHS
15-19	60	52	42	40	41
20-24	227	240	235	211	195
25-29	294	272	305	272	248
30-34	270	257	273	246	217
35-39	214	190	211	209	164
40-44	135	123	117	105	98
45-49	46	33	32	20	21
Total	**6.2**	**5.8**	**6.1**	**5.5**	**4.6**

Note: Age-specific fertility rates are per 1,000 women.

It should be emphasized that the ASFR at age group 45-49 declines slowly over time, demonstrating high levels of late fertility. However, the curve for the current survey (2010 RDHS) drops lower after age 40 than the other three curves, indicating a trend toward declining fertility in women of these generations.

Figure 5.2 **Trends in Age-Specific and Total Fertility Rates, Various Sources**



2010 RDHS

5.4 CHILDREN EVER BORN AND LIVING

Table 5.4 presents by age group the distribution of all women and currently married women by number of children ever born, mean number of children ever born, and mean number of living children. Data on the number of children ever born reflect the accumulation of births to women over their entire reproductive lifespan and therefore have limited reference to current fertility levels, particularly when a country has experienced a decline in fertility. However, the information on children ever born is useful for observing how average family size varies across age groups and also for observing the level of primary infertility.

The results show that 95 percent of women age 15-19 have never given birth. This proportion declines to 19 percent for women age 25-29 and to 8 percent or lower for women age 30 and older. On average, Rwandan women attain a parity of 6.4 children per woman by the end of their childbearing years. This number is relatively higher than the TFR of 4.6 per woman, a discrepancy that is attributable to the gradual decrease in fertility.

As expected, women age 40 or older have much higher parities, with substantial proportions having 10 or more births each by the end of their childbearing years. For example, 35 percent of women age 45-49 have given birth to eight or more children.

The same pattern is shown by currently married women, except that the mean number of children ever born is higher for currently married women (3.8 children) than for all women (2.4 children). The difference in the mean number of children ever born between all women and currently married women is because a substantial proportion of young, unmarried women in the former category exhibit lower fertility.

Table 5.4 Children ever born and living

Percent distribution of all women and currently married women age 15-49 by number of children ever born, mean number of children ever born, and mean number of living children, according to age group, Rwanda 2010

	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							
Age															
15-19	95.3	4.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	2,945	0.05	0.05
20-24	57.1	27.7	11.5	3.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	100.0	2,683	0.62	0.58
25-29	19.1	21.9	27.9	19.0	9.2	2.3	0.5	0.1	0.0	0.0	0.0	100.0	2,494	1.86	1.69
30-34	8.4	7.3	13.8	19.3	22.2	16.5	8.2	3.5	0.5	0.3	0.0	100.0	1,822	3.44	3.06
35-39	4.3	3.3	7.9	12.3	17.7	17.8	16.4	10.9	6.2	2.2	0.9	100.0	1,447	4.70	3.98
40-44	4.2	4.2	4.7	8.2	10.9	14.8	16.8	14.3	11.0	6.3	4.6	100.0	1,168	5.50	4.48
45-49	2.0	3.2	3.8	5.4	9.6	11.8	13.6	15.5	13.5	10.1	11.6	100.0	1,112	6.37	4.99
Total	**37.3**	**12.3**	**10.8**	**9.1**	**8.3**	**6.7**	**5.5**	**4.1**	**2.8**	**1.6**	**1.4**	**100.0**	**13,671**	**2.42**	**2.05**
								CURRENTLY MARRIED WOMEN							
Age															
15-19	44.1	50.9	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	89	0.61	0.59
20-24	16.6	49.0	26.1	7.2	1.1	0.0	0.0	0.0	0.0	0.0	0.0	100.0	998	1.27	1.18
25-29	5.1	21.3	34.2	24.1	11.8	2.7	0.7	0.1	0.0	0.0	0.0	100.0	1,773	2.28	2.07
30-34	2.3	6.2	13.0	20.5	24.5	18.8	9.8	4.0	0.6	0.3	0.0	100.0	1,458	3.80	3.40
35-39	1.8	2.0	4.9	10.5	17.4	19.9	18.8	13.3	7.6	2.7	1.1	100.0	1,112	5.15	4.39
40-44	1.7	1.9	2.3	6.9	9.8	14.3	18.3	16.9	13.5	8.1	6.5	100.0	780	6.14	5.08
45-49	1.5	1.6	2.3	3.2	6.0	10.3	13.0	17.3	15.9	12.7	16.1	100.0	688	7.04	5.60
Total	**5.4**	**15.2**	**16.7**	**14.4**	**12.9**	**10.5**	**8.6**	**6.7**	**4.5**	**2.7**	**2.5**	**100.0**	**6,897**	**3.81**	**3.27**

5.5 BIRTH INTERVALS

Birth intervals, or the length of time between two successive live births, are important not only because they influence the health status of both mother and child but also because they play a role in fertility analysis and in design of reproductive health programs. Currently, short birth intervals (less than 24 months) are considered harmful to the health and nutritional status of children and increase their risk of death. In addition, short birth intervals expose a woman to a greater risk of complications during and after pregnancy (miscarriage or eclampsia, for

example) and are associated with high cumulative fertility. Table 5.5 shows the distribution of nonfirst births across the five years preceding the survey by the number of months since the preceding birth.

Table 5.5 shows that 7 percent of births occur less than 18 months after the preceding birth and that 13 percent of children are born between 18 and 24 months after the birth of their immediately older sibling. Thus, in almost 20 percent of all cases, the birth interval is less than two years. However, a large proportion of births (39 percent) occurs between two and three years after the preceding birth. About two in five children (41 percent) are born three or more years after the birth of their next oldest sibling. The mean duration of the birth interval is slightly more than two and a half years (32.7 months), which means that half of all births take place 32.7 months after the preceding birth.

Table 5.5 Birth intervals

Percent distribution of nonfirst births in the five years preceding the survey by number of months since preceding birth and by median number of months since preceding birth, according to background characteristics, Rwanda 2010

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	48-59	60+			
Age									
15-19	*	*	*	*	*	*	100.0	12	*
20-29	11.5	17.4	41.2	19.7	6.1	4.0	100.0	2,421	29.3
30-39	5.4	10.8	40.6	21.9	10.6	10.9	100.0	3,316	33.7
40-49	3.7	7.6	30.4	23.6	14.6	20.1	100.0	1,079	39.9
Sex of preceding birth									
Male	7.2	12.4	38.5	21.8	10.1	10.0	100.0	3,410	33.0
Female	7.4	12.9	39.9	20.9	9.1	9.8	100.0	3,419	32.4
Survival of preceding birth									
Living	5.2	12.0	40.5	22.3	10.0	9.8	100.0	6,136	33.2
Dead	25.7	18.0	27.3	12.6	6.2	10.2	100.0	693	25.6
Birth order									
2-3	10.2	14.4	38.6	19.4	7.8	9.5	100.0	3,092	31.3
4-6	5.0	10.9	39.2	23.1	11.3	10.5	100.0	2,642	34.1
7+	4.8	11.7	40.9	22.6	10.6	9.3	100.0	1,095	33.4
Residence									
Urban	12.5	13.2	29.8	18.1	11.6	14.8	100.0	715	34.0
Rural	6.7	12.6	40.3	21.7	9.4	9.3	100.0	6,114	32.6
Province									
City of Kigali	12.9	13.4	30.6	18.1	9.7	15.3	100.0	560	33.2
South	5.8	12.9	38.5	22.1	9.5	11.1	100.0	1,635	32.7
West	6.7	11.7	43.6	21.2	9.3	7.6	100.0	1,729	32.2
North	5.7	12.0	41.4	21.9	9.9	9.1	100.0	1,080	33.0
East	8.4	13.5	37.0	21.5	9.9	9.8	100.0	1,825	32.8
Education									
No education	5.9	12.8	37.1	24.4	10.1	9.6	100.0	1,461	33.8
Primary	7.3	12.7	41.1	20.5	9.2	9.2	100.0	4,856	32.2
Secondary and higher	11.3	11.9	26.9	20.8	12.1	17.0	100.0	512	35.9
Wealth quintile									
Lowest	6.2	11.1	38.6	24.5	9.1	10.5	100.0	1,625	33.7
Second	5.4	11.1	44.3	20.7	9.9	8.6	100.0	1,483	32.7
Middle	7.4	13.7	40.7	21.1	10.0	7.1	100.0	1,361	31.8
Fourth	8.3	14.1	37.5	21.5	8.5	10.1	100.0	1,305	32.2
Highest	10.4	13.9	33.1	17.7	10.8	14.0	100.0	1,055	33.1
Total	**7.3**	**12.6**	**39.2**	**21.4**	**9.6**	**9.9**	**100.0**	**6,829**	**32.7**

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. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

With respect to age, birth intervals are shorter for younger women; that is, the younger the woman, the shorter the birth interval. The mean duration increases from 29.3 months at age 20 to 29 to 39.9 months at age 40 to 49. Differentials by gender are not significant (33.0 months for boys and 32.4 months for girls). The results also show an increase in the length of birth intervals associated with birth order, from 31.3 months for birth orders 2-3 to

33.4 months for birth orders 7 and higher. Survival of the preceding child is an important factor. When the preceding child has died, the birth interval between that birth and the next birth is a median of 25.6 months. When the preceding child is alive, the birth interval is a median of 33.2 months, or approximately eight months later than the birth following the death of the preceding sibling.

The median interval between births is slightly lower in rural areas (32.6 months) than in urban areas (34.0 months). In 2010, the differential between rural and urban areas was 1.4 months; in 2005, it was 1.5 months; in 2000, it was 3.2 months. With respect to provinces, the birth interval varies from a low of 32.2 months in the West province to a high of 33.2 months in the City of Kigali.

Regarding mother's level of educational attainment, birth intervals for women with a secondary education or higher are longer (35.9 months) than birth intervals for women with primary education (32.2 months). Apparently, wealth does not influence the length of birth intervals: the lowest birth interval is located at the middle wealth quintile, and the highest is at the first, or lowest, wealth quintile followed closely by the fourth quintile.

5.6 EXPOSURE TO THE RISK OF PREGNANCY

Women are not exposed to the risk of another pregnancy for a period following childbirth. Exposure to the risk of pregnancy depends on several factors, including the duration of postpartum amenorrhea—the period between childbirth and the return of ovulation—and the period when a woman abstains from sexual intercourse (postpartum abstinence). These two factors jointly determine which women are insusceptible to becoming pregnant and the length of the period of insusceptibility. Women are considered insusceptible if they abstain from intercourse following childbirth and/or are amenorrheic. In the latter case, the risk of pregnancy is negligible even if sexual activity is resumed without contraceptive protection. Table 5.6 shows the percentage of births in the three years preceding the survey for which mothers are postpartum amenorrheic, abstaining, and insusceptible. It also shows median and mean durations for these indicators.

Table 5.6 Postpartum amenorrhea, abstinence and insusceptibility

Percentage of births in the three years preceding the survey for which mothers are postpartum amenorrheic, abstaining, and insusceptible, by number of months since birth, and median and mean durations, Rwanda 2010

Months since birth	Percentage of births for which the mother is:			Number of births
	Amenorrheic	Abstaining	Insusceptible[1]	
< 2	96.8	40.8	98.3	195
2-3	84.0	14.8	85.9	250
4-5	75.5	12.0	79.1	288
6-7	65.3	12.9	69.9	298
8-9	59.3	9.4	61.6	275
10-11	49.7	11.7	54.3	287
12-13	42.2	7.9	46.9	275
14-15	32.4	6.8	37.3	277
16-17	33.1	7.5	37.8	258
18-19	25.5	9.9	33.1	288
20-21	14.6	6.8	19.3	287
22-23	12.5	9.1	18.5	309
24-25	9.4	4.2	12.5	304
26-27	7.0	7.0	12.8	322
28-29	3.7	7.9	11.5	334
30-31	5.6	8.4	12.8	351
32-33	3.0	5.0	7.7	315
34-35	2.6	4.5	6.1	292
Total	**31.9**	**9.7**	**36.7**	**5,206**
Median	10.6	0.6	11.6	-
Mean	12.7	4.3	14.4	-

Note: Estimates are based on status at the time of the survey.
na = Not applicable
[1] Includes births for which mothers are either still amenorrheic or still abstaining (or both) following birth

In Rwanda, about 32 percent of women who gave birth during the three years preceding the survey were amenorrheic, and another 10 percent were abstinent. About 37 percent were insusceptible, meaning that they were either amenorrheic, abstinent, or both. The median duration of postpartum amenorrhea is 11 months, and the mean is 13 months. The duration, intensity, and frequency of exclusive breastfeeding affects the return of ovulation (see Chapter 10 on nutrition) and is partly responsible for these relatively long durations. However, the median duration of postpartum amenorrhea (10.6 months) has declined by 3.7 months compared with what it was in the 2005 RDHS (14.3 months). The median and mean durations for postpartum abstinence are very short (0.6 months and 4.3 months, respectively).

Table 5.7 Median duration of amenorrhea, postpartum abstinence, and postpartum insusceptibility

Median number of months of postpartum amenorrhea, postpartum abstinence, and postpartum insusceptibility following births in the three years preceding the survey, by background characteristics, Rwanda 2010

Background characteristic	Postpartum amenorrhea	Postpartum abstinence	Postpartum insusceptibility[1]
Mother's age			
15-29	8.7	0.7	10.5
30-49	12.3	0.6	12.8
Residence			
Urban	6.4	0.7	7.4
Rural	11.0	0.6	12.0
Province			
City of Kigali	7.3	0.8	7.9
South	11.5	0.6	13.0
West	12.0	0.6	13.2
North	10.7	0.6	11.4
East	9.7	0.9	10.4
Education			
No education	13.8	0.6	15.6
Primary	10.5	0.6	11.2
Secondary and higher	7.3	0.9	8.7
Wealth quintile			
Lowest	12.9	0.7	15.0
Second	11.9	0.6	13.6
Middle	10.2	0.6	10.8
Fourth	9.1	0.5	10.4
Highest	7.6	1.0	8.2
Total	**10.6**	**0.6**	**11.6**

Note: Medians are based on the status at the time of the survey (current status)
[1] Includes births for which mothers are either still amenorrheic or still abstaining (or both) following birth

As expected, the amenorrheic status for women who gave birth during the three years preceding the survey decreases with duration since birth: almost all the women (97 percent) remained amenorrheic for less than 2 months since the birth; three quarters (76 percent) remained amenorrheic for 4 or 5 months; approximately three in five women (59 percent) were still amenorrheic at 8-9 months; but only 7 percent remained so at 26 to 27 months. Beyond 28 months, the proportion of women for whom ovulation had not yet returned varied between 6 percent and 3 percent.

Postpartum abstinence decreases quickly over time, affecting 41 percent of women fewer than 2 months and only 15 percent of women for 2 to 3 months. The percentage of women who abstain for 4 months or longer varies from a high of 13 percent to a low of 4 percent.

Table 5.7 shows the median duration of postpartum amenorrhea, abstinence, and insusceptibility following births in the three years preceding the survey. The duration of amenorrhea varies with age: women age 15-29 have shorter periods of amenorrhea (8.7 months) than women age 30-49 (12.3 months). The duration of postpartum amenorrhea is 6.4 months in urban areas compared with 11.0 months in rural areas. By province, women in the City

of Kigali have the shortest period of amenorrhea (7.3 months), while those in the West province have the longest period (12 months). Results differ according to the level of education: women with secondary education and higher have the shortest periods of amenorrhea (7.3 months), while women with no education have the longest periods of amenorrhea (13.8 months). The duration of the postpartum amenorrhea decreases also with the level of the wealth quintile: 12.9 months for the women in the lowest quintile compared with 7.6 months for those in the highest quintile. The duration of postpartum insusceptibility follows the same pattern as that of postpartum amenorrhea.

5.7 MENOPAUSE

Women cease being exposed to the risk of pregnancy when they reach menopause. For the survey, women were considered menopausal if they were neither pregnant nor had postpartum amenorrhea and had not had a menstrual period in the six months preceding the survey, or if they reported themselves as having entered menopause.

Table 5.8 shows the percentage of women age 30-49 who are menopausal. Overall, 9 percent of women age 30-49 reported being menopausal. The proportion increases with age, rising from 5 percent for women age 30-34, to 9 percent at age 44-45, and to 29 percent at age 48-49.

Table 5.8 Menopause

Percentage of women age 30-49 who are menopausal, by age, Rwanda 2010

Age	Percentage menopausal[1]	Number of women
Age		
30-34	4.9	1,822
35-39	6.2	1,447
40-41	6.0	472
42-43	6.7	452
44-45	8.7	442
46-47	16.0	466
48-49	28.8	449
Total	**8.7**	**5,549**

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

5.8 AGE AT FIRST BIRTH

The age at which childbearing begins is an important demographic indicator because it has a direct bearing on a women's cumulative fertility, particularly when there is little or no contraceptive use. The younger a woman begins childbearing, the greater is her likelihood of having many children. At the same time, having children at too young an age can have negative repercussions on the mother's health and can put her children at risk. Table 5.9 shows the distribution of women by age at first birth and median age at first birth by age at the time of the survey.

The results show that median age at first birth has remained practically unchanged from one generation to the next (from a low of 21.9 to a high of 22.9), and no trends indicate a rise or fall in this median age.

Table 5.9 Age at first birth

Percentage of women age 15-49 who gave birth by specific exact ages, percentage who have never given birth, and median age at first birth, according to current age, Rwanda 2010

	Percentage who gave birth by exact age					Percentage who have never given birth	Number of women	Median age at first birth
Current age	15	18	20	22	25			
15-19	0.1	na	na	na	na	95.3	2,945	a
20-24	0.3	5.2	18.3	na	na	57.1	2,683	a
25-29	0.4	6.3	20.3	40.5	68.6	19.1	2,494	22.9
30-34	0.7	8.8	27.8	50.9	73.2	8.4	1,822	21.9
35-39	0.5	8.2	24.8	49.8	78.7	4.3	1,447	22.0
40-44	0.6	10.2	25.0	45.4	72.3	4.2	1,168	22.5
45-49	1.0	9.8	25.6	47.9	75.4	2.0	1,112	22.2
20-49	0.5	7.5	22.8	na	na	21.4	10,726	a
25-49	0.6	8.3	24.2	46.3	72.9	9.5	8,043	22.4

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

Table 5.9 shows a median age at first birth of 22.4 years for women age 25-49; this is 0.4 years higher than the median age at first birth observed for women of the same age in the 2005 RDHS.

Table 5.10 shows median age at first birth according to various socioeconomic characteristics. The first child arrives at a younger age for women in rural areas (22.3 years) than for those in urban areas (23.3 years). The City of Kigali has the highest median age at first birth (23.5 years), which is followed by the South province (23.2 years). In the other provinces, median age at first birth varies from a low of 21.6 years in the East province to a high of 22.2 years in the West province. Women's level of educational attainment affects the median age at first birth: women with no education (21.5 years) and women with primary education (22.4 years) have a lower median age at first birth than women with secondary and higher education (24.5 years).

Results by household wealth show that the first birth occurs later among women in the highest wealth quintile (23.3 years) compared with those in the lowest quintile (22.0 years).

Table 5.10 Median age at first birth

Median age at first birth among women age 20-49 (25-49) years, according to background characteristics, Rwanda 2010

Background characteristic	Women age 25-49
Residence	
Urban	23.3
Rural	22.3
Province	
City of Kigali	23.5
South	23.2
West	22.2
North	21.9
East	21.6
Education	
No education	21.5
Primary	22.4
Secondary and higher	24.5
Wealth quintile	
Lowest	22.0
Second	22.2
Middle	22.1
Fourth	22.3
Highest	23.3
Total	**22.4**

5.9 TEENAGE FERTILITY

Teenage fertility is an important demographic factor for many reasons. First, children born to very young mothers run a greater risk of illness and death. Second, teenage mothers are more likely to suffer complications during pregnancy and less likely to treat them, exposing them to greater risk of complications during delivery and greater risk of dying for reasons related to childbearing. Third, early childbearing seriously affects a woman's ability to pursue an education, thereby limiting her job opportunities.

Table 5.11 shows the proportion of teenagers who have already had one or more children, as well as those currently in their first pregnancy; together these two subgroups make up the proportion of teenagers who have already begun childbearing. About 6 percent of young women between the ages of 15 and 19 have already begun childbearing (5 percent are already mothers; 1 percent are pregnant for the first time). At age 15, none of the teenagers has begun childbearing, but the percentage increases steadily and rapidly with age: 3 percent of the teenagers at age 17 have already had at least one child or are pregnant for the first time. At age 19, this proportion reaches 20 percent, 16 percent of whom have already had at least one child.

Table 5.11 Teenage pregnancy and motherhood

Percentage of women age 15-19 who have had a live birth or who are pregnant with their first child, and percentage who have begun childbearing, by background characteristics, Rwanda 2010

Background characteristic	Percentage of women age 15-19 who:		Percentage who have begun childbearing	Number of women
	Have had a live birth	Are pregnant with first child		
Age				
15	0.0	0.0	0.0	677
16	0.5	0.3	0.8	655
17	2.3	1.0	3.3	530
18	7.6	2.1	9.7	605
19	16.3	4.0	20.3	478
Residence				
Urban	4.2	1.2	5.4	447
Rural	4.8	1.4	6.2	2,499
Province				
Kigali City	5.6	0.9	6.6	332
South	3.8	1.2	4.9	642
West	4.3	1.1	5.4	762
North	4.6	1.1	5.7	503
East	5.8	2.0	7.9	707
Education				
No education	20.0	4.9	24.9	87
Primary	4.6	1.5	6.1	2,132
Secondary	3.2	0.4	3.6	727
Wealth quintile				
Lowest	6.9	2.0	8.9	481
Second	5.5	1.5	7.0	570
Middle	3.8	1.7	5.5	607
Fourth	5.0	1.1	6.1	598
Highest	3.3	0.6	3.9	690
Total	**4.7**	**1.3**	**6.1**	**2,945**

The results show also that teenagers residing in rural areas begin childbearing slightly earlier than their urban counterparts. In fact, 6 percent of teenagers in rural areas have begun childbearing compared with 5 percent in urban areas. Differences are also observed among provinces: the proportion of teenagers who have begun childbearing varies from a low of 5 percent in the South province to a high of 8 percent in the East province. Early childbearing occurs more frequently among teenagers with no education (25 percent) than among those who are educated (6 percent for those have primary education and 4 percent for those with secondary education and higher). Differentials by wealth quintile are also observed: the proportion of teenagers who have begun childbearing varies from 9 percent in the lowest wealth quintile to 4 percent in the highest quintile. These differentials indicate that the standard of living affects childbearing behavior of Rwandan teenagers. Also, the proportion of teenagers who have begun childbearing has decreased from 11 percent in 1992, to 7 percent in 2000, and to 4 percent in 2005, finally increasing slightly to 6 percent in 2010.

FERTILITY PREFERENCES 6

Data on fertility preferences is used to evaluate the effectiveness of couples' efforts to control their own fertility and to assess Rwanda's future contraceptive needs not only for spacing but also for limiting the total number of births.

To obtain information about fertility preferences, the 2010 RDHS asked women how many additional children they wanted to have, how long they wanted to wait before having their next child, and the total number of children they desired. Analysis of the data covered only men and women who were married at the time of the survey.

Data on attitudes and opinions about procreation have always been somewhat controversial. Some researchers believe responses to questions about fertility preferences are subject to three potential flaws: first, they represent viewpoints, which are subject to change, rather than firm convictions; second, they do not take into account the effects of social pressure and the attitudes of other family members, particularly the husband, who can exert enormous influence over reproductive health decisions; and third, they are obtained from a sample of women of differing ages with differing birth histories. Their responses relate to medium- or long-term goals that may change over time or are of limited predictive value for the young or recently-married women who respond. The responses of older women and women at the end of their childbearing years are inevitably influenced by their birth histories.

Despite possible problems with interpretation, the data on fertility preferences can improve understanding of the factors affecting fertility in Rwanda, a country where contraceptive prevalence is increasing and fertility is starting to decline.

6.1 DESIRE FOR CHILDREN

The desire to have children in the future generally correlates with a woman's age and the number of living children she and her husband currently have.

The 2010 RDHS asked currently married women a series of questions designed to discern their desire to delay the next birth or to stop having children altogether. The results are presented in Table 6.1 by number of living children (including any current pregnancy) at the time of the survey. More than half of the respondents (52 percent) reported wanting no more children, while slightly more than two in five women (44 percent) wanted to have another child. The proportion of women who do not want more children has increased since 2005, when 42 percent of women reported not wanting additional children. As a result of this increase, the proportion of women wanting children has decreased from 2005 when 52 percent of women reported that they wanted more children. Among the women who wanted more children in the future, 8 percent wanted another child within two years, 36 percent wanted to delay the next birth by two or more years, and 0.5 percent wanted to have another child but were uncertain when. In general, more than four in five women in Rwanda (88 percent) can be considered potential candidates for family planning: those who do not want any more children (52 percent) and those who want to delay their next birth (36 percent). The results show that the proportion of women who want more children soon decreases as parity increases. In fact, the percentage of women who want more children but who want them later in life ranges from 80 percent among those with one child, to 16 percent among those with four children, and to 3 percent among those who have six children or more. On the other hand, the proportion of women who want no more children increases considerably with the number of living children, from 1 percent for women with no children, to 76 percent for women with four children, and to 92 percent for those with six children or more (Table 6.1). Women who want no more children have presumably reached their desired family size, or cumulative fertility, and should be using a

contraceptive method to avoid unwanted pregnancies. Finally, the data show that 94 percent of women with no children would like to have a child, and the majority of these women (89 percent) would like to have one soon.

Table 6.1 Fertility preferences by number of living children

Percent distribution of currently married women and currently married men age 15-49 by desire for children, according to number of living children, Rwanda 2010

Desire for children	Number of living children[1]							Total 15-49	Total 15-59
	0	1	2	3	4	5	6+		
WOMEN									
Have another soon[2]	88.5	15.0	8.1	4.6	2.5	1.1	0.5	8.3	na
Have another later[3]	5.1	79.5	61.7	35.0	15.9	8.3	3.0	35.6	na
Have another, undecided when	0.5	0.8	1.0	0.4	0.5	0.0	0.3	0.5	na
Undecided	0.0	0.8	1.6	2.6	2.3	1.4	1.5	1.6	na
Want no more	1.4	3.4	26.9	56.2	76.0	86.1	91.7	52.0	na
Sterilised[4]	0.0	0.1	0.1	1.0	1.6	2.3	0.9	0.9	na
Declared infecund	4.1	0.4	0.5	0.3	1.0	0.8	1.7	0.8	na
Missing	0.5	0.1	0.1	0.0	0.3	0.0	0.4	0.2	na
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	na
Number	**220**	**1,159**	**1,366**	**1,183**	**1,045**	**811**	**1,112**	**6,897**	**na**
MEN[5]									
Have another soon[2]	79.0	11.7	7.1	2.8	2.0	1.0	0.4	7.2	6.4
Have another later[3]	19.6	82.0	59.4	32.3	13.6	6.5	5.0	37.4	31.3
Have another, undecided when	0.0	0.3	0.2	0.2	0.0	0.2	0.3	0.2	0.2
Undecided	0.0	0.0	1.2	0.8	0.2	0.4	0.8	0.6	0.5
Want no more	0.0	5.2	32.0	63.5	83.2	90.9	92.3	53.9	60.3
Sterilised[4]	0.0	0.0	0.0	0.4	0.0	0.0	0.7	0.2	0.2
Declared infecund	0.0	0.4	0.0	0.0	0.3	0.0	0.2	0.2	0.7
Missing	1.3	0.3	0.2	0.0	0.6	0.9	0.5	0.4	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	**88**	**515**	**553**	**465**	**383**	**277**	**419**	**2,699**	**3,287**

na = Not applicable
[1] The number of living children includes current pregnancy for women.
[2] Wants next birth within 2 years
[3] Wants to delay next birth for 2 or more years
[4] Includes both female and male sterilisation
[5] The number of living children includes one additional child if respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

Unlike most countries in sub-Saharan Africa, the proportion of men in Rwanda who want no more children (54 percent) is similar to that among women. The same is true for the proportion of men who want more children later (37 percent). As with women, the proportion of men who want more children decreases as parity increases, and the proportion of men who want no more children increases as parity increases. The percentage of men who want more children ranges from a high of 82 percent among those with one child, to 14 percent among those with four children, and to 5 percent among those who have six or more children. It should be noted that, at each parity level, the differences between men and women who want more children are minimal.

Table 6.2.1 Desire to limit childbearing: Women

Percentage of currently married women age 15-49 who want no more children, by number of living children, according to background characteristics, Rwanda 2010

Background characteristic	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Residence								
Urban	1.6	6.5	37.7	67.8	82.5	85.5	90.7	49.8
Rural	1.3	2.8	25.0	55.7	76.8	88.8	92.9	53.4
Province								
City of Kigali	2.0	6.8	37.4	65.0	84.6	91.3	90.2	48.6
South	0.0	2.3	29.6	62.1	80.6	91.5	95.6	55.4
West	0.0	3.1	18.3	49.5	66.7	80.0	91.3	48.8
North	3.6	3.7	20.5	52.9	78.0	88.4	88.4	52.2
East	2.1	2.8	30.8	59.2	81.7	92.4	95.7	56.8
Education								
No education	3.3	6.3	31.0	61.7	75.5	88.9	91.9	64.5
Primary	1.2	2.8	25.5	54.6	77.4	87.5	93.1	49.9
Secondary and higher	0.0	4.7	31.8	68.8	82.1	94.3	93.0	50.8
Wealth quintile								
Lowest	0.0	3.0	27.3	55.3	76.9	90.1	93.9	51.7
Second	3.2	3.2	29.2	59.4	75.6	88.0	92.8	53.9
Middle	2.4	1.7	17.6	55.4	75.7	87.0	93.4	49.6
Fourth	1.6	4.6	28.3	54.2	77.0	90.2	92.5	56.9
Highest	0.0	4.9	32.5	62.4	82.8	86.2	91.0	52.3
Total	**1.4**	**3.5**	**27.0**	**57.2**	**77.5**	**88.4**	**92.7**	**52.9**

Note: Women who have been sterilised are considered to want no more children.
[1] The number of living children includes the current pregnancy.

Tables 6.2.1and 6.2.2 show by background characteristics the percentages of women and men who want no more children. Results by residence show that the proportions of women and men who want no more children are somewhat higher in rural areas (53 percent for women; 55 percent for men) than in urban areas (50 percent for women; 49 percent for men). The situation is the reverse of the previous survey where women and men of urban areas were more likely to want to limit births (49 percent for women; 48 percent for men) than those of rural areas (42 percent for women; 43 percent for men).

By province, the proportion of women who want no more children ranges from a low of 49 percent in the City of Kigali to a high of 57 percent in East province. Results by level of education show that women with no education are more likely to want to limit births (65 percent) than women with primary (50 percent) or secondary education (51 percent). The effect of wealth on the desire to limit the births is not remarkable: the highest proportion is located at the fourth quintile (57 percent) and the lowest at the middle wealth quintile (50 percent).

Married women who do not use contraception and who report not wanting any more children (desiring, therefore, to limit births) or who report wanting to wait two or more years before their next birth (desiring, therefore, to space births) are considered to have an unmet family planning need. Women who report having unmet need and women currently using contraception make up the total potential demand for family planning.

As for women, men with no education are more likely to want to limit births (62 percent) than men with primary (52 percent) or secondary education (54 percent). The results for men, according to province, are similar to those for women: City of Kigali has the lowest proportion of men who have reached their desired number of children (48 percent), and North province has the highest (58 percent).

Table 6.2.2 Desire to limit childbearing: Men

Percentage of currently married men age 15-49 who want no more children, by number of living children, according to background characteristics, Rwanda 2010

Background characteristic	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Residence								
Urban	0.0	8.3	36.5	65.3	87.8	93.2	93.5	48.7
Rural	0.0	4.5	31.1	63.7	82.4	90.7	92.9	55.0
Province								
City of Kigali	0.0	9.2	39.9	63.6	92.0	96.6	100.0	48.0
South	0.0	3.5	25.4	66.8	80.9	95.6	95.2	55.2
West	0.0	5.7	29.0	59.6	72.3	84.6	86.1	51.3
North	0.0	4.9	36.8	55.5	86.8	95.9	97.3	57.7
East	0.0	4.1	33.5	69.7	89.5	87.6	93.7	56.2
Education								
No education	0.0	5.1	27.6	64.3	82.5	90.5	90.9	62.3
Primary	0.0	4.7	32.2	64.4	82.5	91.3	92.8	52.2
Secondary and higher	0.0	7.7	35.3	61.4	87.1	89.6	98.3	54.2
Wealth quintile								
Lowest	0.0	3.3	28.2	68.7	79.3	93.8	93.4	52.2
Second	0.0	3.4	35.6	63.7	84.6	87.2	88.9	53.3
Middle	0.0	5.9	31.5	60.0	84.5	89.9	92.9	53.4
Fourth	0.0	4.5	35.6	64.6	83.9	93.0	92.0	59.1
Highest	0.0	8.1	29.8	63.4	83.7	89.9	98.4	52.0
Total 15-49	**0.0**	**5.2**	**32.0**	**64.0**	**83.2**	**90.9**	**92.9**	**54.1**
50-59	**27.8**	**41.5**	**71.1**	**84.0**	**88.1**	**93.9**	**93.0**	**89.8**
Total 15-59	**1.1**	**5.9**	**33.6**	**65.5**	**83.9**	**91.6**	**92.9**	**60.5**

Note: Men who have been sterilised or who state in response to the question about desire for children that their wife has been sterilised are considered to want no more children.
[1] The number of living children includes one additional child if respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

The proportion of men who want no more children increases slowly from the poorest quintile (52 percent) to the fourth quintile (59 percent); surprisingly, at the richest quintile, this proportion drops to the lowest proportion of men who want no more children (52 percent).

6.2 IDEAL NUMBER OF CHILDREN

Women's reproductive behaviour can be influenced by the ideal number of children they would like to have and the ideal number their husband or partner would like to have. To determine this ideal number, the 2010 RDHS asked all women surveyed one of the following two questions:

- To women with no living children: *If you could choose the exact number of children you would like to have in your lifetime, how many would you have?*
- To women with living children: *If you could go back to the time when you had no children and choose the exact number of children you would like to have in your lifetime, how many would you have chosen?*

These seemingly simple questions may be embarrassing, particularly for women with living children who may wish to specify an ideal number that differs from the number of children they already have. It may also be difficult for a woman to specify an ideal number that is lower than her current cumulative fertility.

The ideal number of children reported in Table 6.3 by all women is 3.3 and the ideal number reported by married women is 3.6. In both cases, the ideal is lower than the TFR of 4.6, which means that women desire a lower cumulative fertility. An examination of the distribution of reported ideal family size shows that, for 85 percent of women, the ideal number of children ranges from 2 to 4. For 36 percent of the women, the ideal number of children is 3; for about one quarter (26 percent), it is 2; and for more than two in four women (23 percent), it is 4. For 6 percent of women, the ideal number of children is either 5 or 6. The proportion of women who visualize the ideal number of children fewer than 2 is very low—only 2 percent.

Table 6.3 Ideal number of children

Percent distribution of women and men age 15-49 by ideal number of children, and mean ideal number of children for all respondents and for currently married respondents, according to the number of living children, Rwanda 2010

Ideal number of children	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
WOMEN								
0	1.5	0.2	0.3	0.2	0.1	0.0	0.4	0.7
1	2.0	3.4	0.9	1.5	1.1	1.2	0.8	1.7
2	37.4	33.5	22.2	11.6	14.5	14.8	11.2	25.8
3	41.6	46.0	41.6	35.5	21.4	22.7	19.9	36.2
4	13.7	13.3	26.8	34.8	38.3	32.7	31.7	23.1
5	2.1	1.9	5.0	9.3	12.8	11.5	12.7	5.9
6+	0.8	1.1	2.6	6.0	10.2	15.6	21.1	5.5
Non-numeric responses	0.9	0.5	0.7	1.1	1.7	1.5	2.3	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	4,926	1,894	1,762	1,504	1,306	984	1,295	13,671
Mean ideal number children for:[2]								
All women	2.8	2.8	3.2	3.7	3.9	4.1	4.5	3.3
Number	**4,882**	**1,884**	**1,751**	**1,487**	**1,284**	**969**	**1,266**	**13,523**
Women currently in union	2.9	2.9	3.2	3.7	3.9	4.1	4.5	3.6
Number	**217**	**1,154**	**1,357**	**1,175**	**1,028**	**800**	**1,087**	**6,817**
MEN								
0	0.3	0.5	0.5	0.2	0.7	0.8	1.2	0.4
1	2.3	3.0	3.0	3.7	1.8	2.4	3.6	2.6
2	40.4	37.4	24.6	24.3	28.2	29.1	23.4	34.4
3	43.4	48.4	52.2	44.4	31.1	35.0	39.2	43.3
4	11.7	8.8	16.5	22.2	29.2	20.7	24.0	15.3
5	1.5	0.8	1.7	3.6	6.9	7.1	3.6	2.4
6+	0.5	1.2	1.5	1.7	1.8	4.2	4.9	1.4
Non-numeric responses	0.0	0.0	0.0	0.0	0.3	0.8	0.2	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	2,898	626	583	476	390	282	432	5,687
Mean ideal number children for:[2]								
All men	2.7	2.7	2.9	3.0	3.1	3.2	3.2	2.8
Number	**2,898**	**626**	**583**	**476**	**389**	**280**	**431**	**5,683**
Men currently in union	2.6	2.7	2.9	3.0	3.1	3.2	3.2	3.0
Number	**88**	**515**	**553**	**465**	**382**	**275**	**418**	**2,695**
Mean ideal number children for men 15-59:[2]								
All men	2.7	2.7	2.9	3.0	3.1	3.1	3.1	2.9
Number	**2,912**	**639**	**612**	**520**	**458**	**371**	**810**	**6,323**
Men currently in union	2.6	2.7	2.9	3.0	3.1	3.1	3.2	3.0
Number	**91**	**525**	**576**	**503**	**444**	**357**	**787**	**3,283**

[1] The number of living children includes current pregnancy for women.
[2] Means are calculated excluding respondents who gave non-numeric responses.
[3] The number of living children includes one additional child if respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

The results also show that the mean ideal family size increases from 2.8 children for all women with no children to 4.5 children for those with 6 children or more. The finding is almost the same for women who were married at the time of the survey.

The ideal number of children for men is approximately 2.8 for all men and 3.0 for married men. As with the women, the men reported an ideal number of children that was lower than the TFR. For 93 percent the ideal number

of children ranges from 2 to 4: for 43 percent, the ideal number of children is 3, for 34 percent it is 2, and for 15 percent it is 4. Only 2 percent would like to have 5 children, and 1 percent desires 6 children. Only 3 percent would like to have fewer than 2 children.

Table 6.4 shows the mean ideal number of children for all women, according to current age and background characteristics. The ideal number of children does not vary much by age: for women age 15 to 19, the ideal is 2.7 children, for those age 25-29, the ideal is 3.2, and for those age 45 to 49 it is 4.3 children.

Table 6.4 Mean ideal number of children

Mean ideal number of children for all women age 15-49 by background characteristics, Rwanda 2010

Background characteristic	Mean	Number of women[1]
Age		
15-19	2.7	2,924
20-24	2.8	2,668
25-29	3.2	2,481
30-34	3.6	1,796
35-39	3.8	1,429
40-44	4.0	1,147
45-49	4.3	1,078
Residence		
Urban	3.1	2,045
Rural	3.3	11,477
Province		
City of Kigali	3.0	1,587
South	3.2	3,155
West	3.5	3,272
North	3.2	2,262
East	3.4	3,247
Education		
No education	3.8	2,080
Primary	3.3	9,242
Secondary and higher	2.9	2,200
Wealth quintile		
Lowest	3.4	2,579
Second	3.4	2,637
Middle	3.3	2,699
Fourth	3.4	2,659
Highest	3.1	2,947
Total	**3.3**	**13,523**

[1] Number of women who gave a numeric response

This ideal number is the same in urban and in rural areas (3.1 and 3.3); similarly, in all provinces, the ideal number of children is not very different. The highest number is located in West province (3.5) and the lowest number is in the City of Kigali (3 percent). Also, the higher the level of education, the lower is the mean ideal number of children: 3.8 for women with no education compared with 2.9 for women with a secondary education and higher. The desired cumulative fertility does not vary much with household wealth, ranging from 3.4 children in the lowest, second, and fourth wealth quintiles to 3.3 children in the middle wealth quintile and to 3.1 in the highest quintile.

6.3 FERTILITY PLANNING STATUS

For each child born in the five years preceding the survey and for the current pregnancy (if the respondent was pregnant), each mother was asked if she had wanted to be pregnant at that time, if she would have preferred to be pregnant later, or if she had not wanted to become pregnant at all. The responses to these questions were used to measure couples' effectiveness in controlling their fertility. Such questions require a woman to concentrate in order to remember her desires accurately at one or more specific times during the past five years. The data may be subject

to rationalisation, as an undesired pregnancy often results in the birth of a child to which the mother later becomes attached.

Table 6.5 shows that more than four in five births (87 percent) were wanted, either at the time they occurred or later. Most of these births (62 percent) occurred at the desired time; 25 percent occurred earlier than the women would have liked. Unwanted pregnancies represented approximately 13 percent of the births.

Table 6.5 Fertility planning status

Percent distribution of births to women age 15-49 in the five years preceding the survey (including current pregnancies), by planning status of the birth, according to birth order and mother's age at birth, Rwanda 2010

Birth order and mother's age at birth	Planning status of birth				Total	Number of births
	Wanted then	Wanted later	Wanted no more	Missing		
Birth order						
1	79.8	18.8	1.1	0.3	100.0	2,534
2	64.1	33.5	2.1	0.2	100.0	1,990
3	61.5	33.3	5.1	0.0	100.0	1,503
4+	50.7	21.7	27.4	0.2	100.0	4,067
Mother's age at birth						
<20	59.5	37.1	3.1	0.3	100.0	593
20-24	71.7	25.6	2.4	0.3	100.0	2,806
25-29	64.5	29.5	6.0	0.1	100.0	2,978
30-34	59.6	24.0	16.3	0.1	100.0	1,928
35-39	51.6	17.6	30.7	0.1	100.0	1,139
40-44	41.9	8.4	49.4	0.3	100.0	585
45-49	27.2	1.7	71.1	0.0	100.0	66
Total	**62.3**	**25.1**	**12.5**	**0.2**	**100.0**	**10,093**

The great majority of births are desired and arrive according to the desired timing, regardless of birth order. However, the percentage of women reporting that a birth was unplanned increased regularly starting with the birth of the first child (1 percent), increased slightly with the third child (5 percent), and finally peaked up at four or more children when more than one quarter of the women (27 percent) reported that the birth was unplanned. In fact, the results show that 80 percent of first births arrived at the desired time compared with 64 percent of second births and 51 percent of fourth or higher order births.

Beginning at age 20, the percentage of planned births decreases with the age of the mother: dropping from 72 percent for women age 20-24 to 27 percent for women age 45-49. In fact, births among women who had children when they were older (age 45 to 49) seem to be less well planned: 71 percent of births were not wanted at this age. It must be noted also that for women less than age 20 at the time of birth, only 60 percent of the births were planned, 37 percent of the births were wanted later in life, and 3 percent were unwanted.

Table 6.6 compares the total wanted fertility rate (TWFR) with the current total fertility rate (TFR) for the five years preceding the survey. Calculation of the TWFR is the same as for the TFR, except that unwanted births are omitted. If all unwanted births were eliminated, the TFR for Rwandan women would be 3.1 children rather than 4.6 children.

Table 6.6 Wanted fertility rates

Total wanted fertility rates and total fertility rates for the three years preceding the survey, by background characteristics, Rwanda 2010

Background characteristic	Total wanted fertility rates	Total fertility rate
Residence		
Urban	2.6	3.4
Rural	3.2	4.8
Province		
City of Kigali	2.6	3.5
South	3.2	4.6
West	3.4	5.0
North	2.7	4.1
East	3.4	4.9
Education		
No education	3.8	5.4
Primary	3.3	4.8
Secondary and higher	2.2	3.0
Wealth quintile		
Lowest	3.7	5.4
Second	3.6	5.2
Middle	3.1	4.5
Fourth	3.0	4.4
Highest	2.4	3.4
Total	**3.1**	**4.6**

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 5.2.

The TWFR is higher in rural areas (3.2) than in urban areas (2.6). It is lowest in the City of Kigali (2.6) and highest in West and East provinces (3.4). It decreases as the level of education increases, from 3.8 percent for women with no education to 2.2 percent for women with a secondary level of education. It also decreases with the increase of the wealth quintile: the lowest TWFRs are found among women with the greatest household wealth (2.4 percent), and the highest TWFRs are found among women with the lowest household wealth (3.7).

FAMILY PLANNING 7

This chapter presents the 2010 Rwanda Demographic and Health Survey (RDHS) results on contraceptive prevalence, knowledge, attitudes, and behaviour. Although the focus is on women, some results from the men's survey are also presented because men play an important role in the realisation of reproductive health goals. Comparisons are also made, where feasible, with findings from previous surveys to evaluate trends occurring in Rwanda over the past decade.

7.1 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. The interviewer collected data on knowledge of contraception by describing the method and asking whether the respondent recognised it. Information was collected on 11 modern family planning methods: female and male sterilisation, pills, intrauterine devices (IUDs), injectables, implants, male and female condoms, lactational amenorrhoea method (LAM), emergency contraception, and Standard Days Method (SDM). Information was also collected on two traditional methods: rhythm and withdrawal. Any other traditional method mentioned spontaneously by the respondent was recorded on the questionnaire. Prompted and unprompted knowledge are combined in this report.

Table 7.1 shows that knowledge of at least one method of contraception is universal among both women and men in Rwanda regardless of marital status and sexual experience. Men are slightly more likely than women to have heard of a modern method (100 and 99 percent, respectively) and a traditional method (91 and 90 percent, respectively). The mean number of methods known is a rough indicator of the breadth of knowledge of family planning methods. All women and men age 15-49 know an average of 9.8 contraceptive methods. Currently married women and men are more likely than sexually active unmarried women and men to know about family planning methods. Modern methods are more widely known than traditional methods. More than 9 in 10 women have heard about the male condom, injectables, and the pill. Emergency contraception is the least known modern method among women and men. The most well-known contraceptive methods among men are the male condom and injectables.

Table 7.1 Knowledge of contraceptive methods

Percentage of all respondents, currently married respondents, and sexually active unmarried respondents age 15-49 who know any contraceptive method, by specific method, Rwanda 2010

Method	Women			Men		
	All women	Currently married women	Sexually active unmarried women[1]	All men	Currently married men	Sexually active unmarried men[1]
Any method	99.3	99.9	99.6	99.5	100.0	100.0
Any modern method	99.3	99.9	99.6	99.5	100.0	100.0
Female sterilisation	71.9	78.1	76.0	77.4	85.9	82.8
Male sterilisation	59.9	71.0	58.7	69.0	82.0	66.6
Pill	95.0	99.0	98.7	88.6	96.5	92.5
IUD	69.1	79.1	72.6	67.8	80.1	65.5
Injectables	95.4	99.2	96.1	90.0	97.8	95.5
Implants	88.1	96.9	91.7	75.4	91.1	74.9
Male condom	98.1	99.0	99.6	99.0	99.8	100.0
Female condom	82.4	87.1	85.4	79.5	84.7	86.3
Lactational amenorrhoea (LAM)	66.3	79.2	68.6	54.5	70.5	40.4
Emergency contraception	23.0	25.5	23.8	39.2	45.8	47.5
Standard Days Method	77.7	88.2	76.8	71.8	82.4	64.1
Any traditional method	89.6	95.4	91.3	90.7	98.1	93.4
Rhythm	85.6	90.2	84.8	87.5	96.0	89.0
Withdrawal	70.8	88.2	79.7	75.3	91.4	80.9
Other	0.5	0.8	0.3	0.7	0.8	0.0
Mean number of methods known by respondents 15-49	9.8	10.8	10.1	9.8	11.0	9.9
Number of respondents	13,671	6,897	246	5,687	2,699	117
Mean number of methods known by respondents 15-59	na	na	na	9.9	11.1	9.8
Number of respondents	**na**	**na**	**na**	**6,329**	**3,287**	**118**

na = Not applicable
[1] Had sexual intercourse within 30 days preceding the survey

Table 7.2 shows little variation in knowledge of contraceptive methods by background characteristics. Regardless of their background, nearly all currently married women and men have heard of at least one contraceptive method or at least one modern method, with the proportion ranging from over 99 percent to universal.

Table 7.2 Knowledge of contraceptive methods by background characteristics

Percentage of currently married women and currently married men age 15-49 who have heard of at least one contraceptive method and who have heard of at least one modern method by background characteristics, Rwanda 2010

Background characteristic	Women			Men		
	Heard of any method	Heard of any modern method[1]	Number	Heard of any method	Heard of any modern method[1]	Number
Age						
15-19	98.5	98.5	89	100.0	100.0	3
20-24	100.0	100.0	998	100.0	100.0	222
25-29	99.8	99.8	1,773	99.8	99.8	646
30-34	100.0	99.9	1,458	100.0	100.0	613
35-39	99.9	99.9	1,112	100.0	100.0	439
40-44	100.0	100.0	780	100.0	100.0	397
45-49	100.0	99.9	688	100.0	100.0	380
Residence						
Urban	100.0	100.0	926	100.0	100.0	391
Rural	99.9	99.9	5,971	100.0	100.0	2,308
Province						
City of Kigali	100.0	100.0	726	100.0	100.0	307
South	100.0	99.9	1,614	100.0	100.0	624
West	100.0	100.0	1,675	100.0	100.0	623
North	100.0	100.0	1,151	99.8	99.8	430
East	99.7	99.6	1,731	100.0	100.0	715
Education						
No education	99.9	99.8	1,355	99.8	99.8	438
Primary	99.9	99.9	4,816	100.0	100.0	1,893
Secondary and higher	100.0	100.0	727	100.0	100.0	368

Continued...

Table 7.2—*Continued*

Background characteristic	Women			Men		
	Heard of any method	Heard of any modern method[1]	Number	Heard of any method	Heard of any modern method[1]	Number
Wealth quintile						
Lowest	99.7	99.6	1,352	99.8	99.8	467
Second	100.0	100.0	1,388	100.0	100.0	523
Middle	99.9	99.8	1,394	100.0	100.0	558
Fourth	100.0	100.0	1,415	100.0	100.0	580
Highest	100.0	100.0	1,348	100.0	100.0	572
Total 15-49	**99.9**	**99.9**	**6,897**	**100.0**	**100.0**	**2,699**
50-59	**na**	**na**	**na**	**99.7**	**99.5**	**588**
Total 15-59	**na**	**na**	**na**	**99.9**	**99.9**	**3,287**

na = Not applicable
[1] Female sterilisation, male sterilisation, pill, IUD, injectables, implants, male condom, female condom, diaphragm, foam or jelly, lactational amenorrhoea method (LAM), and emergency contraception

7.2 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 and one of the determinants of fertility. This section focuses on levels, trends, and differentials in current use of family planning.

7.2.1 Current Use of Contraception by Age

Table 7.3 shows that 29 percent of all women, 52 percent of currently married women, and 41 percent of sexually active unmarried women age 15-49 are using a contraceptive method. The majority of women who are using a contraceptive method use a modern method (25 percent). Three percent of women use traditional methods. The most commonly used modern methods are injectables (15 percent), the pill (4 percent), and implants (4 percent).

More than one in two currently married women (52 percent) are currently using contraception; 45 percent use modern methods and 6 percent use traditional methods. The most commonly used methods among currently married women are injectables (26 percent), the pill (7 percent), and implants (6 percent). The use of modern contraceptive methods among currently married women varies by age, gradually rising from 31 percent among women age 15-19, peaking at 52 percent among women age 35 to 39, and dropping to 21 percent among women age 45-49. Most of the women who have been sterilised are age 35 or older, while younger women are more likely to use other nonpermanent methods of contraception such as injectables and pills.

The high level of current use of any contraception among sexually active unmarried women (41 percent) is driven by the high prevalence of injectables and condoms (18 percent and 12 percent, respectively).

Table 7.3 Current use of contraception by age

Percent distribution of all women, currently married women, and sexually active unmarried women age 15-49 by contraceptive method currently used, according to age, Rwanda 2010

Age	Any method	Any modern method	Modern method										Any tradi-tional method	Traditional method			Not currently using	Total	Number of women
			Female sterili-sation	Male sterili-sation	Pill	IUD	Injectables	Implants	Male condom	Diaphragm	LAM	Standard Days Method		Rhythm	Withdrawal	Other			
ALL WOMEN																			
15-19	2.1	1.9	0.0	0.0	0.3	0.0	1.0	0.1	0.5	0.0	0.0	0.0	0.1	0.1	0.0	0.0	97.9	100.0	2,945
20-24	19.5	18.5	0.0	0.0	2.9	0.0	12.6	1.4	1.2	0.0	0.3	0.1	1.0	0.5	0.5	0.0	80.5	100.0	2,683
25-29	42.1	38.8	0.1	0.0	6.3	0.1	24.0	4.8	2.7	0.0	0.5	0.4	3.3	1.2	2.0	0.0	57.9	100.0	2,494
30-34	47.8	42.9	0.4	0.0	7.0	0.5	23.8	7.3	2.8	0.0	0.4	0.6	4.9	2.2	2.7	0.1	52.2	100.0	1,822
35-39	48.5	42.9	1.7	0.2	5.4	0.9	22.5	7.7	3.6	0.0	0.2	0.7	5.6	2.6	3.0	0.0	51.5	100.0	1,447
40-44	37.1	30.9	0.9	0.0	5.5	0.4	15.6	5.1	2.2	0.0	0.4	0.9	6.2	3.2	2.8	0.2	62.9	100.0	1,168
45-49	24.4	14.8	1.7	0.0	1.7	0.1	7.6	2.5	1.1	0.0	0.1	0.1	9.6	5.0	4.6	0.0	75.6	100.0	1,112
Total	**28.6**	**25.2**	**0.5**	**0.0**	**3.9**	**0.2**	**14.6**	**3.6**	**1.8**	**0.0**	**0.3**	**0.3**	**3.4**	**1.6**	**1.8**	**0.0**	**71.4**	**100.0**	**13,671**
CURRENTLY MARRIED WOMEN																			
15-19	32.9	30.6	0.0	0.0	6.7	1.4	19.9	0.0	1.5	0.0	1.2	0.0	2.2	1.2	1.0	0.0	67.1	100.0	89
20-24	44.5	42.1	0.1	0.0	6.9	0.1	28.9	2.9	2.2	0.0	0.6	0.3	2.4	1.0	1.4	0.0	55.5	100.0	998
25-29	54.3	49.8	0.1	0.0	8.1	0.2	31.1	6.0	3.1	0.0	0.7	0.6	4.5	1.6	2.8	0.0	45.7	100.0	1,773
30-34	56.3	50.2	0.4	0.0	8.4	0.6	28.0	8.3	3.2	0.1	0.5	0.7	6.1	2.7	3.3	0.1	43.7	100.0	1,458
35-39	58.6	51.8	2.1	0.3	6.5	1.2	27.3	9.2	4.1	0.0	0.3	0.9	6.8	3.0	3.9	0.0	41.4	100.0	1,112
40-44	50.9	42.1	1.3	0.0	7.8	0.6	21.2	6.9	2.6	0.0	0.4	1.3	8.9	4.5	4.1	0.3	49.1	100.0	780
45-49	36.5	21.4	2.3	0.0	2.6	0.0	11.2	3.4	1.6	0.0	0.2	0.1	15.1	7.7	7.5	0.0	63.5	100.0	688
Total	**51.6**	**45.1**	**0.8**	**0.0**	**7.1**	**0.5**	**26.3**	**6.3**	**2.9**	**0.0**	**0.5**	**0.6**	**6.4**	**2.9**	**3.5**	**0.1**	**48.4**	**100.0**	**6,897**
SEXUALLY ACTIVE UNMARRIED WOMEN[1]																			
15-19	(27.3)	(27.3)	(0.0)	(0.0)	(0.0)	(0.0)	(7.1)	(0.0)	(20.2)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(72.7)	(100.0)	42
20-24	38.3	38.3	0.0	0.0	2.5	0.0	21.5	7.9	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.7	100.0	53
25-29	46.4	46.4	0.0	0.0	9.1	0.0	24.4	2.0	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.6	100.0	61
30-34	(48.9)	(48.9)	(0.0)	(0.0)	(6.2)	(0.0)	(22.9)	(11.0)	(8.8)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(51.1)	(100.0)	34
35-39	(46.2)	(41.9)	(0.0)	(0.0	(7.2)	(0.0)	(12.5)	(9.7)	(12.5)	(0.0)	(0.0)	(0.0)	(4.3)	(4.3)	(0.0)	(0.0)	(53.8)	(100.0)	25
40-44	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	23
45-49	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	7
Total	**41.2**	**40.3**	**0.0**	**0.0**	**4.4**	**0.0**	**18.4**	**5.9**	**11.7**	**0.0**	**0.0**	**0.0**	**0.8**	**0.4**	**0.4**	**0.0**	**58.8**	**100.0**	**246**

Note: If more than one method is used, only the most effective method is considered in this tabulation. 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.
LAM = Lactational amenorrhoea method
[1] Women who have had sexual intercourse within 30 days preceding the survey

7.2.2 Current Use of Contraception by Background Characteristics

Table 7.4 shows no substantial variation by background characteristics in the current use of contraceptive methods. Currently married women in urban areas and their rural counterparts slightly differ in terms of use of a contraceptive method (53 and 51 percent, respectively). There is also little difference between urban women and rural women in the use of a modern method (47 percent and 45 percent, respectively). By province, the North province shows the highest proportion of married women who are using a contraceptive method (57 percent); the lowest proportion (43 percent) is in the West province.

Women in the North province are more likely to rely on injectables (36 percent) than their counterparts in other regions, while pills are equally popular among women in the City of Kigali and the South, North, and East provinces (8 percent). The male condom, IUDs, and female sterilisation are most popular among women in the City of Kigali (5 percent, 3 percent, and 2 percent, respectively), while implants are most popular among currently married women in the South province (8 percent).

Use of any contraceptive method among currently married women increases with educational attainment, from 43 percent among women with no education to 60 percent among women with a secondary education or higher. Contraceptive use also increases rapidly as the number of living children increases, peaking at 58 percent for women with three to four children. Use of any contraceptive method increases with wealth quintile as well, from 43 percent of women in the lowest quintile to 57 percent of women in the highest quintile.

Table 7.4 Current use of contraception by background characteristics

Percent distribution of currently married women age 15-49 by contraceptive method currently used, according to background characteristics, Rwanda 2010

Background characteristic	Any method	Any modern method	Modern method: Female sterilisation	Male sterilisation	Pill	IUD	Injectables	Implants	Male condom	Diaphragm	LAM	Standard Days Method	Any traditional method	Traditional method: Rhythm	Withdrawal	Other	Not currently using	Total	Number of women
Number of living children																			
0	1.5	1.3	0.0	0.0	0.0	0.0	0.5	0.5	0.3	0.0	0.0	0.0	0.2	0.0	0.2	0.0	98.5	100.0	429
1-2	53.1	48.3	0.1	0.0	8.2	0.5	30.5	4.7	3.1	0.0	0.5	0.7	4.8	2.2	2.6	0.0	46.9	100.0	2,478
3-4	58.2	52.0	1.3	0.1	8.3	0.6	28.8	8.3	3.5	0.0	0.7	0.5	6.2	2.8	3.4	0.0	41.8	100.0	2,133
5+	53.5	43.2	1.5	0.1	6.0	0.5	23.7	7.6	2.6	0.0	0.3	0.8	10.3	4.6	5.5	0.1	46.5	100.0	1,858
Residence																			
Urban	53.1	47.0	2.0	0.0	7.9	2.4	22.3	6.1	4.3	0.0	0.2	1.9	6.0	2.5	3.3	0.2	46.9	100.0	926
Rural	51.4	44.9	0.7	0.0	7.0	0.2	26.9	6.4	2.7	0.0	0.5	0.4	6.5	3.0	3.5	0.0	48.6	100.0	5,971
Province																			
City of Kigali	53.6	47.5	2.2	0.0	8.2	2.6	20.9	5.9	5.0	0.0	0.1	2.6	6.1	2.8	3.0	0.3	46.4	100.0	726
South	55.3	48.3	0.6	0.0	7.5	0.4	27.7	8.3	2.5	0.0	0.6	0.7	6.9	2.4	4.4	0.1	44.7	100.0	1,614
West	42.7	35.5	1.2	0.1	5.0	0.2	19.3	5.5	2.6	0.0	1.2	0.5	7.3	3.7	3.5	0.1	57.3	100.0	1,675
North	56.9	52.0	0.3	0.2	8.0	0.2	36.0	4.5	2.6	0.0	0.0	0.3	4.9	3.0	1.9	0.0	43.1	100.0	1,151
East	52.3	45.9	0.5	0.0	7.8	0.1	27.5	6.6	2.9	0.1	0.2	0.2	6.4	2.6	3.7	0.0	47.7	100.0	1,731
Education																			
No education	43.3	37.3	0.5	0.2	5.1	0.1	22.7	6.0	1.6	0.1	1.0	0.1	6.0	3.0	2.9	0.1	56.7	100.0	1,355
Primary	52.6	46.3	0.7	0.0	7.3	0.2	28.2	6.0	3.0	0.0	0.3	0.6	6.3	2.6	3.7	0.1	47.4	100.0	4,816
Secondary and higher	60.3	52.3	2.3	0.0	10.1	3.0	20.5	8.9	4.9	0.0	0.6	2.0	8.0	4.9	3.1	0.0	39.7	100.0	727
Wealth quintile																			
Lowest	43.1	38.5	0.2	0.0	4.9	0.1	27.0	3.8	1.2	0.0	0.8	0.4	4.6	1.8	2.7	0.1	56.9	100.0	1,352
Second	47.4	41.2	0.7	0.2	6.5	0.0	25.8	4.7	2.0	0.0	1.0	0.3	6.2	2.4	3.7	0.1	52.6	100.0	1,388
Middle	52.8	47.1	0.6	0.0	7.5	0.1	28.4	6.7	2.9	0.1	0.4	0.3	5.7	3.0	2.7	0.0	47.2	100.0	1,394
Fourth	57.2	49.2	0.8	0.1	8.3	0.2	28.2	7.8	3.4	0.0	0.0	0.3	8.0	3.5	4.5	0.0	42.8	100.0	1,415
Highest	57.1	49.6	1.8	0.0	8.4	2.0	21.7	8.5	5.1	0.0	0.2	1.8	7.6	3.8	3.6	0.1	42.9	100.0	1,348
Total	**51.6**	**45.1**	**0.8**	**0.0**	**7.1**	**0.5**	**26.3**	**6.3**	**2.9**	**0.0**	**0.5**	**0.6**	**6.4**	**2.9**	**3.5**	**0.1**	**48.4**	**100.0**	**6,897**

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

7.3 TIMING OF STERILISATION

Table 7.5 shows the distribution of women age 15-49 by age group at the time of sterilisation and median age at sterilisation. Forty-six percent of Rwandan women who adopted sterilisation as their contraceptive method have done so at age 35-39, 28 percent at age 30-34. The median age at sterilisation is 35.1.

Table 7.5 Timing of sterilisation

Percent distribution of sterilised women age 15-49 by age at the time of sterilisation and median age at sterilisation, Rwanda 2010

	Age at time of sterilisation						Total	Number of women	Median age[1]
	<25	25-29	30-34	35-39	40-44	45-49			
Total	**3.1**	**10.4**	**28.2**	**45.7**	**11.4**	**1.0**	**100.0**	**63**	**35.1**

[1] Median age at sterilisation is calculated only for women sterilised before age 40 to avoid problems due to censoring.

7.4 SOURCE OF SUPPLY

To assess the contribution of public and private medical service providers to the sale or distribution of the various modern methods of contraception, the women surveyed were asked where they obtained the method they use. They were also asked where they had most recently obtained the contraceptive methods they were using at the time of the survey.

Table 7.6 shows that the majority of women in Rwanda obtain modern methods of contraception from the public sector (92 percent, compared with 73 percent in 2005) and that 77 percent of women obtain their method from a health centre. Other sources are health posts, outreach, and the private medical sector (4 percent). The nonmedical private sector (kiosks, friends, relatives, and other sources) supplies about 2 percent of contraceptive needs, while community health workers provide only 1 percent (mainly the male condom, at 8 percent).

Table 7.6 Source of modern contraception methods

Percent distribution of users of modern contraceptive methods age 15-49 by most recent source of method, according to method, Rwanda 2010

Source	Female sterilisation	Male sterilisation	Pill	IUD[1]	Injectables	Implants[1]	Male condom	Diaphragm	Total
Public sector	**89.1**	*****	**93.6**	**(50.4)**	**97.0**	**93.9**	**51.2**	*****	**92.0**
Referral hospital	26.2	*	0.0	(22.7)	0.1	0.8	0.4	*	1.0
District hospital	57.4	*	2.9	(16.9)	2.1	4.3	2.1	*	3.8
Health centre	2.1	*	77.4	(10.8)	84.2	84.2	37.5	*	77.3
Health post	0.0	*	5.1	(0.0)	5.5	0.9	2.2	*	4.3
Outreach	0.0	*	6.1	(0.0)	4.4	3.5	1.0	*	4.2
Community health worker	0.0	*	2.0	(0.0)	0.2	0.0	7.9	*	1.0
Other public	3.4	*	0.2	(0.0)	0.4	0.2	0.0	*	0.3
Private medical sector	**5.5**	*****	**5.5**	**(34.5)**	**2.8**	**3.4**	**8.9**	*****	**4.2**
Polyclinic	0.7	*	0.0	(20.7)	0.1	1.9	0.0	*	0.6
Clinic	3.3	*	0.9	(4.5)	0.3	0.0	0.0	*	0.4
Dispensary	0.0	*	1.1	(3.6)	1.7	0.6	1.0	*	1.4
Pharmacy	0.0	*	2.6	(0.0)	0.4	0.0	7.1	*	1.2
Family planning clinic	0.0	*	0.8	(5.7)	0.2	0.9	0.4	*	0.5
Other private	1.5	*	0.0	(0.0)	0.1	0.0	0.4	*	0.1
Other source	**0.0**	*****	**0.0**	**(0.0)**	**0.0**	**0.2**	**31.8**	*****	**2.4**
Kiosk	0.0	*	0.0	(0.0)	0.0	0.0	30.0	*	2.2
Friend/relative	0.0	*	0.0	(0.0)	0.0	0.2	1.8	*	0.2
Other	0.7	*	0.3	(4.7)	0.0	1.1	6.1	*	0.7
Don't know	0.0	*	0.0	(0.0)	0.1	0.0	1.5	*	0.1
Missing	4.7	*	0.7	(10.4)	0.1	1.4	0.6	*	0.6
Total	100.0	*	100.0	(100.0)	100.0	100.0	100.0	*	100.0
Number of women	**63**	**3**	**531**	**34**	**1,993**	**491**	**252**	**1**	**3,367**

Note: Total includes other modern methods but excludes lactational amenorrhoea method (LAM). 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.
[1] For users of IUDs and implants, the source is where the respondent obtained the method when she started the current episode of use. Source of method is missing for IUD and implant users if they began using the method more than five years before the survey.

7.5 INFORMED CHOICE

Informed choice is an important aspect of the delivery of family planning services. It is required that all family planning providers inform method users of potential side effects and what they should do if they encounter such side effects. This information is designed to assist users in coping with side effects and, thus, to decrease discontinuation of temporary methods. Contraceptive users should also be informed of the choices they have with respect to other methods. Table 7.7 shows the percentage of current users of modern methods who were informed about side effects or problems with the method used and informed of other methods they could use at the time they first began using the method. Figures are broken down by method type, initial source, and background characteristics.

A majority of users were given information about each of the three issues considered to be essential parts of informed choice: 64 percent were informed about potential side effects of their method, 68 percent were told what to do if they experienced side effects, and 78 percent were given information about other contraception method options.

Table 7.7 Informed choice

Among current users of modern methods age 15-49 who started the most recent episode of use within the five years preceding the survey, the percentage who were informed about possible side effects or problems of that method, the percentage who were informed about what to do if they experienced side effects, and the percentage who were informed about other methods they could use, by method and initial source, Rwanda 2010

	Among women who started last episode of modern contraceptive method within five years preceding the survey:			
Method/source	Percentage who were informed about side effects or problems of method used	Percentage who were informed about what to do if experiencing side effects	Percentage who were informed by a health or family planning worker of other methods that could be used	Number of women
Method				
Female sterilisation	(37.5)	(36.9)	(22.6)	38
Pill	60.4	64.3	81.4	507
IUD	(72.0)	(80.7)	(75.5)	28
Injectables	64.5	68.5	78.3	1,914
Implants	66.5	69.8	76.4	484
Initial source of method[1]				
Public sector	64.0	67.8	78.2	2,828
Referral hospital	(62.6)	(62.3)	(56.4)	23
District hospital	56.7	60.9	65.3	121
Health centre	65.2	69.0	79.4	2,446
Health post	54.2	56.5	71.6	105
Outreach	53.2	59.3	75.0	121
Community health worker	*	*	*	1
Other public	*	*	*	10
Private medical sector	61.6	68.3	71.9	121
Polyclinic	(69.3)	(69.3)	(75.9)	20
Clinic	*	*	*	16
Dispensary	59.0	68.8	76.9	42
Pharmacy	*	*	*	18
Family planning clinic	(72.8)	(83.7)	(69.4)	20
Other private	*	*	*	6
Other source	*	*	*	1
Friend/relative	*	*	*	1
Other	*	*	*	10
Don't know	*	*	*	1
Total	**63.8**	**67.7**	**77.8**	**2,970**

Note: Table includes users of only the methods listed individually. 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.
[1] Source at start of current episode of use

7.6 CONTRACEPTIVE DISCONTINUATION

Couples can realise their reproductive goals only when they use contraceptive methods continuously. A prominent concern for managers of family planning programmes is discontinuation of contraceptive use. In the 2010 RDHS 'calendar' section, all periods of contraceptive use between January 2005 and the date of the interview were recorded, along with reasons for any discontinuation. One-year contraceptive discontinuation rates based on the calendar data are presented in Table 7.8.

The results show that a variety of reasons were given for discontinuation. Thirty-five percent of women gave reasons relating to side effects/health concerns, 19 percent wanted to become pregnant, 13 percent became pregnant while using, and 11 percent wanted a more effective method. The frequency with which reasons were reported varied according to method. Women using implants were most likely to discontinue use due to side effects/health concerns (67 percent), followed by those using injectables (45 percent) and pills (37 percent).

Table 7.8 Reasons for discontinuation

Percent distribution of discontinuations of contraceptive methods in the five years preceding the survey by main reason stated for discontinuation, according to specific method, Rwanda 2010

Reason	Pill	IUD	Injectables	Implants	Male condom	LAM	Rhythm	Withdrawal	Other	All methods
Became pregnant while using	11.7	*	5.1	1.6	16.7	35.9	44.3	38.9	(48.9)	12.9
Wanted to become pregnant	13.7	*	20.7	11.2	21.5	10.4	26.4	24.9	(28.2)	19.3
Husband disapproved	1.1	*	1.4	1.2	11.9	0.0	1.1	1.7	(2.0)	1.7
Wanted a more effective method	12.4	*	9.0	4.1	16.8	38.1	11.9	14.6	(5.6)	11.1
Side effects/health concerns	37.1	*	44.6	66.5	0.9	0.0	0.7	0.0	(0.0)	34.5
Lack of access/too far	1.1	*	0.9	0.0	1.1	0.0	0.0	0.0	(0.0)	0.8
Cost too much	0.0	*	0.0	0.0	0.0	0.0	0.0	0.0	(0.0)	0.0
Inconvenient to use	8.7	*	1.7	1.1	5.2	1.5	4.2	7.0	(6.1)	4.1
Up to God/fatalistic	0.8	*	0.3	0.0	0.0	0.0	0.0	0.0	(0.0)	0.4
Difficult to get pregnant/menopausal	0.2	*	0.2	0.0	1.0	0.0	0.0	0.5	(0.0)	0.2
Infrequent sex/husband away	2.9	*	3.5	1.4	7.2	0.0	1.2	2.7	(1.0)	3.1
Marital dissolution/separation	1.0	*	1.9	1.5	1.1	0.0	0.5	0.5	(0.0)	1.4
Other	5.2	*	5.7	1.3	6.2	1.5	3.8	1.4	(0.0)	4.9
Don't know	0.0	*	0.0	0.0	2.5	0.0	0.0	0.0	(0.0)	0.1
Missing	4.2	*	4.9	10.1	7.9	12.6	5.9	7.8	(8.3)	5.5
Total	100.0	*	100.0	100.0	100.0	100.0	100.0	100.0	(100.0)	100.0
Number of discontinuations	**710**	**10**	**1,533**	**86**	**105**	**59**	**171**	**207**	**43**	**2,923**

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.
LAM = Lactational amenorrhoea method

7.7 KNOWLEDGE OF FERTILE PERIOD

Successful use of natural family planning methods depends largely on an understanding of when during the menstrual cycle a woman is most likely to conceive. An elementary knowledge of reproductive physiology provides background for the successful practice of coitus-associated methods such as withdrawal. Such knowledge is especially critical for the practice of rhythm/periodic abstinence (the calendar method).

To assess this understanding, the survey asked all women whether there were certain days during the menstrual cycle when they were more likely to become pregnant if they had sexual intercourse. Those who answered yes were asked when those days occurred during the cycle. The question provided four explicit responses: 'just before her period begins', 'right after her period has ended', 'during her period', and 'halfway between two periods'. Respondents could also give a different response or state that they did not know when this occurred. These responses can be grouped into three categories of decreasing knowledge:

- Correct knowledge: 'halfway between two periods'; the middle of the cycle.
- Possibly correct knowledge: 'just before her period begins' and 'right after her period has ended'. These responses are too vague to be considered accurate but, depending on how a woman views 'right after her period has ended' or 'just before her period begins', these answers could indicate the fertile period.
- Incorrect knowledge: 'during her period', 'no specific time', 'other', and 'don't know'.

Table 7.9 provides the results for all women users and nonusers of the rhythmic method. Overall, only 12 percent of women reported the correct timing of the fertile period, that is, halfway through the woman's menstrual cycle. This is a slight decline compared with the results of the 2005 RDHS, where 13 percent of women reported the correct timing of the fertile period.

The data also show that 29 percent of women have possibly correct knowledge and that 59 percent have incorrect knowledge or don't know that there is a time during the menstrual cycle when a woman is more likely to conceive. Knowledge of the fertile period is considerably higher among users of rhythm/periodic abstinence (38 percent) than among nonusers (12 percent). However, 40 percent of rhythm/periodic abstinence users have only

possibly correct knowledge of the fertile period, and 22 percent do not know when a woman should stop having sexual intercourse in order to avoid becoming pregnant or do not know that such a time exists. Nonetheless, these results show an improvement since 2005, when 67 percent of rhythm/periodic abstinence users did not know how to use the method correctly because they had only possibly correct knowledge of the fertile period or because they had incorrect knowledge. This is a result of government efforts to make contraceptive methods available and accessible to the population, as reflected by the current prevalence of use of modern methods (45 percent).

Table 7.9 Knowledge of fertile period

Percent distribution of women age 15-49 by knowledge of the fertile period during the ovulatory cycle, according to current use of the rhythm method, Rwanda 2010

Perceived fertile period	Users of rhythm method	Nonusers of rhythm method	All women
Just before her menstrual period begins	2.3	4.6	4.6
During her menstrual period	1.5	1.4	1.4
Right after her menstrual period has ended	37.9	23.7	24.0
Halfway between two menstrual periods	37.8	11.9	12.3
Other	2.4	0.7	0.7
No specific time	16.1	48.9	48.4
Don't know	2.1	8.6	8.5
Missing	0.0	0.1	0.1
Total	100.0	100.0	100.0
Number of women	**217**	**13,454**	**13,671**

7.8 NEED AND DEMAND FOR FAMILY PLANNING SERVICES

7.8.1 Need and Demand for Family Planning among Currently Married Women

Women who do not want any more children or 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 women with met need together constitute the total demand for family planning, which can be categorised according to whether the need is for spacing or limiting births.

Table 7.10.1 presents estimates for unmet need, met need, and total demand for family planning among currently married Rwandan women. Nineteen percent of currently married women have an unmet need for family planning (an improvement since 2005, when the figure was 38 percent): 10 percent have an unmet need for spacing, and 9 percent have an unmet need for limiting. The total demand for family planning among currently married women is 72 percent, and almost three quarters of that demand (74 percent) is satisfied. The demand for limiting needs is slightly higher than the demand for spacing needs (39 and 34 percent, respectively).

Unmet need does not vary much by age except for the youngest and oldest women, who have the lowest percentage of unmet need. Up to age 34, most unmet need for family planning involves spacing. From age 35, most unmet need for family planning is for limiting childbearing. Total unmet need for family planning is higher in rural areas (20 percent) than in urban areas (16 percent). At regional levels, total unmet need is highest in the West province (25 percent) and lowest in the City of Kigali (15 percent).

There are notable differences in percentage of demand satisfied by women's characteristics. As expected, a high percentage of demand is satisfied among urban women, those living in wealthier households, and those with more education. There has been a significant improvement in unmet need since the 2005 RDHS (when, as mentioned above, the figure was 38 percent); also, there has been a significant increase in the total demand for family planning among currently married women (from 55 percent in the 2005 RDHS to 72 percent in the 2010 RDHS). In this same interval, the percentage of demand satisfied has more than doubled, increasing from 31 percent to 74 percent.

Table 7.10.1 Need and demand for family planning among currently married women

Percentage of currently married women age 15-49 with unmet need for family planning, percentage with met need for family planning, the total demand for family planning, and the percentage of the demand for contraception that is satisfied, by background characteristics, Rwanda 2010

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	Percentage of demand satisfied by modern methods	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total			
Age												
15-19	6.4	0.0	6.4	30.2	2.7	32.9	36.5	2.7	39.2	83.8	78.1	89
20-24	14.3	0.9	15.2	38.4	6.1	44.5	54.7	7.0	61.8	75.4	68.2	998
25-29	14.0	3.0	17.0	39.3	15.0	54.3	55.2	18.3	73.5	76.9	67.8	1,773
30-34	11.7	8.1	19.8	21.7	34.6	56.3	35.4	43.7	79.1	75.0	63.4	1,458
35-39	6.4	15.2	21.6	9.0	49.6	58.6	15.7	65.7	81.4	73.5	63.6	1,112
40-44	3.2	21.2	24.4	4.0	47.0	50.9	7.3	69.3	76.6	68.1	54.9	780
45-49	0.9	17.8	18.7	1.2	35.3	36.5	2.1	53.5	55.5	66.3	38.5	688
Residence												
Urban	8.7	6.8	15.5	23.6	29.5	53.1	33.8	37.1	70.8	78.2	66.4	926
Rural	9.9	9.6	19.5	22.5	28.8	51.4	33.6	39.0	72.6	73.2	61.8	5,971
Province												
City of Kigali	7.5	7.5	15.0	25.7	27.9	53.6	34.8	36.1	71.0	78.9	67.0	726
South	7.6	8.6	16.1	23.0	32.3	55.3	32.0	41.8	73.8	78.1	65.5	1,614
West	14.6	10.3	25.0	20.2	22.5	42.7	36.0	33.3	69.4	64.0	51.2	1,675
North	7.8	7.8	15.6	25.2	31.7	56.9	33.9	40.1	74.0	78.9	70.3	1,151
East	9.1	10.5	19.6	21.8	30.5	52.3	32.2	41.4	73.5	73.3	62.5	1,731
Education												
No education	8.9	14.9	23.8	13.8	29.5	43.3	23.1	45.0	68.2	65.1	54.8	1,355
Primary	10.4	8.2	18.6	24.6	28.0	52.6	36.6	36.7	73.3	74.6	63.1	4,816
Secondary and higher	6.4	5.5	11.9	26.3	34.0	60.3	33.8	40.4	74.2	84.0	70.5	727
Wealth quintile												
Lowest	12.9	11.1	24.0	19.3	23.8	43.1	33.4	35.4	68.8	65.1	55.9	1,352
Second	11.7	10.0	21.7	21.4	26.0	47.4	34.6	36.8	71.4	69.6	57.7	1,388
Middle	9.0	8.8	17.8	25.0	27.8	52.8	35.0	36.9	71.9	75.2	65.5	1,394
Fourth	7.8	8.4	16.2	23.1	34.1	57.2	32.3	43.5	75.8	78.6	64.9	1,415
Highest	7.2	7.9	15.0	24.6	32.6	57.1	32.8	41.0	73.9	79.6	67.1	1,348
Total	**9.7**	**9.2**	**18.9**	**22.7**	**28.9**	**51.6**	**33.6**	**38.7**	**72.4**	**73.8**	**62.4**	**6,897**

[1] Unmet need for spacing: Includes women who are fecund and not using family planning and who say they want to wait two or more years for their next birth, or who say they are unsure whether they want another child, or who want another child but are unsure when to have the child. In addition, unmet need for spacing includes pregnant women whose current pregnancy was mistimed, or whose last pregnancy was unwanted but who now say they want more children. Unmet need for spacing also includes amenorrhoeic women whose last birth was mistimed, or whose last birth was unwanted but who now say they want more children. Unmet need for limiting: Includes women who are fecund and not using family planning and who say they do not want another child. In addition, unmet need for limiting includes pregnant women whose current pregnancy was unwanted but who now say they do not want more children or who are undecided whether they want another child. Unmet need for limiting also includes amenorrhoeic women whose last birth was unwanted but who now say they do not want more children or who are undecided whether they want another child.
[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.

7.8.2 Need and Demand for Family Planning among All Women and Women Who Are Not Currently Married

Table 7.10.2 presents estimates for unmet need, met need, and total demand for family planning among all women and among women who are not currently married. Ten percent of all women and about 1 percent of women not currently married have an unmet need for family planning. The total demand for family planning is 40 percent among all women and 7 percent among women not currently married; the corresponding proportions of demand satisfied among these women are 74 percent and 80 percent. The demand for limiting is slightly higher than the demand for spacing (21 and 19 percent, respectively) among all women, while the demand for spacing and limiting is almost the same among women not currently married.

Unmet need does not vary extensively by age with the exception of the youngest and oldest women, who have the lowest percentages of unmet need. Up to age 34, most unmet need for family planning involves spacing. From age 35, most unmet need for family planning is for limiting childbearing. Total unmet need for family planning among all women is higher in rural areas (11 percent) than in urban areas (8 percent), while the reverse is true among women not currently married. At the regional level, total unmet need is highest in the West province and lowest in the City of Kigali among all women; proportions of unmarried women with unmet need are lowest in the South and highest in the City of Kigali.

There are notable differences according to women's characteristics in the percentage of demand satisfied. As expected, among all women a high percentage of demand is satisfied for those residing in urban areas, those living in wealthier households, and those with more education. In general, the same tendency is seen among women not currently married except in terms of residence; the percentage of demand satisfied is higher in rural areas than in urban areas.

Table 7.10.2 Need and demand for family planning among all women and women who are not currently married

Percentage of all women and women not currently married age 15-49 with unmet need for family planning, percentage with met need for family planning, the total demand for family planning, and the percentage of the demand for contraception that is satisfied, by background characteristics, Rwanda 2010

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	Percentage of demand satisfied by modern methods	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total			
					ALL WOMEN							
Age												
15-19	1.0	0.0	1.0	1.9	0.2	2.1	3.0	0.2	3.2	67.1	61.6	2,945
20-24	6.2	0.5	6.6	16.8	2.7	19.5	23.8	3.2	27.0	75.4	68.7	2,683
25-29	10.5	2.3	12.9	29.5	12.6	42.1	41.4	15.2	56.6	77.3	68.6	2,494
30-34	9.6	6.8	16.3	18.1	29.8	47.8	29.2	37.4	66.6	75.5	64.4	1,822
35-39	5.0	12.0	17.0	7.3	41.2	48.5	12.6	53.9	66.5	74.5	64.5	1,447
40-44	2.1	14.4	16.6	3.0	34.1	37.1	5.2	49.3	54.5	69.6	56.6	1,168
45-49	0.6	11.1	11.7	0.8	23.6	24.4	1.4	34.9	36.3	67.9	40.8	1,112
Residence												
Urban	4.8	3.2	8.0	12.4	14.5	26.9	17.9	18.2	36.1	77.9	66.8	2,057
Rural	5.5	5.1	10.6	12.6	16.3	28.9	18.8	21.7	40.5	73.8	62.8	11,614
Province												
City of Kigali	4.4	3.5	7.9	12.8	13.7	26.6	18.0	17.7	35.7	77.8	66.7	1,596
South	4.1	4.5	8.6	13.1	18.1	31.3	18.1	23.1	41.2	79.2	66.9	3,212
West	8.1	5.4	13.5	11.2	12.6	23.7	19.9	18.2	38.0	64.6	52.2	3,305
North	4.3	4.1	8.4	13.6	17.4	31.0	18.4	21.8	40.2	79.1	70.6	2,278
East	5.2	5.7	10.9	12.6	17.7	30.3	18.5	23.7	42.1	74.1	63.9	3,280
Education												
No education	6.3	9.7	16.0	9.3	20.4	29.7	16.0	30.5	46.5	65.6	55.5	2,119
Primary	5.8	4.4	10.2	14.0	16.0	29.9	20.6	20.7	41.3	75.2	64.3	9,337
Secondary and higher	2.6	1.9	4.6	10.0	12.1	22.0	12.9	14.3	27.2	83.3	70.2	2,216
Wealth quintile												
Lowest	7.2	6.1	13.3	11.0	14.6	25.7	19.0	21.0	40.0	66.7	58.0	2,622
Second	6.6	5.4	11.9	12.3	15.2	27.5	19.7	20.9	40.6	70.6	58.9	2,661
Middle	4.8	4.5	9.4	13.8	15.4	29.1	19.3	20.0	39.3	76.1	66.4	2,736
Fourth	4.4	4.6	9.0	13.2	19.2	32.4	18.3	24.3	42.7	78.9	65.8	2,677
Highest	4.1	3.7	7.8	12.6	15.8	28.4	17.2	19.8	36.9	79.0	67.3	2,976
Total	**5.4**	**4.8**	**10.2**	**12.6**	**16.0**	**28.6**	**18.6**	**21.2**	**39.8**	**74.4**	**63.4**	**13,671**
					WOMEN NOT CURRENTLY MARRIED							
Age												
15-19	0.9	0.0	0.9	1.0	0.1	1.1	1.9	0.1	2.0	57.1	51.7	2,857
20-24	1.3	0.2	1.5	4.0	0.7	4.7	5.4	1.0	6.3	75.8	71.5	1,685
25-29	1.9	0.8	2.8	5.2	6.8	12.1	7.5	7.7	15.1	81.7	78.0	721
30-34	1.1	1.3	2.4	3.4	10.5	13.9	4.5	12.0	16.5	85.3	82.4	364
35-39	0.4	1.2	1.6	1.4	13.4	14.8	2.0	14.8	16.9	90.8	78.4	335
40-44	0.0	0.8	0.8	1.1	8.1	9.2	1.1	9.1	10.2	92.6	82.6	388
45-49	0.0	0.3	0.3	0.2	4.7	4.9	0.2	5.0	5.1	94.8	80.3	425
Residence												
Urban	1.6	0.2	1.8	3.2	2.2	5.4	4.9	2.7	7.6	76.0	70.1	1,130
Rural	0.9	0.3	1.2	2.1	3.1	5.2	3.1	3.4	6.5	81.3	75.2	5,643
Province												
City of Kigali	1.9	0.1	2.0	2.1	1.9	4.0	3.9	2.3	6.2	67.4	63.8	870
South	0.6	0.3	0.9	3.2	3.8	7.0	4.0	4.2	8.2	88.9	80.1	1,598
West	1.3	0.3	1.7	1.8	2.3	4.2	3.2	2.6	5.9	71.9	65.4	1,630
North	0.6	0.4	1.0	1.8	2.7	4.5	2.5	3.1	5.6	81.3	74.4	1,126
East	0.8	0.4	1.2	2.3	3.4	5.8	3.2	3.9	7.1	83.3	80.0	1,550
Education												
No education	1.8	0.4	2.2	1.3	4.2	5.5	3.2	4.9	8.1	72.7	66.4	764
Primary	0.9	0.4	1.3	2.6	3.2	5.8	3.6	3.6	7.2	82.3	77.0	4,521
Secondary and higher	0.8	0.2	1.0	2.0	1.4	3.4	2.7	1.6	4.3	77.7	67.4	1,489
Wealth quintile												
Lowest	1.2	0.8	2.0	2.2	4.8	7.1	3.5	5.8	9.3	78.7	74.5	1,270
Second	0.9	0.3	1.3	2.4	3.4	5.7	3.4	3.7	7.1	82.2	71.7	1,273
Middle	0.5	0.1	0.6	2.1	2.4	4.5	2.9	2.5	5.4	88.8	79.3	1,341
Fourth	0.7	0.3	0.9	2.0	2.5	4.5	2.6	2.8	5.5	83.4	79.2	1,262
Highest	1.5	0.3	1.7	2.7	1.9	4.6	4.2	2.2	6.4	72.7	69.3	1,628
Total	**1.0**	**0.3**	**1.3**	**2.3**	**2.9**	**5.2**	**3.4**	**3.3**	**6.7**	**80.3**	**74.2**	**6,774**

[1] Unmet need for spacing: Includes women who are fecund and not using family planning and who say they want to wait two or more years for their next birth, or who say they are unsure whether they want another child, or who want another child but are unsure when to have the child. In addition, unmet need for spacing includes pregnant women whose current pregnancy was mistimed, or whose last pregnancy was unwanted but who now say they want more children. Unmet need for spacing also includes amenorrhoeic women whose last birth was mistimed, or whose last birth was unwanted but who now say they want more children.
Unmet need for limiting: Includes women who are fecund and not using family planning and who say they do not want another child. In addition, unmet need for limiting includes pregnant women whose current pregnancy was unwanted but who now say they do not want more children or who are undecided whether they want another child. Unmet need for limiting also includes amenorrhoeic women whose last birth was unwanted but who now say they do not want more children or who are undecided whether they want another child.
[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.

7.9 FUTURE USE OF CONTRACEPTION

Married women who were not using a contraceptive method at the time of the survey were asked whether they planned to use a method in the future. The reasons given by those who do not plan to use contraception in the future are useful in developing family planning marketing strategies. Also, the methods preferred by those who plan to use contraception in the future are useful in assessing the demand for family planning.

Table 7.11 shows that more than 7 in 10 currently married women (74 percent) reported that they intend to use a contraceptive method in the future, 2 percent were not sure, and 24 percent reported that they did not intend to use contraception. The number of children a woman has affects her decision on whether to use contraception in the future. Almost 7 in 10 currently married women (69 percent) who do not have any children reported intending to use a family planning method in the future. The percentages are 86 percent among women with one child and 84 percent among women with two children; among those with three children and those with four or more children, the proportions are a bit lower (77 percent and 63 percent, respectively).

Table 7.11 Future use of contraception

Percent distribution of currently married women age 15-49 who are not using a contraceptive method by intention to use in the future, according to number of living children, Rwanda 2010

	Number of living children[1]					
Intention	0	1	2	3	4+	Total
Intends to use	68.6	85.5	84.1	76.8	63.2	73.5
Unsure	6.3	1.2	1.6	1.9	1.3	1.8
Does not intend to use	24.6	12.9	14.1	21.0	34.7	24.2
Missing	0.6	0.4	0.1	0.3	0.8	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	**213**	**599**	**611**	**533**	**1,384**	**3,339**

[1] Includes current pregnancy

7.10 EXPOSURE TO FAMILY PLANNING MESSAGES

Information on the level of exposure to sources of information about family planning can be very important to those managing family planning programmes. This information allows them to design strategies to reach specific target populations and to effectively disseminate information about contraceptive use. For this reason, the survey asked women age 15 to 49 and men age 15 to 59 whether they had heard or seen anything about family planning on the radio or on television, from newspapers/magazines, or from posters/ brochures during the past 12 months.

Table 7.12 shows that 33 percent of women did not see or hear a family planning message in newspapers/magazines or on radio or television. However, 66 percent of women heard a family planning message on the radio, and 5 percent saw one on television. Only 4 percent of women had seen a family planning message in a newspaper or magazine in the past 12 months.

Exposure to family planning messages in the media varied by background characteristics. Women age 15 to 19 were least likely to see family planning messages in the media during the 12 months preceding the survey (40 percent). The results also showed disparities by residence, with women in rural areas having higher rates of nonexposure than women in urban areas (34 percent and 30 percent, respectively). Similarly, women with no education were less exposed (43 percent with no exposure) than those with a secondary education or higher (21 percent with no exposure), and women in the poorest households were less exposed (50 percent with no exposure) than women in the wealthiest households (24 percent with no exposure). With respect to province, the West (39 percent) and South (37 percent) provinces had the highest levels of nonexposure to family planning messages.

Among men, the data show that 16 percent—a smaller proportion than for women (33 percent)—had no exposure to a family planning message in the past few months through any of the various media (radio, television, newspapers/magazines). However, 83 percent of men reported having heard a family planning message on the radio, 13 percent had seen one on television, and 12 percent had seen one in a newspaper or magazine.

Younger men (age 15-19) were more exposed to family planning messages than men age 20 or older, regardless of the media source. As was the case among women, men in rural areas were more likely to report not having been exposed to family planning messages, regardless of the source (17 percent among rural men and 13 percent among urban men). Similarly, men with no education (21 percent) were more likely than those with a secondary education or higher (7 percent) to have had no exposure, and men in the poorest households (25 percent) were more likely to have had no exposure than those in the richest households (12 percent). Results by province showed that 20 percent of men in the East province had no exposure to family planning messages, as compared with 11 percent in the City of Kigali.

Table 7.12 Exposure to family planning messages

Percentage of women and men age 15-49 who heard or saw a family planning message on radio, television, or in a newspaper/magazine in the past few months, according to background characteristics, Rwanda 2010

	Women					Men				
Background characteristic	Radio	Television	Newspaper/ magazine	None of these three media sources	Number of women	Radio	Television	Newspaper/ magazine	None of these three media sources	Number of men
Age										
15-19	59.4	4.8	4.9	39.6	2,945	74.4	7.6	9.5	25.0	1,449
20-24	66.4	6.7	5.5	32.8	2,683	83.3	15.0	12.7	16.0	1,159
25-29	68.2	5.4	3.7	31.1	2,494	84.0	13.5	11.3	15.0	1,038
30-34	68.5	5.8	3.7	30.8	1,822	87.1	15.7	14.6	11.7	710
35-39	68.0	6.2	3.9	31.4	1,447	85.7	13.5	12.9	12.7	490
40-44	69.6	4.5	3.8	30.2	1,168	90.5	16.0	16.0	9.5	430
45-49	65.8	3.6	2.1	33.8	1,112	89.2	11.0	13.7	10.1	412
Residence										
Urban	67.3	21.9	8.5	29.8	2,057	85.1	33.7	20.5	12.5	939
Rural	65.6	2.5	3.5	34.0	11,614	82.4	8.4	10.5	17.1	4,748
Province										
City of Kigali	68.1	26.5	9.4	28.3	1,596	85.7	39.5	21.0	11.4	739
South	63.1	2.3	2.8	36.6	3,212	87.1	8.7	10.0	12.4	1,308
West	60.8	3.3	3.9	39.0	3,305	79.8	8.7	8.5	19.8	1,307
North	67.5	2.5	4.9	32.0	2,278	84.0	7.0	18.5	15.1	899
East	71.6	2.4	3.0	28.1	3,280	79.5	9.3	9.0	20.2	1,435
Education										
No education	57.1	1.3	0.1	42.7	2,119	78.9	6.5	0.9	20.9	583
Primary	65.3	3.1	2.4	34.3	9,337	80.9	9.7	8.3	18.5	3,916
Secondary and higher	76.7	19.2	16.1	20.5	2,216	91.0	25.1	30.7	7.1	1,189
Wealth quintile										
Lowest	50.2	1.1	1.8	49.5	2,622	74.3	5.0	4.4	24.8	854
Second	61.1	0.9	2.0	38.8	2,661	78.7	6.7	7.1	21.1	986
Middle	67.0	1.5	3.0	32.6	2,736	84.5	7.4	9.2	15.4	1,139
Fourth	76.2	1.7	3.6	23.6	2,677	86.6	8.9	12.2	12.8	1,235
Highest	73.6	20.3	10.0	24.0	2,976	86.1	28.1	22.4	12.1	1,474
Total 15-49	**65.9**	**5.4**	**4.2**	**33.4**	**13,671**	**82.8**	**12.6**	**12.2**	**16.4**	**5,687**
50-59	**na**	**na**	**na**	**na**	**na**	**89.3**	**8.4**	**9.7**	**10.5**	**642**
Total 15-59	**na**	**na**	**na**	**na**	**na**	**83.5**	**12.2**	**11.9**	**15.8**	**6,329**

na = Not applicable

7.11 CONTACT OF NONUSERS WITH FAMILY PLANNING PROVIDERS

Information on contact with family planning service providers among women who do not use contraception is important in determining effective family planning outreach activities. For this reason, the 2010 RDHS asked women whether they had been visited in the past 12 months by a community health worker who spoke to them about

family planning. Women who had visited a health facility in the past 12 months were also asked whether medical personnel had spoken to them about family planning methods.

Table 7.13 shows that in the 12 months preceding the survey, more than 7 of 10 women who did not use contraception (73 percent) had not discussed family planning with a community health worker or at a health facility. Nearly 3 in 10 women (29 percent) had visited a health facility but had not discussed family planning issues. Only 15 percent had been visited by a community health worker who discussed family planning with them, and only 20 percent had discussed family planning at a health facility. There were differences according to residence: 79 percent of women in urban areas and 71 percent in rural areas had not discussed family planning with a community health worker or at a health facility. The results show surprisingly significant differentials by level of education; 63 percent of those with no education had not discussed family planning with a community health worker or at a health facility, as compared with 83 percent of those with a secondary education or higher.

Table 7.13 Contact of nonusers with family planning providers

Among women age 15-49 who are not using contraception, the percentage who during the last 12 months were visited by a community health worker who discussed family planning, the percentage who visited a health facility and discussed family planning, the percentage who visited a health facility but did not discuss family planning, and the percentage who neither discussed family planning with a fieldworker nor at a health facility, by background characteristics, Rwanda 2010

Background characteristic	Percentage of women who were visited by community health worker who discussed family planning	Percentage of women who visited a health facility in the past 12 months and who:		Percentage of women who neither discussed family planning with community health worker nor at a health facility	Number of women
		Discussed family planning	Did not discuss family planning		
Age					
15-19	4.2	4.2	23.3	92.4	2,884
20-24	11.0	19.0	32.1	75.5	2,159
25-29	19.8	31.7	31.2	59.8	1,444
30-34	31.6	38.2	29.3	49.2	950
35-39	25.7	33.9	28.7	54.9	745
40-44	24.2	28.4	29.0	59.1	735
45-49	15.8	20.1	33.7	71.3	841
Residence					
Urban	8.1	17.3	35.4	78.8	1,504
Rural	16.1	20.9	27.5	71.3	8,255
Province					
City of Kigali	5.9	14.0	38.2	82.3	1,172
South	13.4	19.5	30.3	73.4	2,208
West	14.8	23.8	26.6	70.2	2,521
North	21.8	18.4	29.2	68.8	1,571
East	16.0	21.9	24.4	71.5	2,285
Education					
No education	20.7	26.6	26.7	63.1	1,490
Primary	15.2	20.9	27.4	71.9	6,541
Secondary and higher	8.4	12.7	35.4	82.5	1,727
Wealth quintile					
Lowest	19.5	22.7	26.4	67.9	1,949
Second	16.0	22.0	26.1	70.4	1,930
Middle	16.1	21.5	25.5	70.7	1,939
Fourth	14.2	20.6	29.0	73.1	1,810
Highest	9.0	15.4	35.9	79.6	2,131
Total	**14.8**	**20.3**	**28.7**	**72.5**	**9,758**

INFANT AND CHILD MORTALITY 8

This chapter describes levels and trends of neonatal, postneonatal, infant, and child mortality in Rwanda. Infant and child mortality rates reflect a country's socioeconomic situation as well as the quality of life of the population under study. Childhood mortality is affected by socioeconomic conditions and can vary according to the demographic characteristics of children and their mothers. Therefore, differentials in infant and child mortality are presented by socioeconomic and demographic characteristics in this chapter.

Disaggregation of mortality indicators by economic, social, and demographic categories helps to identify population groups at risk. Preparation, implementation, monitoring, and evaluation of socioeconomic programs and policies depend to a large extent on identification of a target population. The data presented here can help identify at-risk populations and indicate their current mortality status, which can be compared with previously collected data to determine whether improvements in health and quality of life have occurred over time.

The data used to compute the childhood mortality rates presented in this chapter were derived from the birth history section of the Woman's Questionnaire. Each woman age 15-49 was asked whether she had ever given birth, and, if she had, she was asked to report the number of sons and daughters who live with her, the number who live elsewhere, and the number who have died. In addition, she was asked to provide a detailed birth history of her children in chronological order starting with the first child. Women were asked whether a birth was single or multiple, the sex of the child, the date of birth (month and year, according to either the Gregorian or the Khmer calendar system), survival status, age of the child on the date of the interview if alive, and, if not alive, the age at death of each live birth. Childhood mortality rates, expressed as deaths per 1,000 live births, are defined as follows:

- **Neonatal mortality:** the probability of dying within the first month of life
- **Postneonatal mortality:** the probability of dying between the first month of life and first birthday (computed as the difference between infant and neonatal mortality)
- **Infant mortality:** the probability of dying between birth and the first birthday
- **Child mortality:** the probability of dying between the first and fifth birthday
- **Under-5 mortality:** the probability of dying between birth and the fifth birthday

8.1 ASSESSMENT OF DATA QUALITY

The reliability of mortality estimates depends on sampling errors and nonsampling errors. Sampling errors are discussed in detail in Appendix B. Nonsampling errors depend on the extent to which the date of birth and age at death are accurately reported and recorded and the completeness with which child deaths are reported. Omission of births and deaths affects mortality estimates, displacement of dates of births and of deaths affects mortality trends, and misreporting of age at death may alter the age pattern of mortality. Typically, the most serious source of nonsampling errors in a survey that collects retrospective information on births and deaths is underreporting of both births and deaths of children who are not alive at the time of the survey. It may be that mothers are generally reluctant to talk about their dead children because of the sorrow associated with any death, or they may live in a culture that discourages discussing the dead. Underreporting of births and deaths is generally more severe the further back in time an event has occurred. Table C.3 in Appendix C shows a negligible proportion of missing information for birth dates (births in the past 15 years), age at death, age at first union, and mother's education.

An unusual pattern in the distribution of births by calendar years is an indication of omission of children or age displacement. However, Table C.4 in Appendix C shows that the percentage of all births for which a month and year of birth were reported remains stable over time, ranging from 100 percent of births in 2011 to 98.0 percent of births prior to 1992. There is little difference in reporting by whether or not the child is alive (99.6 percent of births) or dead (98.0 percent of births). Table C.5 in Appendix C shows the distribution of reported deaths under age 1 month by age at death in days and the percentage of neonatal deaths reported to occur at age 0-6 days, for five-year periods preceding the survey. For all infant deaths reported in days for the period 0-4 years preceding the survey, 67 percent were neonatal deaths occurring in the first week of life. For all infant deaths reported in days for the 20 years preceding the survey, 65 percent were neonatal deaths. These rates are reasonable, suggesting that there has not been severe underreporting of early infant deaths in the 2010 RDHS.

Another issue affecting childhood mortality estimates is the quality of reporting of age at death. If age at death is misreported, estimates may be biased, especially if the net effect of age misreporting results in the transfer of deaths from one childhood mortality category to another. To minimize this error, interviewers were instructed to record the age at death in days for deaths under age 1 month, and in months for deaths under age 2. They were also asked to probe for deaths reported at one year to determine a more precise age at death in terms of months.

Table C.6 in Appendix C shows that there may have been death transfers or heaping of deaths at age 12 months because the number of deaths at this age is four times the number of deaths at age 11 months. Reporting of infant deaths at 12 months is less accurate for 15-19 years prior to the survey than for the other earlier five-year periods. It is possible that some of these deaths may have occurred before age 1 but are not included in the infant mortality rate. However, the excess deaths reported at 12 months would have no effect on estimates of under-5 mortality rates.

8.2 LEVELS AND TRENDS IN CHILDHOOD MORTALITY

Table 8.1 presents neonatal, postneonatal, infant, child, and under-5 mortality rates for five-year periods preceding the survey. Neonatal mortality in the most recent period is 27 deaths per 1,000 live births. This rate is higher than the postneonatal mortality rate (23 deaths per 1,000 live births) during the same period; that is, the risk of dying for any child who survives the first month of life decreases during the period of the next 11 months. Fifty of every 1,000 babies born in Rwanda do not survive to their first birthday. Under-5 mortality in Rwanda is 76 deaths per 1,000 live births.

Table 8.1 Early childhood mortality rates

Neonatal, postneonatal, infant, child, and under-5 mortality rates for five-year periods preceding the survey, Rwanda 2010

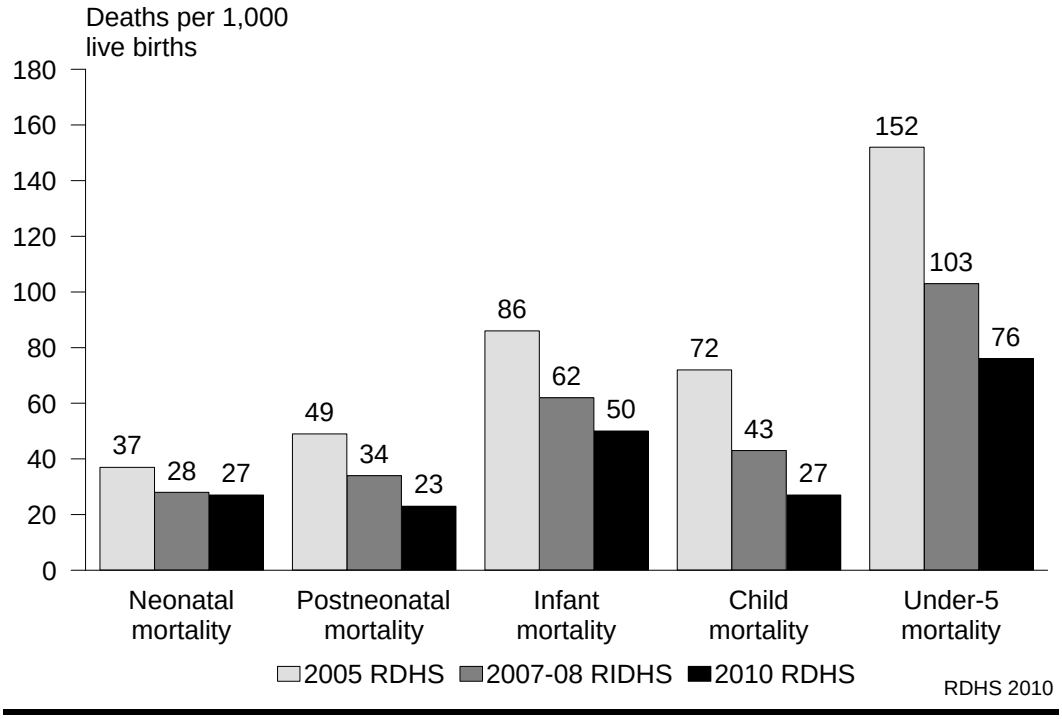
Years preceding the survey	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
0-4	27	23	50	27	76
5-9	32	41	73	64	133
10-14	48	61	109	99	197

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

Trends in the childhood mortality rate can be established by comparing the results of the 2010 RDHS with the findings from the 2005 RDHS and 2007-08 Rwanda Interim Demographic Health Survey (RIDHS), in which data were collected using the same techniques and estimates were calculated using the same methodology. Figure 8.1 shows that infant mortality has declined substantially in the past 5 years, from 86 deaths per 1,000 live births in 2005 to 62 per 1,000 in 2007-08 and to 50 per 1,000 in 2010. Under-5 mortality also declined during this period, from 152 deaths per 1,000 live births in 2005 to 103 per 1,000 in 2007-08 and to 76 per 1,000 in 2010. The decrease

in infant mortality and under-5 mortality result mainly from the implementation of integrated management of childhood illness in health facilities and communities and also the introduction of new vaccines.

Figure 8.1 **Trend in Childhood Mortality Rates**



8.3 SOCIOECONOMIC DIFFERENTIALS IN CHILDHOOD MORTALITY

Results presented in Table 8.2 and Figure 8.2 show that childhood mortality in Rwanda varies significantly by the socioeconomic characteristics of households and mothers.[1] Mortality in urban areas is generally lower than in rural areas. For example, infant mortality in urban areas is 55 deaths per 1,000 live births compared with 62 deaths per 1,000 live births in rural areas. The urban-rural gap is wider for neonatal mortality (21 deaths versus 31 deaths per 1,000). Differentials in mortality by province are also substantial, particularly in the under-5 mortality rates. The City of Kigali has the lowest rates of neonatal mortality (21 deaths per 1,000 live births) and under-5 mortality (79 deaths per 1,000 live births). The highest neonatal mortality and infant mortality rates are found in the North province (39 deaths and 71 deaths per 1,000 live births respectively), whereas the East province has the highest rate of under-5 mortality (125 deaths per 1,000 live births).

[1] To have a sufficient number of cases to ensure statistically reliable mortality estimates, rates presented in Tables 8.2 and 8.3 are calculated for a 10-year period.

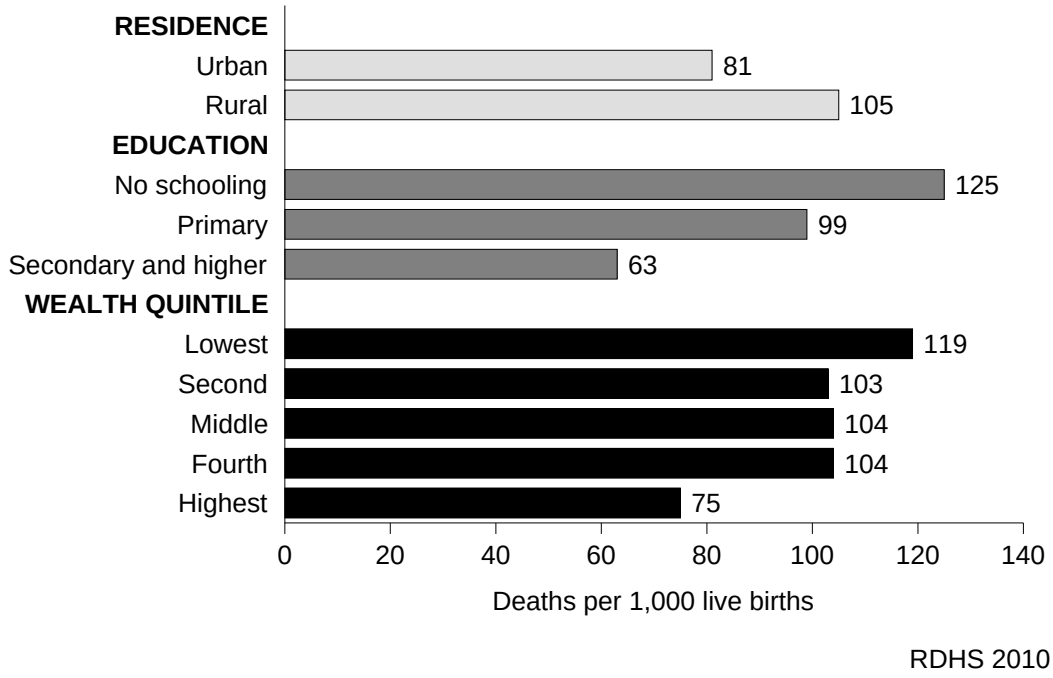
Table 8.2 Early childhood mortality rates by socioeconomic characteristics

Neonatal, postneonatal, infant, child, and under-5 mortality rates for the 10-year period preceding the survey, by background characteristic, Rwanda 2010

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-5 mortality ($_5q_0$)
Residence					
Urban	21	34	55	27	81
Rural	31	31	62	46	105
Province					
City of Kigali	21	34	55	26	79
South	31	28	60	39	96
West	27	29	56	34	88
North	39	33	71	39	107
East	27	35	63	66	125
Mother's education					
No education	32	42	75	54	125
Primary	30	29	59	43	99
Secondary and higher	22	23	46	19	63
Wealth quintile					
Lowest	33	37	70	53	119
Second	32	25	57	49	103
Middle	25	35	61	46	104
Fourth	31	35	66	41	104
Highest	24	26	50	27	75

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

Figure 8.2 Under-5 Mortality Rates by Socioeconomic Characteristics



RDHS 2010

As expected, mortality declines markedly as mother's education increases. Children born to mothers with no schooling have the highest mortality rates. According to the survey results in Table 8.2, the infant mortality rate

among children of mothers with a secondary education or higher is 46 deaths per 1,000 live births, much lower than the rate of 75 deaths per 1,000 live births among children of mothers with no schooling.

In addition, mortality declines markedly as the wealth of the household increases. Children born in poorer households suffer higher mortality than those born in wealthier households. For example, infant and under-5 mortality rates are about one and a half times higher among children living in the poorest households compared with rates among those living in the wealthiest households.

8.4 DEMOGRAPHIC DIFFERENTIALS IN MORTALITY

Infant and child mortality varies substantially by the demographic characteristics of mothers and children. Table 8.3 and Figure 8.3 show childhood mortality rates by different demographic variables. With the exception of child mortality, mortality rates are higher among male children than among female children during all periods of life before age 5. This excess mortality among boys is observed not only in Rwanda but also in other countries and is in fact a universal phenomenon.

Table 8.3 Early childhood mortality rates by demographic characteristics

Neonatal, postneonatal, infant, child, and under-5 mortality rates for the 10-year period preceding the survey, by demographic characteristics, Rwanda 2010

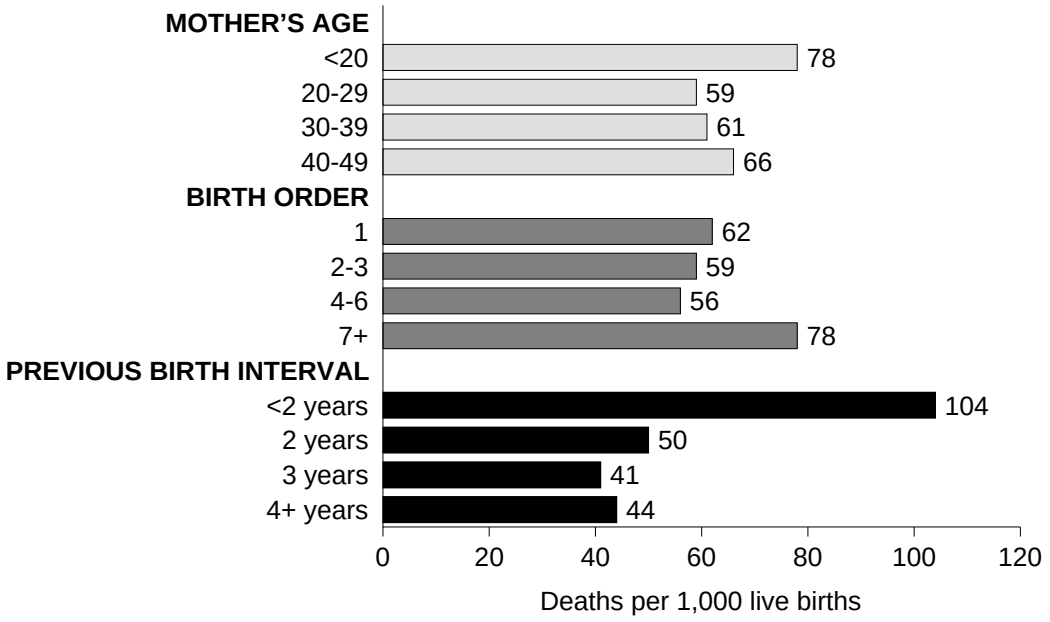
Demographic characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Child's sex					
Male	32	35	67	43	107
Female	27	28	55	44	97
Mother's age at birth					
<20	42	36	78	64	137
20-29	28	31	59	46	102
30-39	29	32	61	38	96
40-49	31	36	66	25	89
Birth order					
1	32	30	62	47	107
2-3	30	29	59	47	103
4-6	25	32	56	40	94
7+	35	42	78	36	111
Previous birth interval[2]					
<2 years	52	52	104	57	156
2 years	20	29	50	39	87
3 years	20	21	41	37	76
4+ years	21	23	44	36	78
Birth size[3]					
Small/very small	42	26	69	na	na
Average or larger	23	22	45	na	na

[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
na = Not applicable

The distribution of infant mortality by maternal age at birth is a U-shaped curve, being relatively higher among children born to mothers under age 20 and over age 40 than among children born to mothers in age groups 20-29 and 30-39.

Relationships between infant mortality and specific demographic characteristics are illustrated in Figure 8.3. First-order births appear to be at the same risk of mortality as second- to sixth-order births. Significant increases in risk are most apparent for births of order seven and higher.

Figure 8.3 Infant Mortality Rates by Demographic Characteristics



RDHS 2010

Short birth interval is one of the risk factors for childhood mortality. For example, Table 8.3 shows that children born less than two years after a preceding birth are more than twice as likely to die within the first month of life as children born after a two-year interval (52 deaths per 1,000 live births versus 20 per 1,000 live births). The relationship between short birth interval and infant mortality is also evident; a child born less than two years after a preceding birth is more than twice as likely to die before his or her first birthday compared with a child born four or more years after a preceding birth (104 deaths per 1,000 live births versus 44 per 1,000).

Studies have demonstrated that children's weight at birth is an important determinant of their chances of survival. Actual birth weights were unavailable for most children; instead, mothers were asked whether their child was very large, larger than average, average, smaller than average, or small at birth, because this has been found to be a good proxy for a child's weight at birth. Those children reported by their mothers to be small or very small were almost twice as likely to die before age 1 month as those reported to be average or larger than average.

8.5 High-Risk Fertility Behavior

The survival of infants and children depends in part on the demographic and biological characteristics of their mothers. Typically, the probability of dying in infancy is much greater among children born to mothers who are too young (under age 18) or too old (over age 34), children born after a short birth interval (less than 24 months after the preceding birth), and children born to mothers of high parity (more than three children). The risk is elevated when a child is born to a mother who has a combination of these risk characteristics.

Table 8.4 shows the percent distribution of children born to currently married women in the five years before the survey by these risk factors. One quarter of births (25 percent) were not in any high-risk category. Twenty-four percent were first births to women between age 18 and age 34—considered an unavoidable risk category—whereas 30 percent of births were in a single high-risk category and 21 percent were in a multiple high-

risk category. The most common single high-risk category was births of order three and above (20 percent), and the most common multiple high-risk category was births to mothers older than 34 years and of birth order three and above (15 percent).

Table 8.4 High-risk fertility behavior

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, Rwanda 2010

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	24.7	1.00	20.0
Unavoidable risk category			
First order births between ages 18 and 34 years	23.6	1.08	4.7
Single high-risk category			
Mother's age <18	1.3	1.37	0.0
Mother's age >34	1.2	0.91	2.7
Birth interval <24 months	8.2	1.27	10.5
Birth order >3	19.6	0.68	16.7
Subtotal	30.3	0.87	29.9
Multiple high-risk category			
Age <18 and birth interval <24 months[2]	0.0	*	0.0
Age >34 and birth interval <24 months	0.1	*	0.2
Age >34 and birth order >3	14.7	1.06	31.8
Age >34 and birth interval <24 months and birth order >3	1.9	2.65	4.7
Birth interval <24 months and birth order >3	4.6	1.92	8.8
Subtotal	21.4	1.40	45.4
In any avoidable high-risk category	51.7	1.09	75.3
Total	**100.0**	**-**	**100.0**
Number of births/women	**9,137**	**-**	**6,897**

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. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
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 sterilized women

The risk ratios displayed in the second column of Table 8.4 denote the relationship between risk factors and mortality. For example, the risk of dying for a child who falls into any of the avoidable high-risk categories is 1.1 times higher than for a child not in any high-risk category. In general, risk ratios are higher for children in a multiple high-risk category than for children in a single high-risk category. Most vulnerable are children born to a mother older than age 34, born less than 24 months after a preceding birth, and born with a birth order greater than 3; they are nearly 2.65 times as likely to die as children who are not in any high-risk category. However, only 2 percent of births fall into this category. Among the single high-risk categories, having a mother less than 18 years old results in a child having a risk of dying that is 1.4 times the risk of a child not in any high-risk category.

The final column of Table 8.4 illustrates the potential for currently married women to experience a high-risk birth. A woman's status at the time of the survey with regard to her age, time elapsed since the last birth, and parity are used to classify her into a potential risk category that would apply if she were to become pregnant at the time of the survey. For example, if a respondent who is age 40, has had four births, and has had her last birth 12 months ago were to become pregnant, she would fall into the multiple high-risk category of being too old, too high in parity (four or more births), and giving birth too soon (less than 24 months) after a previous birth.

Overall, approximately three in four currently married women (75 percent) have the potential to give birth to a child at elevated risk of mortality. Thirty percent of women have the potential for having a birth in a single high-risk category, and 45 percent of women have the potential for having a birth in a multiple high-risk category (mainly older maternal age and higher birth order).

MATERNAL HEALTH 9

The 2010 Rwanda Demographic and Health Survey (RDHS) collected information about the health of mothers and their children born in the five years preceding the survey. This chapter covers antenatal, postnatal, and delivery care and describes problems in accessing health care. The findings in this chapter help identify the most important problems in maternal and child health and reproductive health. A comparison of the results with those of previous surveys can assist in the planning and evaluation of national health policies and programmes.

9.1 ANTENATAL CARE

Monitoring of pregnant women through antenatal care visits helps reduce risks and complications during pregnancy and delivery and the postpartum period. For this reason, the 2010 RDHS asked women who had had a live birth in the five years preceding the survey whether they had received antenatal care (ANC). Table 9.1 shows the distribution of women's most recent live births in the past five years according to the type of medical personnel consulted by the women during the pregnancy and the women's background characteristics. All categories of ANC providers consulted by the mother were recorded; however, if more than one provider was mentioned, only the provider with the highest qualifications was considered in the tabulations (e.g., if a doctor and nurse were mentioned, the doctor is considered in the tabulation).

For their most recent live births in the five years preceding the survey, nearly all of the mothers (98 percent) received antenatal care from trained personnel. This proportion represented an increase from the previous survey, where 94 percent of births benefited from antenatal care (Figure 9.1).

ANC was mainly provided by nurses or medical assistants (94 percent) and, in very low percentages, by doctors (4 percent). In the current Rwandan health system, ANC at public or private health facilities is almost always provided by nurses (doctors intervene only if complications are noted during the mother's ANC visit).

The data do not vary substantially by background characteristics: the proportion of mothers who received antenatal care is greater than or nearly equal to 97 percent regardless of age, birth order, area of residence, level of education, or household wealth. However, the proportion of women who consulted with a doctor during these visits is higher in urban areas (9 percent, as compared with 3 percent in rural areas), among those in the City of Kigali (8 percent, as compared with 1 to 5 percent in the other provinces), and among those with a secondary education or higher (11 percent, as compared with 4 percent among mothers with no education). The proportion of women who consulted with a doctor is also higher among those in the richest quintile (9 percent, as compared with 2 or 3 percent in the other quintiles).

Table 9.1 Antenatal care

Percent distribution of women age 15-49 who had a live birth in the five years preceding the survey by antenatal care (ANC) provider during pregnancy for the most recent birth and the percentage receiving antenatal care from a skilled provider for the most recent birth, according to background characteristics, Rwanda 2010

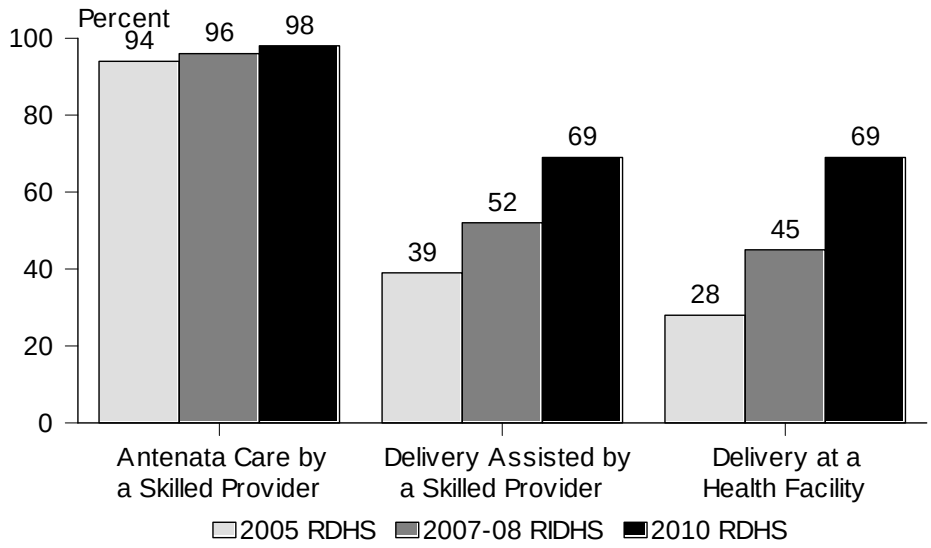
Background characteristic	Antenatal care provider							Total	Percentage receiving antenatal care from a skilled provider[1]	Number of women
	Doctor	Nurse/ medical assistant	Midwife	Traditional birth attendant	Other	No one	Missing			
Mother's age at birth										
<20	2.1	95.0	0.0	0.0	0.0	2.9	0.0	100.0	97.1	373
20-34	4.1	94.2	0.2	0.0	0.0	1.4	0.1	100.0	98.4	4,679
35-49	3.7	93.2	0.1	0.0	0.1	2.7	0.2	100.0	97.0	1,353
Birth order										
1	4.4	93.7	0.2	0.1	0.0	1.5	0.1	100.0	98.3	1,436
2-3	4.0	94.4	0.0	0.0	0.0	1.4	0.1	100.0	98.5	2,190
4-5	4.0	93.6	0.3	0.0	0.1	1.7	0.3	100.0	97.9	1,406
6+	3.0	94.1	0.0	0.0	0.0	2.7	0.1	100.0	97.1	1,373
Residence										
Urban	8.5	89.6	0.2	0.0	0.0	1.5	0.1	100.0	98.3	819
Rural	3.2	94.6	0.1	0.0	0.0	1.8	0.2	100.0	98.0	5,586
Region										
City of Kigali	7.7	91.2	0.1	0.0	0.0	0.9	0.2	100.0	99.0	635
South	4.4	93.1	0.1	0.0	0.0	2.3	0.0	100.0	97.6	1,532
West	5.3	92.6	0.0	0.0	0.0	1.8	0.3	100.0	97.9	1,545
North	1.1	96.8	0.4	0.0	0.1	1.4	0.2	100.0	98.3	1,035
East	2.3	95.5	0.1	0.1	0.0	1.9	0.1	100.0	98.0	1,658
Mother's education										
No education	3.5	92.8	0.1	0.1	0.0	3.2	0.3	100.0	96.4	1,211
Primary	3.0	95.3	0.1	0.0	0.0	1.5	0.1	100.0	98.4	4,571
Secondary and higher	11.3	86.9	0.4	0.0	0.0	1.0	0.3	100.0	98.7	623
Wealth quintile										
Lowest	3.3	93.2	0.1	0.1	0.0	3.2	0.2	100.0	96.6	1,475
Second	2.9	94.5	0.0	0.0	0.0	2.3	0.3	100.0	97.4	1,369
Middle	2.6	95.8	0.2	0.0	0.0	1.3	0.1	100.0	98.6	1,250
Fourth	2.4	96.6	0.1	0.0	0.1	0.8	0.0	100.0	99.1	1,188
Highest	8.8	89.8	0.3	0.0	0.0	0.9	0.2	100.0	98.9	1,122
Total	**3.9**	**94.0**	**0.1**	**0.0**	**0.0**	**1.8**	**0.1**	**100.0**	**98.0**	**6,405**

Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation.
[1] Skilled provider includes doctor, nurse, medical assistant, and midwife.

These results can be explained by the concentration of doctors in urban areas, particularly the City of Kigali. It should be noted that almost 2 percent of women received no antenatal care during their pregnancy. The youngest and oldest women, those in the sixth or higher birth order category, those with no education, and those in the poorest wealth quintile were least likely to receive antenatal care (3 percent in each group).

To be effective, antenatal care must be sought early in the pregnancy, preferably in the first semester; more important, it must continue regularly through to delivery. The World Health Organization (WHO) recommends at least four ANC visits at regular intervals throughout the pregnancy, as does the Rwandan health system.

Figure 9.1 Trends in Antenatal Care and Delivery, Rwanda 2005, 2007-08, and 2010



RDHS 2010

Table 9.2 shows the number of ANC visits and the timing of the first visit. Although the great majority of Rwandan mothers sought antenatal care, the number of visits was below the standard set by WHO and Rwanda Ministry of Health. About 35 percent of women who had a live birth in the five years preceding the survey met the standard of at least four ANC visits. This proportion was only 13 percent in 2005. More than half of the women (58 percent) had two or three ANC visits. It should also be noted that 4 percent of mothers had only one ANC visit and that 2 percent had no visits, as compared with 13 percent and 5 percent, respectively, in 2005. Results by residence show that the proportion of women who had at least four ANC visits was slightly higher in urban areas (40 percent) than in rural areas (35 percent).

It should be noted that Rwandan women seek their first prenatal visit late in pregnancy. In fact, only 38 percent of women made their first visit before the fourth month of pregnancy, and this proportion was higher in urban areas (43 percent) than in rural areas (38 percent). The results also show that 38 percent of women had their first visit at the fourth or fifth month of pregnancy; 19 percent began at the sixth or seventh month, and 2 percent began at the eighth month or after. The median number of months pregnant at the first ANC visit was 4.5 for the country as a whole (4.3 and 4.5 for urban and rural areas, respectively); this represents a decline from the previous survey (2005 RDHS), when the figure was 6.4 (6.2 in urban areas and 6.5 in rural areas).

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

Percent distribution of women age 15-49 who had a live birth in the five years preceding the survey by number of antenatal care (ANC) visits for the most recent live birth, and by the timing of the first visit, and among women with ANC, median months pregnant at first visit, according to residence, Rwanda 2010

Number and timing of ANC visits	Residence		Total
	Urban	Rural	
Number of ANC visits			
None	1.5	1.9	1.8
1	5.4	4.2	4.3
2-3	52.5	59.1	58.3
4+	40.4	34.7	35.4
Don't know/missing	0.3	0.2	0.2
Total	100.0	100.0	100.0
Number of months pregnant at time of first ANC visit			
No antenatal care	1.5	1.9	1.8
<4	43.4	37.5	38.2
4-5	35.1	38.8	38.3
6-7	16.8	19.6	19.2
8+	3.2	2.2	2.3
Don't know/missing	0.0	0.1	0.1
Total	100.0	100.0	100.0
Number of women	**819**	**5,586**	**6,405**
Median months pregnant at first visit (for those with ANC)	4.3	4.5	4.5
Number of women with ANC	**806**	**5,482**	**6,289**

9.1.1 Components of Antenatal Care

The effectiveness of antenatal care depends not only on the types of examinations performed at the visit but also on the counselling and preventive measures administered to avoid the risk of miscarriage and other pregnancy complications. The 2010 RDHS collected data on this important aspect of prenatal monitoring by asking women whether, during their ANC visits for their most recent birth, they were told about the danger signs of pregnancy complications, they received specific medical examinations (blood pressure measurements), and they were given blood and urine tests. In addition, women were asked whether they had received iron supplements. The results from these questions are presented in Table 9.3 by background characteristics.

Almost three quarters of women (73 percent, as compared with 28 percent in 2005) took iron tablets or syrup during the pregnancy of their last birth, but only 39 percent took intestinal parasite drugs. Ninety-one percent of women had a blood sample taken (as compared with 25 percent in 2005), 86 percent had their blood pressure measured (71 percent in 2005), and 72 percent were informed of signs of pregnancy complications (6 percent in 2005); however, only 31 percent had a urine sample taken (7 percent in 2005).

The results reveal the possible effects of birth order and education on use of iron tablets or syrup by pregnant mothers. Seventy-five percent of women in the first birth order category took iron, as compared with 72 percent in the fourth and fifth birth order category. Similarly, 69 percent of women with no education took iron, as compared with 74 percent of those with a secondary education or higher. By province, the East province had the lowest proportion (69 percent) of women who took iron during their pregnancy, while the North province had the highest proportion (78 percent).

Table 9.3 Components of antenatal care

Among women age 15-49 with a live birth in the five years preceding the survey, the percentage who took iron tablets or syrup and drugs for intestinal parasites during the pregnancy of the most recent birth, and among women receiving antenatal care (ANC) for the most recent live birth in the five years preceding the survey, the percentage receiving specific antenatal services, according to background characteristics, Rwanda 2010

Background characteristic	Among women with a live birth in the past five years, the percentage who during the pregnancy of their last birth:			Among women who received antenatal care for their most recent birth in the past five years, the percentage with selected services:				
	Took iron tablets or syrup	Took intestinal parasite drugs	Number of women with a live birth in the past five years	Informed of signs of pregnancy complica-tions	Blood pressure measured	Urine sample taken	Blood sample taken	Number of women with ANC for their most recent birth
Mother's age at birth								
<20	73.8	40.2	373	72.7	79.7	35.6	92.5	362
20-34	72.9	40.1	4,679	72.3	85.6	32.0	91.2	4,610
35-49	72.9	35.4	1,353	72.0	88.1	25.1	88.0	1,316
Birth order								
1	74.9	39.4	1,436	72.5	83.4	39.8	94.5	1,414
2-3	73.0	40.9	2,190	72.3	85.0	32.0	91.5	2,160
4-5	72.3	38.1	1,406	71.7	88.4	26.9	89.1	1,380
6+	71.6	36.9	1,373	72.4	86.8	23.0	86.7	1,335
Residence								
Urban	72.5	35.5	819	74.5	93.0	51.9	94.7	806
Rural	73.1	39.6	5,586	71.9	84.7	27.6	90.0	5,482
Region								
City of Kigali	72.0	33.2	635	73.4	95.0	60.0	96.1	629
South	75.9	32.7	1,532	77.4	90.8	33.7	91.3	1,497
West	71.9	42.4	1,545	64.7	80.2	33.5	88.7	1,517
North	77.8	44.8	1,035	74.4	89.3	32.4	87.2	1,019
East	68.7	40.7	1,658	72.8	80.5	13.1	91.9	1,626
Mother's education								
No education	68.7	37.3	1,211	71.2	84.3	23.6	88.1	1,172
Primary	73.9	39.4	4,571	71.8	85.4	29.6	90.9	4,501
Secondary and higher	74.4	40.1	623	77.3	91.4	52.8	93.6	616
Wealth quintile								
Lowest	71.3	37.0	1,475	72.0	84.2	26.5	88.7	1,427
Second	72.0	38.0	1,369	69.9	83.2	25.2	89.8	1,337
Middle	75.2	39.6	1,250	72.0	84.3	26.3	89.3	1,234
Fourth	74.0	43.2	1,188	73.9	86.4	29.0	92.4	1,178
Highest	72.8	38.4	1,122	73.9	91.7	49.7	93.8	1,112
Total	**73.0**	**39.1**	**6,405**	**72.3**	**85.8**	**30.8**	**90.6**	**6,289**

Consumption of intestinal drugs varied by age, area of residence, and education. Two in five pregnant women less than age 35 took intestinal drugs, as compared with 35 percent of those age 35-49. Thirty-six percent of pregnant women in urban areas took intestinal drugs, as compared with 40 percent in rural areas, and 37 percent with education took intestinal drugs, as compared with 40 percent with a secondary education or higher. By province, the City of Kigali and the South province had the lowest proportions of women who took intestinal drugs during their pregnancy (33 percent), while the North province had the highest proportion (45 percent).

Overall, the proportion of pregnant women informed of the signs of pregnancy complications was higher in urban areas (75 percent) than in rural areas (72 percent). It was also higher among mothers with a secondary education or more (77 percent) than among those with no education (71 percent). The West province had the lowest proportion of pregnant women informed of the signs of pregnancy complications (65 percent), while the South province had the highest (77 percent).

The oldest women were more likely to have their blood pressure measured than the youngest ones (88 percent and 80 percent, respectively). Similarly, mothers in the fourth or fifth birth order category (88 percent) were more likely to have their blood pressure measured than those in the first birth order category (83 percent). Ninety-three percent of women in urban areas had their blood pressure measured, as compared with 85 percent in rural areas. Mothers with a secondary education or higher (91 percent) were more likely than those with no education (84 percent) to have their blood pressure checked. By province, the proportion varied from a low of 80 percent in the West province to a high of 95 percent in the City of Kigali.

Young women (36 percent), those in the first birth order category (40 percent), those living in urban areas (52 percent), those living in the City of Kigali (60 percent), those with the highest level of education (53 percent), and those in the highest wealth quintile (50 percent) were most likely to have a urine test.

9.1.2 Tetanus Vaccinations

Neonatal tetanus is a major cause of death among newborns in most developing countries. Tetanus toxoid injections given to the mother during pregnancy protect both mother and child against this disease. To be fully protected, a woman should receive five doses of the vaccine during her life; however, if she has already been vaccinated, for example during a previous pregnancy, one additional dose is sufficient. It is important to note that the information presented here does not take into account women's vaccination history; some women may have received the vaccine prior to the period under consideration. If the vaccination was received within the past 10 years, the woman will retain some immunity.

Table 9.4 shows that 34 percent of women who had a live birth in the five years preceding the survey received two or more doses of anti-tetanus vaccine during their most recent pregnancy, as compared with 63 percent in 2005. If we take into account the mothers who had previous protection against tetanus and were immunised during the survey, the proportion increases to 79 percent. This means that 21 percent of pregnant women were not protected against tetanus. The age of the mother seemed to be an important factor in tetanus coverage: the proportion whose last birth was protected against neonatal tetanus was higher among mothers in the oldest group (82 percent) than among mothers in the youngest group (65 percent). Similarly, higher order births were better protected than first births (85 percent for births order six and above and 62 percent for first births). In addition, mothers in rural areas (79 percent), mothers in the East province (81 percent), and mothers with a primary education or a secondary education or higher (79 percent) were more likely to be protected against tetanus. The data by wealth quintile showed no major variations with respect to vaccination coverage.

Table 9.4 Tetanus toxoid injections

Among mothers age 15-49 with a live birth in the five years preceding the survey, the percentage receiving two or more tetanus toxoid injections during the pregnancy for the last live birth and the percentage whose last live birth was protected against neonatal tetanus, according to background characteristics, Rwanda 2010

Background characteristic	Percentage receiving two or more injections during last pregnancy	Percentage whose last birth was protected against neonatal tetanus[1]	Number of mothers
Mother's age at birth			
<20	58.7	65.0	373
20-34	37.0	78.6	4,679
35-49	17.2	82.4	1,353
Birth order			
1	60.3	61.8	1,436
2-3	37.8	80.0	2,190
4-5	23.5	86.9	1,406
6+	11.7	85.4	1,373
Residence			
Urban	36.5	76.7	819
Rural	33.7	78.9	5,586
Region			
City of Kigali	36.9	73.2	635
South	38.0	79.4	1,532
West	35.2	76.0	1,545
North	29.4	80.7	1,035
East	31.3	81.0	1,658
Mother's education			
No education	27.9	77.4	1,211
Primary	35.0	78.9	4,571
Secondary and higher	40.0	78.9	623
Wealth quintile			
Lowest	33.4	74.1	1,475
Second	33.5	78.9	1,369
Middle	36.8	81.1	1,250
Fourth	30.8	81.0	1,188
Highest	36.4	78.7	1,122
Total	**34.1**	**78.6**	**6,405**

[1] Includes mothers with two injections during the pregnancy of their last birth or two or more injections (the last within three years of the last live birth), three or more injections (the last within five years of the last birth), four or more injections (the last within 10 years of the last live birth), or five or more injections prior to the last birth

9.2 DELIVERY CARE

9.2.1 Place of Delivery

Because every pregnancy may be subject to complications, women are advised to deliver their babies in a health facility so they have access to emergency services if needed during labour, delivery, and postdelivery. For this reason, the 2010 RDHS asked women where they had given birth and who had assisted in the delivery. Table 9.5 shows that 69 percent of women delivered their babies at a health facility (compared with 28 percent in 2005). Among these deliveries, 68 percent took place in a public health facility (compared with 27 percent in 2005) and only 1 percent took place in a private facility (compared with 1.3 percent in 2005). It should also be noted that 29 percent of deliveries in the five years preceding the survey took place at home (compared with 70 percent in 2005).

Table 9.5 Place of delivery

Percent distribution of live births in the five years preceding the survey by place of delivery and percentage delivered in a health facility, according to background characteristics, Rwanda 2010

Background characteristic	Health facility		Home	Other	Missing	Total	Percentage delivered in a health facility	Number of births
	Public sector	Private sector						
Mother's age at birth								
<20	82.5	0.2	15.4	1.8	0.1	100.0	82.7	556
20-34	69.5	1.1	27.4	1.8	0.2	100.0	70.6	6,938
35-49	56.0	1.1	40.3	2.6	0.1	100.0	57.0	1,643
Birth order								
1	86.8	1.2	11.0	0.9	0.2	100.0	88.0	2,277
2-3	68.6	1.2	27.9	2.1	0.2	100.0	69.8	3,123
4-5	58.5	1.0	38.1	2.3	0.1	100.0	59.5	1,960
6+	52.7	0.6	44.1	2.4	0.2	100.0	53.3	1,777
Antenatal care visits[1]								
None	16.0	0.0	83.0	0.0	1.0	100.0	16.0	116
1-3	67.2	0.8	29.9	2.1	0.1	100.0	68.0	4,009
4+	79.6	2.0	16.3	2.1	0.0	100.0	81.6	2,268
Residence								
Urban	77.5	4.6	16.2	1.8	0.0	100.0	82.0	1,094
Rural	66.6	0.5	30.8	1.9	0.2	100.0	67.1	8,043
Region								
City of Kigali	77.1	5.9	16.0	1.0	0.0	100.0	83.0	872
South	65.5	1.1	30.6	2.4	0.3	100.0	66.6	2,169
West	70.4	0.2	27.4	1.9	0.1	100.0	70.6	2,284
North	63.1	0.3	33.6	2.6	0.4	100.0	63.4	1,437
East	67.1	0.4	31.1	1.4	0.1	100.0	67.5	2,376
Mother's education								
No education	56.3	0.5	41.1	1.6	0.5	100.0	56.7	1,756
Primary	69.4	0.5	28.0	2.0	0.1	100.0	69.9	6,578
Secondary and higher	80.9	6.4	11.1	1.4	0.3	100.0	87.3	803
Wealth quintile								
Lowest	60.6	0.4	36.1	2.6	0.3	100.0	61.0	2,134
Second	62.9	0.4	34.5	2.0	0.2	100.0	63.3	1,964
Middle	66.0	0.4	31.6	1.7	0.2	100.0	66.5	1,815
Fourth	72.4	0.4	25.7	1.5	0.1	100.0	72.7	1,698
Highest	81.7	4.0	12.7	1.4	0.1	100.0	85.7	1,525
Total	**67.9**	**1.0**	**29.0**	**1.9**	**0.2**	**100.0**	**68.9**	**9,137**

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

The incidence of home births increased with the age of the mother (15 percent among mothers under the age of 20 and 40 percent among mothers age 35 to 49) and with the child's birth order (11 percent of first births took place at home, as compared with 44 percent of births order six and above). Mothers who had not received ANC were more likely to give birth at home (83 percent, compared with 16 percent among women who had four or more ANC visits). In addition, home births were more frequent in rural areas (31 percent, as compared with 16 percent in urban areas) and among women with no education or only a primary education (41 percent and 28 percent, respectively, as compared with 11 percent among women with a secondary education or higher). By province, with

the exception of the City of Kigali (where only 16 percent of births took place at home), the proportion of home births ranged from a low of 27 percent in the West province to a high of 34 percent in the North province. Finally, the proportion of women who delivered at home decreased as household wealth increased, from 36 percent among women in the poorest households to 13 percent among those in the richest households.

The youngest mothers were more likely to deliver in a health facility (83 percent) than the oldest mothers (57 percent). Similarly, the proportion of mothers who delivered at a health facility decreased with increasing birth order (88 percent for first births, as compared with 53 percent for births order six and above). Mothers who had four or more ANC visits were more likely than mothers with no visits to deliver at a health facility (82 percent and 16 percent, respectively). In urban areas 82 percent of births took place at a health facility, and in the City of Kigali this proportion was 83 percent. Similarly, 87 percent of women with a secondary education or higher delivered their babies at a health facility, as did 86 percent of women in the highest wealth quintile. It should be noted that these results represent a substantial change from the 2005 RDHS with respect to place of delivery.

9.2.2 Assistance during Delivery

To avoid the risk of complications or maternal death, women should be assisted during delivery by personnel who have received training in normal childbirth and who are able, if needed, to diagnose, treat, and refer complications. Table 9.6 presents the distribution of births in the five years preceding the survey according to the person providing assistance during the delivery. The results show that almost 7 in 10 births (69 percent) were assisted by a skilled provider (a substantial improvement since the previous survey, where only 39 percent were assisted by a skilled provider); 10 percent were assisted by doctors, 59 percent by nurses or medical assistants, and 0.3 percent by midwives. However, it should be noted that 10 percent of births received no assistance during their delivery and that 21 percent were assisted by untrained persons (2 percent by nonqualified health workers, 3 percent by traditional birth attendants, and 16 percent by relatives or other persons). Seven percent of births delivered by caesarean.

The proportion of deliveries that received no assistance increased with mother's age at birth (3 percent among mothers under age 20 and 17 percent among mothers age 35-49) and with birth order (2 percent for first births and 19 percent for births order six and above). Unassisted deliveries were more frequent in rural areas (11 percent) than in urban areas (5 percent). In the provinces, the proportion of unassisted deliveries ranged from a low of 6 percent in the City of Kigali to a high of 12 percent in the East province. Level of education was related to delivery conditions: 15 percent of deliveries that mothers having no education delivered without assistance, as compared with 9 percent of deliveries that mothers having a primary education and 4 percent of deliveries that mothers having a secondary education or higher. Results by household wealth quintile showed a higher proportion of unassisted deliveries in the poorest quintile (13 percent) than in the richest one (5 percent). Deliveries assisted by skilled personnel were more frequent among the youngest mothers (83 percent); those in the first birth order category (88 percent); those who delivered in health facilities (100 percent); those in urban areas (82 percent), particularly the City of Kigali (83 percent); those with a secondary education or higher (88 percent); and those in the richest wealth quintile (86 percent) (Table 9.6 and Figure 9.2).

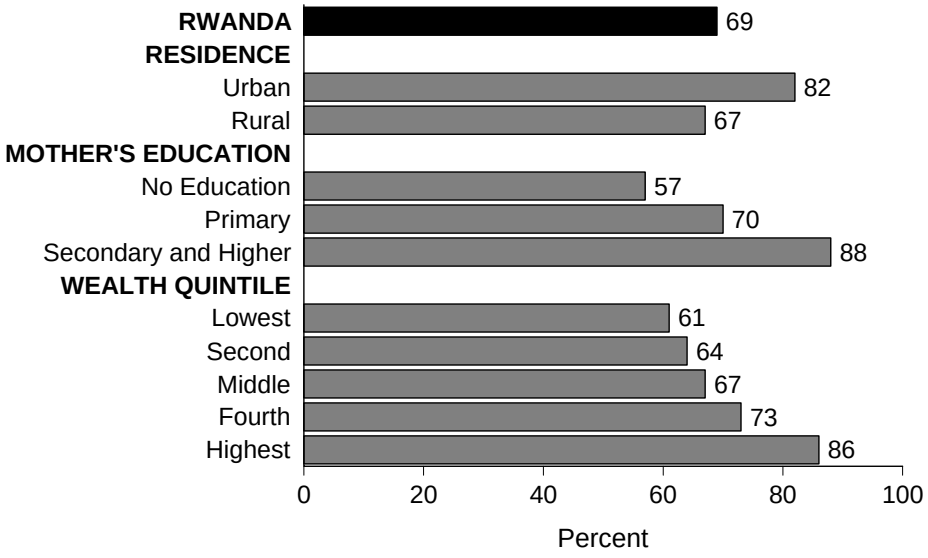
Table 9.6 Assistance during delivery

Percent distribution of live births in the five years preceding the survey by person providing assistance during delivery, percentage of births assisted by a skilled provider, and percentage delivered by caesarean section, according to background characteristics, Rwanda 2010

Background characteristic	Person providing assistance during delivery									Percentage delivered by a skilled provider[1]	Percentage delivered by C-section	Number of births
	Doctor	Nurse/ medical assistant	Midwife	Other health worker	Traditional birth attendant	Relative/ other	No one	Don't know/ missing	Total			
Mother's age at birth												
<20	12.2	70.5	0.4	1.5	1.9	10.2	3.1	0.1	100.0	83.1	9.3	556
20-34	10.3	60.0	0.3	2.0	2.5	15.7	8.8	0.4	100.0	70.6	7.4	6,938
35-49	7.0	50.2	0.2	2.9	2.5	19.6	17.3	0.3	100.0	57.4	5.0	1,643
Birth order												
1	16.0	71.3	0.6	1.0	1.1	7.7	2.0	0.3	100.0	88.0	13.1	2,277
2-3	10.1	59.4	0.3	2.2	2.8	16.5	8.4	0.3	100.0	69.8	7.0	3,123
4-5	6.9	52.6	0.2	2.7	3.2	20.5	13.5	0.4	100.0	59.7	3.7	1,960
6+	4.6	48.8	0.2	2.8	2.9	21.2	19.0	0.4	100.0	53.7	3.2	1,777
Place of delivery												
Health facility	14.1	85.1	0.3	0.1	0.0	0.1	0.1	0.2	100.0	99.5	10.3	6,295
Elsewhere	0.4	0.7	0.3	6.7	7.9	51.9	32.0	0.2	100.0	1.3	0.0	2,825
Residence												
Urban	20.3	61.5	0.5	1.2	1.1	9.4	5.4	0.5	100.0	82.4	15.9	1,094
Rural	8.4	58.5	0.3	2.2	2.6	17.0	10.6	0.3	100.0	67.2	5.9	8,043
Region												
City of Kigali	19.9	62.8	0.4	1.2	1.2	8.1	5.9	0.5	100.0	83.1	15.9	872
South	9.2	56.8	0.4	2.3	2.9	17.9	9.8	0.6	100.0	66.4	7.1	2,169
West	9.0	61.7	0.2	1.6	0.9	17.3	9.2	0.1	100.0	71.0	5.9	2,284
North	7.2	56.3	0.3	1.5	1.5	22.6	10.2	0.4	100.0	63.8	5.1	1,437
East	9.0	58.2	0.3	3.2	4.6	12.3	12.2	0.2	100.0	67.5	6.3	2,376
Mother's education												
No education	6.5	50.4	0.2	1.9	3.1	23.0	14.5	0.3	100.0	57.1	4.7	1,756
Primary	9.0	60.7	0.3	2.2	2.5	15.5	9.4	0.4	100.0	69.9	6.3	6,578
Secondary and higher	24.2	62.6	0.9	1.4	0.8	5.7	4.2	0.2	100.0	87.7	18.6	803
Wealth quintile												
Lowest	7.0	53.9	0.3	2.7	2.9	20.3	12.5	0.5	100.0	61.2	4.9	2,134
Second	7.1	56.2	0.2	2.2	2.4	19.7	11.9	0.3	100.0	63.5	5.2	1,964
Middle	8.7	57.6	0.3	2.0	3.3	17.8	10.0	0.2	100.0	66.7	7.0	1,815
Fourth	9.0	63.3	0.2	2.1	2.7	13.2	9.2	0.2	100.0	72.6	5.7	1,698
Highest	19.4	65.8	0.6	1.3	0.8	6.9	4.6	0.5	100.0	85.9	14.4	1,525
Total	**9.8**	**58.9**	**0.3**	**2.1**	**2.5**	**16.1**	**10.0**	**0.3**	**100.0**	**69.0**	**7.1**	**9,137**

Note: If the respondent mentioned more than one person attending during delivery, only the most qualified person is considered in this tabulation.
[1] Skilled provider includes doctor, nurse, medical assistant, and midwife.

Figure 9.2 Children Whose Delivery was Assisted by Trained Personnel



RDHS 2010

9.3 POSTNATAL CARE

A significant proportion of maternal and newborn deaths in the neonatal period take place within the 48 hours following delivery. For this reason, safe motherhood programmes have recently placed special emphasis on the importance of postnatal checkups, recommending that all women have a postnatal visit within two to seven days following the delivery. During the survey, therefore, women age 15-49 who had given birth in the two years preceding the survey were asked whether they had received a postnatal checkup and about the timing of this checkup.

9.3.1 Maternal Postnatal Care

Table 9.7 shows that slightly fewer than one woman in five (18 percent) had a postnatal checkup in the first two days after delivery. Among these women, 12 percent had a checkup within 4 hours, 3 percent within 4 to 23 hours, and 3 percent within 1 to 2 days. Eighty percent of women did not have a postnatal checkup, and this proportion was very high in each of the background characteristic categories. However, the proportion of women who did not have a postnatal checkup decreased relative to 2005, when it was 95 percent.

Table 9.7 Timing of first postnatal checkup

Among women age 15-49 giving birth in the two years preceding the survey, the percent distribution of the mother's first postnatal checkup for the last live birth by time after delivery, and the percentage of women with a live birth in the two years preceding the survey who had a postnatal checkup in the first two days after giving birth, according to background characteristics, Rwanda 2010

Background characteristic	Time after delivery of mother's first postnatal checkup						No postnatal checkup[1]	Total	Percentage of women with a postnatal checkup in the first two days after birth	Number of women
	Less than 4 hours	4-23 hours	1-2 days	3-6 days	7-41 days	Don't know/ missing				
Mother's age at birth										
<20	16.9	3.4	3.8	0.9	2.5	0.0	72.4	100.0	24.2	214
20-34	11.5	3.1	2.7	1.1	1.1	0.7	79.9	100.0	17.2	2,454
35-49	9.7	4.5	2.2	0.0	1.0	0.2	82.4	100.0	16.5	540
Birth order										
1	13.8	3.9	4.2	1.8	2.2	0.9	73.2	100.0	21.8	881
2-3	13.4	2.8	2.4	0.7	0.8	0.6	79.3	100.0	18.6	1,104
4-5	8.3	3.4	1.7	0.6	1.1	0.4	84.5	100.0	13.4	658
6+	8.3	3.5	2.0	0.0	0.4	0.2	85.6	100.0	13.8	566
Place of delivery										
Health facility	12.8	4.0	3.2	1.0	1.3	0.7	76.9	100.0	20.0	2,576
Elsewhere	6.4	0.8	0.5	0.3	0.5	0.0	91.5	100.0	7.7	630
Residence										
Urban	13.3	6.0	3.8	1.6	1.9	1.1	72.2	100.0	23.1	381
Rural	11.3	3.0	2.5	0.8	1.1	0.5	80.8	100.0	16.8	2,827
Region										
City of Kigali	15.2	5.7	3.9	1.0	1.3	1.8	71.1	100.0	24.8	297
South	14.7	6.0	3.1	0.7	1.4	1.3	72.7	100.0	23.8	759
West	8.6	2.5	2.2	0.8	1.2	0.0	84.9	100.0	13.2	874
North	13.9	2.0	2.0	1.2	1.3	0.4	79.2	100.0	17.9	478
East	9.1	1.7	2.7	0.9	0.8	0.1	84.6	100.0	13.6	800
Education										
No education	9.7	2.6	3.1	0.9	0.8	0.2	82.8	100.0	15.4	550
Primary	11.7	3.3	2.5	0.8	1.3	0.7	79.8	100.0	17.4	2,364
Secondary and higher	13.8	5.3	3.5	1.2	1.1	0.4	74.7	100.0	22.7	294
Wealth quintile										
Lowest	10.9	3.0	2.4	0.7	1.1	1.0	80.9	100.0	16.3	776
Second	10.5	2.8	3.3	1.2	0.9	0.2	81.0	100.0	16.6	736
Middle	11.7	3.3	2.6	0.3	1.7	0.4	79.9	100.0	17.6	595
Fourth	11.6	2.6	1.8	0.8	1.4	0.4	81.5	100.0	16.0	578
Highest	13.9	5.4	3.2	1.3	0.8	0.9	74.5	100.0	22.5	523
Total	**11.6**	**3.3**	**2.7**	**0.9**	**1.2**	**0.6**	**79.8**	**100.0**	**17.6**	**3,208**

[1] Includes women who had a checkup after 41 days

The proportion of women who had no postnatal checkup increased with age (72 percent among women under age 20 and 82 percent among women age 35-49) and with birth order (73 percent for first births and 86 percent for births order six and above). Lack of a postnatal checkup was more frequent in rural areas (81 percent) than in urban areas (72 percent). By province, the proportion of women who had no postnatal checkup ranged from a low of 71 percent in the City of Kigali to a high of 85 percent in the West and East provinces. A woman's level of education was related to whether or not she had a postnatal checkup: 83 percent of women with no education did not have a postnatal checkup, as compared with 80 percent of women with a primary education and 75 percent of women with a secondary education or higher. Results by household wealth quintile showed that the proportion of women with no postnatal checkup was higher in the poorest quintile (81 percent) than in the richest one (75 percent).

It is important that postnatal care be carried out by skilled health providers who can detect and intervene in time to counter any problems related to the delivery and postpartum period. Table 9.8 shows the type of provider of the mother's first postnatal health checkup in the two days after the last live birth. Only 17 percent of women's first postnatal health checkups were carried out by doctors, nurses, or midwives. For 82 percent of women, there was no postnatal checkup in the first two days after the last live birth. Absence of postnatal care, high in each of the background characteristic categories, increased with age (76 percent among women under age 20 and 84 percent among women age 35-49) and with birth order (78 percent for first births and 87 percent for birth order four or five).

Table 9.8 Type of provider of first postnatal checkup

Among women age 15-49 giving birth in the two years preceding the survey, the percent distribution by type of provider of the mother's first postnatal health check in the two days after the last live birth, according to background characteristics, Rwanda 2010

Background characteristic	Type of health provider of mother's first postnatal checkup			No postnatal checkup in the first two days after birth[1]	Total	Number of women
	Doctor/nurse/ midwife	Auxiliary nurse/midwife	Community health worker			
Mother's age at birth						
<20	24.2	0.0	0.0	75.8	100.0	214
20-34	17.0	0.2	0.0	82.8	100.0	2,454
35-49	16.3	0.2	0.0	83.5	100.0	540
Birth order						
1	21.8	0.0	0.0	78.2	100.0	881
2-3	18.5	0.1	0.0	81.4	100.0	1,104
4-5	13.1	0.3	0.0	86.6	100.0	658
6+	13.1	0.6	0.2	86.2	100.0	566
Place of delivery						
Health facility	19.8	0.2	0.0	80.0	100.0	2,576
Elsewhere	7.3	0.3	0.1	92.3	100.0	630
Missing	0.0	0.0	0.0	100.0	100.0	2
Residence						
Urban	22.8	0.0	0.2	76.9	100.0	381
Rural	16.6	0.2	0.0	83.2	100.0	2,827
Region						
City of Kigali	24.8	0.0	0.0	75.2	100.0	297
South	23.5	0.3	0.0	76.2	100.0	759
West	13.2	0.0	0.0	86.8	100.0	874
North	17.5	0.4	0.0	82.1	100.0	478
East	13.2	0.3	0.1	86.4	100.0	800
Education						
No education	15.0	0.2	0.2	84.6	100.0	550
Primary	17.3	0.2	0.0	82.6	100.0	2,364
Secondary and higher	22.3	0.3	0.0	77.3	100.0	294
Wealth quintile						
Lowest	16.0	0.1	0.1	83.7	100.0	776
Second	16.5	0.1	0.0	83.4	100.0	736
Middle	17.3	0.3	0.0	82.4	100.0	595
Fourth	16.0	0.0	0.0	84.0	100.0	578
Highest	22.0	0.5	0.0	77.5	100.0	523
Total	**17.3**	**0.2**	**0.0**	**82.4**	**100.0**	**3,208**

[1] Includes women who had a checkup after 41 days

Mothers who had not given birth in health facilities (92 percent, compared with 80 percent of women who delivered in health facilities), those living in rural areas (83 percent, compared with 77 percent in urban areas), those with no education (85 percent, compared with 77 percent of women with a secondary education or higher), and those in the lowest wealth quintile (84 percent, compared with 78 percent for women in the highest wealth quintile) were most likely not to have had a postnatal health checkup. By contrast, although proportions were low, young women (24 percent), those in the first birth order category (22 percent), those who delivered in a health facility (20 percent), those living in urban areas (23 percent), those with a high level of education (22 percent), and those in the highest wealth quintile (22 percent) were more likely to receive postnatal care from a skilled provider.

9.3.2 Newborn Postnatal Care

Postnatal checkups for newborns should also be carried out within two days after the birth to evaluate their health status and intervene rapidly if necessary. Table 9.9 shows the distribution of births according to the time after birth of the first postnatal checkup and the percentage of births with a postnatal checkup in the first two days.

Table 9.9 Timing of newborn's first postnatal checkup

Percent distribution of births in the two years preceding the survey by time after birth of first postnatal checkup, and the percentage of births with a postnatal checkup in the two days after birth, according to background characteristics, Rwanda 2010

Background characteristic	Time after birth of newborn's first postnatal checkup						No postnatal checkup[1]	Total	Percentage of births with a postnatal checkup in the first two days after birth	Number of births
	Less than 1 hour	1-3 hours	4-23 hours	1-2 days	3-6 days	Don't know/ missing				
Mother's age at birth										
<20	1.4	4.2	0.8	2.3	0.0	0.0	91.3	100.0	8.7	214
20-34	1.6	1.5	0.6	0.7	0.3	0.2	95.1	100.0	4.4	2,454
35-49	1.3	1.9	1.0	0.2	0.1	0.0	95.5	100.0	4.4	540
Birth order										
1	1.8	1.6	0.6	1.1	0.3	0.0	94.5	100.0	5.2	881
2-3	1.9	2.0	0.6	0.9	0.1	0.3	94.2	100.0	5.4	1,104
4-5	0.9	1.6	0.9	0.4	0.5	0.1	95.6	100.0	3.7	658
6+	1.3	1.6	0.6	0.2	0.1	0.0	96.1	100.0	3.7	566
Place of delivery										
Health facility	1.7	1.5	0.5	0.7	0.1	0.2	95.3	100.0	4.4	2,576
Elsewhere	1.0	2.7	1.2	0.9	0.7	0.0	93.5	100.0	5.8	630
Residence										
Urban	2.5	1.8	1.3	1.7	0.3	0.0	92.3	100.0	7.4	381
Rural	1.4	1.7	0.6	0.6	0.2	0.1	95.3	100.0	4.3	2,827
Region										
City of Kigali	3.0	2.4	1.0	1.9	0.4	0.0	91.4	100.0	8.2	297
South	1.8	1.9	1.6	0.4	0.5	0.3	93.5	100.0	5.7	759
West	0.6	1.3	0.1	0.7	0.0	0.0	97.3	100.0	2.7	874
North	3.0	2.3	0.6	0.9	0.4	0.2	92.6	100.0	6.8	478
East	1.0	1.5	0.3	0.6	0.2	0.2	96.3	100.0	3.4	800
Mother's education										
No education	0.9	1.2	0.4	0.7	0.2	0.0	96.7	100.0	3.2	550
Primary	1.7	1.8	0.7	0.6	0.3	0.2	94.7	100.0	4.8	2,364
Secondary and higher	1.6	2.2	0.8	1.9	0.0	0.0	93.5	100.0	6.5	294
Wealth quintile										
Lowest	1.0	1.0	0.8	0.7	0.1	0.2	96.2	100.0	3.5	776
Second	1.5	2.2	0.1	0.7	0.3	0.0	95.1	100.0	4.6	736
Middle	1.6	1.3	0.8	0.5	0.2	0.0	95.6	100.0	4.2	595
Fourth	1.8	1.5	0.8	0.3	0.4	0.2	95.0	100.0	4.4	578
Highest	2.1	2.9	0.9	1.7	0.4	0.2	91.8	100.0	7.6	523
Total	**1.6**	**1.7**	**0.7**	**0.7**	**0.3**	**0.1**	**94.9**	**100.0**	**4.7**	**3,208**

[1] Includes newborns who had a checkup after the first six days

Ninety-five percent of newborns did not receive postnatal care in the first two days after birth, and this proportion was higher than 91 percent in each of the background characteristic categories. Among the 5 percent of newborns who received postnatal care, 2 percent received it either in less than 1 hour or in 1 to 3 hours, and 1 percent received it in 4 to 23 hours or 1 to 2 days. The proportion of newborns who received postnatal care in 3 to 6 days was very low (0.3 percent). The proportion of newborns receiving care was not related to mother's age or birth order but was related to place of delivery and mother's area of residence, level of education, and wealth quintile.

Table 9.10 shows the proportion of newborns who received postnatal care from skilled providers. Almost all children who received postnatal care (5 percent) were cared for by doctors, nurses, or midwives.

Newborns whose mothers were less than age 20 were twice as likely to have a postnatal checkup (9 percent) as newborns whose mothers were age 20-34 or 35-49 (4 percent for each age group). Paradoxically, newborns not delivered in a health facility were slightly more likely to have a postnatal checkup (6 percent) than those delivered in a health facility (4 percent). By province, the proportion of newborns who received postnatal care varied from a low of 3 percent in the East and West provinces to a high of 8 percent in the City of Kigali. By other background characteristics, newborns whose mothers lived in urban areas (7 percent, as compared with 4 percent in rural areas), had a secondary education or higher (7 percent, as compared with 3 percent of those with no education), and were in the highest wealth quintile (7 percent, as compared with 3 percent of those in the lowest wealth quintile) were most likely to have had a postnatal checkup.

Table 9.10 Type of provider of newborn's first postnatal checkup

Percent distribution of births in the two years preceding the survey by type of provider of the newborn's first postnatal health check during the two days after the last live birth, according to background characteristics, Rwanda 2010

Background characteristic	Type of health provider of newborn's first postnatal checkup			No postnatal checkup in the first two days after birth	Total	Number of births
	Doctor/nurse/ midwife	Auxiliary nurse/midwife	Community health worker			
Mother's age at birth						
<20	8.7	0.0	0.0	91.3	100.0	214
20-34	4.3	0.1	0.1	95.6	100.0	2,454
35-49	4.4	0.0	0.0	95.6	100.0	540
Birth order						
1	5.2	0.0	0.0	94.8	100.0	881
2-3	5.3	0.1	0.0	94.6	100.0	1,104
4-5	3.6	0.0	0.1	96.3	100.0	658
6+	3.3	0.2	0.2	96.3	100.0	566
Place of delivery						
Health facility	4.3	0.1	0.0	95.6	100.0	2,576
Elsewhere	5.6	0.0	0.3	94.2	100.0	630
Missing	0.0	0.0	0.0	100.0	100.0	2
Residence						
Urban	7.1	0.0	0.2	92.6	100.0	381
Rural	4.2	0.1	0.0	95.7	100.0	2,827
Region						
City of Kigali	8.2	0.0	0.0	91.8	100.0	297
South	5.5	0.1	0.0	94.3	100.0	759
West	2.7	0.0	0.0	97.3	100.0	874
North	6.8	0.0	0.0	93.2	100.0	478
East	3.0	0.2	0.2	96.6	100.0	800
Mother's education						
No education	3.0	0.0	0.2	96.8	100.0	550
Primary	4.7	0.1	0.0	95.2	100.0	2,364
Secondary and higher	6.5	0.0	0.0	93.5	100.0	294
Wealth quintile						
Lowest	3.3	0.0	0.1	96.5	100.0	776
Second	4.6	0.0	0.0	95.4	100.0	736
Middle	4.2	0.0	0.0	95.8	100.0	595
Fourth	4.3	0.0	0.1	95.6	100.0	578
Highest	7.2	0.5	0.0	92.4	100.0	523
Total	**4.6**	**0.1**	**0.1**	**95.3**	**100.0**	**3,208**

9.4 PROBLEMS IN ACCESSING HEALTH CARE

Access to health care is a key priority for improving a country's overall health status. Therefore, the survey asked women about perceived barriers to accessing health care. The results are presented in Table 9.11. Three in five women (61 percent) reported at least one problem in accessing health care.

Slightly more than half of women (53 percent) reported that lack of money for treatment was the primary barrier. The extent of this problem increased with age; 49 percent of women age 15-19 reported difficulties in getting money for treatment, as compared with 60 percent of women age 40-49. Divorced, separated, and widowed women (74 percent) reported having this problem more frequently than married women (51 percent) and never-married women (50 percent). Lack of money was more of a barrier for women in rural areas (55 percent) than for women in urban areas (41 percent). With respect to provinces, women in the South province were more likely (64 percent) than those in other provinces to mention this problem. Similarly, women with no education mentioned this problem more often (68 percent) than women with a secondary education or higher (36 percent), and women in the poorest wealth quintile were more affected by lack of money (74 percent) than women in the richest quintile (32 percent).

Twenty-six percent of women mentioned distance to the health facility as a problem. This problem was much more frequent among women age 35-49 (28 percent); women with five or more children (28 percent); divorced, separated, and widowed women (31 percent); women employed not for cash (27 percent); women in rural areas (28 percent); women with no education (30 percent); and women in poorer households (31 percent).

Less than one in five women (17 percent) mentioned 'not wanting to go alone' as a serious problem in accessing health care. The youngest women (18 percent); those with no living children (19 percent); those who were divorced, separated, or widowed (20 percent); those employed not for cash (19 percent); those living in rural areas (18 percent); those with no education (19 percent); those in the North province (20 percent); and those in the poorest households (22 percent) were most likely to consider not wanting to go alone as a barrier to accessing health care.

Getting permission was a serious problem for only 3 percent of women. Young women (4 percent), those with no living children (3 percent), those who had never been married (3 percent), those living in urban areas (4 percent), those with a high level of education (3 percent), and those in the highest wealth quintile (4 percent) most frequently reported this problem.

Table 9.11 Problems in accessing health care

Percentage of women age 15-49 who reported that they have serious problems in accessing health care for themselves when they are sick, by type of problem, according to background characteristics, Rwanda 2010

Background characteristic	Problems in accessing health care					
	Getting permission to go for treatment	Getting money for treatment	Distance to health facility	Not wanting to go alone	At least one problem accessing health care	Number of women
Age						
15-19	3.7	48.5	23.5	18.4	57.1	2,945
20-34	2.5	51.0	26.1	17.0	60.0	6,999
35-49	1.7	60.3	28.3	16.3	67.4	3,727
Number of living children						
0	3.1	47.7	24.4	18.9	56.5	5,207
1-2	2.3	54.3	26.5	16.2	62.1	3,552
3-4	2.6	56.9	27.2	16.2	65.1	2,704
5+	1.7	58.8	28.3	15.4	67.3	2,209
Marital status						
Never married	3.1	49.6	24.4	19.1	58.0	5,285
Married or living together	2.2	51.1	26.4	14.8	60.4	6,897
Divorced/separated/widowed	2.4	73.9	30.9	20.4	78.1	1,489
Employed last 12 months						
Not employed	3.1	50.3	22.8	16.9	58.1	2,227
Employed for cash	2.5	53.4	26.6	16.0	61.6	7,660
Employed not for cash	2.5	53.8	27.3	19.4	63.0	3,751
Missing	0.0	44.6	8.4	5.7	47.1	33
Residence						
Urban	4.2	41.4	14.9	12.7	48.1	2,057
Rural	2.3	55.1	28.1	17.9	63.8	11,614
Region						
City of Kigali	4.4	38.8	15.2	11.1	45.4	1,596
South	3.3	64.4	30.8	19.5	74.0	3,212
West	1.3	50.5	20.7	12.8	57.5	3,305
North	3.3	46.1	21.5	20.4	55.1	2,278
East	1.8	56.0	35.6	19.7	65.1	3,280
Education						
No education	2.4	68.1	30.2	18.5	73.8	2,119
Primary	2.5	53.6	26.5	17.5	62.2	9,337
Secondary and higher	2.9	36.2	20.8	14.2	46.3	2,216
Wealth quintile						
Lowest	3.2	74.3	31.3	22.1	79.6	2,622
Second	2.6	61.4	28.2	18.3	68.6	2,661
Middle	2.0	55.2	28.6	18.6	64.3	2,736
Fourth	1.4	45.1	27.8	15.6	55.9	2,677
Highest	3.6	31.9	15.9	11.6	41.2	2,976
Total	**2.6**	**53.0**	**26.1**	**17.1**	**61.4**	**13,671**

CHILD HEALTH 10

This chapter presents findings from several areas of importance relating to child health and survival, including infant birth weight and size, the vaccination status of children, and childhood illnesses and their treatment. The information on birth weight and size is intended to assist monitoring programs in their efforts to decrease neonatal and infant mortality by reducing the incidence of low birth weight.

Immunizing children against vaccine-preventable diseases can greatly reduce childhood morbidity and mortality. In the 2010 RDHS, data on immunization were collected for all living children born in 2005 or later. Information on vaccination coverage was collected in two ways: from the child's health card and by direct report from the mother. If a health card was presented, the interviewer would copy the immunization dates directly onto the questionnaire. If the mother was not able to present a card for her child, she was asked to recall the specific vaccines given to her child and the number of times the child received each vaccine.

Ensuring that children receive prompt and appropriate treatment when they become ill is also important to improving child health. Information on treatment practices and contact with health services for children with three childhood illnesses (acute respiratory infection, fever, and diarrhea) help in the assessment of national programs aimed at reducing child mortality. The 2010 RDHS collected data on the prevalence and treatment of acute respiratory infection (ARI), fever, and diarrhea. The extent to which diarrheal disease is treated with oral rehydration therapy (including increased fluid intake) is used to assess programs that recommend such treatment. Because appropriate sanitary practices can help prevent and reduce the severity of diarrheal disease, information is provided on how children's fecal matter is disposed.

10.1 Child's Size at Birth

A child's birth weight is an important determinant of infant and child health and mortality. A birth weight less than 2.5 kilograms (kg) is considered low. For all births during the five-year period preceding the survey, mothers were asked their perception of their child's size at birth. Although such information is subjective, it can be a useful proxy for the weight of the child. The mothers were also asked to report the actual weight in kilograms (based on either a written record or on their own recall) if the child had been weighed after delivery.

Table 10.1 shows that 68 percent of newborns were weighed at birth. Among births with known birth weight, only 6 percent were classified as having low birth weight (i.e., weighing less than 2.5 kg at birth). According to the respondent's own assessment of her infant's size, the majority of infants (84 percent) were classified as average or larger than average. More than one in ten births was either smaller than average (13 percent) or very small (2 percent).

Although the differences are not large, children born in rural areas are more likely than those born in urban areas to weigh less than 2.5 kg or to be described as very small in size. Data also show that, in general, there is a positive relationship between the mother's education and wealth quintile and the weight and size of the newborn. Children whose mothers have at least some secondary and higher education, or who are in the highest wealth quintile, are less likely to weigh under 2.5 kg or to be described as very small at birth compared with other children. Variations in weight and size at birth are also seen among regions; the prevalence of children born with a weight below 2.5 kg ranges from 5.2 percent in West province to 7.5 percent in South province.

Table 10.1 Child's weight and size at birth

Percentage of live births in the five years preceding the survey with a reported birth weight; among live births in the five years preceding the survey with a reported birth weight, percent distribution by birth weight; percent distribution of all live births in the five years preceding the survey by mother's estimate of baby's size at birth, according to background characteristics, Rwanda 2010

Background characteristic	Percentage of all births with a reported birth weight[1]	Percent distribution of births with a reported birth weight[1]				Percent distribution of all live births by size of child at birth					
		Less than 2.5 kg	2.5 kg or more	Total	Number of births	Very small	Smaller than average	Average or larger	Don't know/ missing	Total	Number of births
Mother's age at birth											
<20	80.2	8.4	91.6	100.0	446	2.3	16.2	81.3	0.1	100.0	556
20-34	68.9	5.9	94.1	100.0	4,783	2.2	12.9	84.2	0.7	100.0	6,938
35-49	58.9	7.0	93.0	100.0	967	2.9	12.4	84.5	0.2	100.0	1,643
Birth order											
1	81.8	7.6	92.4	100.0	1,862	2.3	16.9	80.1	0.7	100.0	2,277
2-3	69.3	5.9	94.1	100.0	2,163	2.1	12.5	84.8	0.6	100.0	3,123
4-5	60.3	5.2	94.8	100.0	1,181	2.4	11.4	86.0	0.3	100.0	1,960
6+	55.7	5.6	94.4	100.0	990	2.6	10.8	85.9	0.7	100.0	1,777
Mother's smoking status											
Smokes cigarettes/tobacco	49.0	2.2	97.8	100.0	46	2.2	11.5	85.4	1.0	100.0	95
Does not smoke	68.0	6.3	93.7	100.0	6,150	2.3	13.0	84.1	0.6	100.0	9,041
Residence											
Urban	81.2	5.9	94.1	100.0	888	1.4	13.9	84.5	0.3	100.0	1,094
Rural	66.0	6.3	93.7	100.0	5,308	2.4	12.9	84.0	0.6	100.0	8,043
Province											
Kigali City	81.7	6.5	93.5	100.0	712	1.9	14.7	83.3	0.1	100.0	872
South	66.4	7.5	92.5	100.0	1,441	2.0	15.6	81.5	0.8	100.0	2,169
West	66.8	5.2	94.8	100.0	1,526	1.9	12.4	85.3	0.4	100.0	2,284
North	65.1	5.9	94.1	100.0	935	3.0	10.8	84.9	1.2	100.0	1,437
East	66.6	6.2	93.8	100.0	1,582	2.7	12.0	85.0	0.3	100.0	2,376
Education											
No education	57.0	7.1	92.9	100.0	1,001	2.1	13.8	83.1	1.0	100.0	1,756
Primary	68.3	6.3	93.7	100.0	4,495	2.5	12.7	84.3	0.5	100.0	6,578
Secondary and higher	87.2	4.7	95.3	100.0	701	1.5	13.7	84.6	0.2	100.0	803
Wealth quintile											
Lowest	60.1	9.0	91.0	100.0	1,283	2.5	13.2	83.2	1.1	100.0	2,134
Second	61.5	6.9	93.1	100.0	1,208	2.3	14.5	82.7	0.5	100.0	1,964
Middle	65.5	5.8	94.2	100.0	1,189	2.7	13.0	84.0	0.4	100.0	1,815
Fourth	71.8	5.5	94.5	100.0	1,220	2.7	12.6	84.3	0.4	100.0	1,698
Highest	84.9	4.0	96.0	100.0	1,295	1.3	11.5	86.9	0.3	100.0	1,525
Total	**67.8**	**6.2**	**93.8**	**100.0**	**6,196**	**2.3**	**13.0**	**84.1**	**0.6**	**100.0**	**9,137**

[1] Based on either a written record or the mother's recall

10.2 VACCINATION OF CHILDREN

To assess Rwanda's Expanded Program on Immunization (EPI), the 2010 RDHS gathered information on vaccinations for all children born in the five years preceding the survey. The EPI generally follows the World Health Organization (WHO) guidelines for vaccinating children. These guidelines stipulate that, to be considered fully immunized, children should receive the following vaccines by the age of 12 months: one dose of BCG (against tuberculosis), three doses of DPT (against diphtheria, pertussis, and tetanus), three doses of oral polio vaccine, and one dose of measles vaccine. Vaccines against Haemophilus influenzae type B and hepatitis B were introduced in Rwanda in February 2002 and pneumococcal vaccine in April 2009. Each child who is vaccinated receives an immunization card on which all of the vaccines received are recorded. The information on vaccinations was gathered from two sources: (1) where vaccination cards were available, the interviewer copied the information directly onto the questionnaire; and (2) where cards were not available because the mother never had one, or the card was unavailable at the time of the survey, or the mother had lost the card, mothers were asked to recall whether or not the child had received each of the vaccines covered by the survey.

Table 10.2 presents vaccination coverage results by source of information for children age 12 to 23 months, thereby including only children who had reached the age by which they should be fully immunized. According to the vaccination cards, 78 percent of children age 12-23 months are fully immunized. When information from both

information sources is considered, the percentage of children fully immunized reaches 90 percent. Vaccination coverage based solely on the mother's report occurred in only 12 percent of cases. Of the fully immunized children, 85 percent received their vaccinations before their first birthday as recommended by WHO and the Rwanda EPI. Less than one percent of children age 12 to 23 months had not received any vaccinations at the time of the survey.

Table 10.2 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, Rwanda 2010

Source of information	BCG	Pentavalent 1	Pentavalent 2	Pentavalent 3	Polio[1] 0	Polio[1] 1	Polio[1] 2	Polio[1] 3	Measles	All basic vaccinations[2]	No vaccinations	Number of children
Vaccinated at any time before survey												
Vaccination card	82.1	82.2	81.9	80.9	74.7	82.2	81.9	81.0	79.0	78.4	0.0	1,329
Mother's report	17.0	16.7	16.4	15.9	14.8	17.0	16.6	12.3	16.0	11.7	0.5	287
Either source	99.1	98.8	98.3	96.8	89.6	99.2	98.5	93.3	95.0	90.1	0.5	1,616
Vaccinated by 12 months of age[3]	98.9	98.5	98.0	96.3	89.4	98.9	98.2	92.8	90.3	85.4	0.8	1,616

[1] Polio 0 is the polio vaccination given at birth.
[2] BCG, measles, and three doses each of pentavalent 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.

Table 10.3 shows the results for vaccination coverage among children age 12 to 23 months, according to background characteristics of mother and child. The data show practically no disparity by sex (90 percent for males and females). However, complete coverage first increases slightly, from 90 percent for the first birth order to 93 percent with children's birth orders two to three, before it declines to 89 percent with children's birth orders four to five; and declines further to 86 percent for children of birth orders six and above. By residence, complete vaccination coverage is higher in urban areas (93 percent) than in rural areas (90 percent), primarily because the City of Kigali has the highest vaccination coverage in the country (96 percent). The West province has the lowest coverage rate (81 percent). This low proportion in the West province is due in part to the high dropout rate between polio doses (12 percentage points between the second and the third doses).

Complete vaccination coverage increases steadily with the mother's level of education, although the differentials are not great: 87 percent for children whose mothers have no education; 90 percent for children whose mothers have a primary education; and 97 percent for children whose mothers have a secondary education or higher. Household wealth quintile has a positive relationship with the vaccination coverage. The proportion of vaccinated children varies from 87 percent for the lowest quintile to 96 percent for the highest quintile.

Table 10.3 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, Rwanda 2010

Background characteristic	BCG	Pentavalent 1	Pentavalent 2	Pentavalent 3	Polio 0[1]	Polio 1	Polio 2	Polio 3	Measles	All basic vaccinations[2]	No vaccinations	Percentage with a vaccination card seen	Number of children
Sex													
Male	99.5	99.2	98.5	97.1	90.3	99.3	98.5	93.3	95.0	90.2	0.4	82.1	786
Female	98.8	98.5	98.1	96.5	88.9	99.1	98.4	93.3	95.0	90.0	0.7	82.3	831
Birth order													
1	99.0	99.3	98.6	96.8	94.9	99.7	98.5	92.5	96.2	90.3	0.0	81.2	437
2-3	99.4	99.3	98.6	97.5	87.4	99.5	98.8	94.8	96.2	92.6	0.4	85.1	542
4-5	98.5	97.8	97.3	96.1	86.8	98.2	97.9	93.2	94.3	89.4	1.5	81.1	336
6+	99.5	98.5	98.5	96.4	88.9	99.2	98.5	91.8	92.1	86.1	0.5	79.8	301
Residence													
Urban	99.7	99.4	99.0	95.7	94.3	99.4	99.0	94.1	97.3	93.3	0.3	77.8	181
Rural	99.1	98.8	98.2	97.0	89.0	99.2	98.4	93.2	94.8	89.7	0.6	82.8	1,436
Province													
City of Kigali	99.6	99.2	98.8	98.5	94.5	99.2	98.8	96.6	98.2	96.3	0.4	77.0	142
South	99.0	98.7	98.4	96.8	89.0	99.2	99.0	94.4	97.6	92.8	0.8	82.4	383
West	98.3	98.3	97.3	94.5	89.7	98.8	97.7	86.3	91.1	80.9	1.0	82.9	426
North	100.0	100.0	100.0	99.2	96.1	100.0	100.0	97.0	97.4	93.6	0.0	86.8	251
East	99.5	98.7	98.0	97.2	84.4	99.2	97.7	96.2	94.2	92.8	0.2	80.5	414
Education													
No education	98.5	98.0	97.7	95.0	87.6	99.2	98.1	92.3	90.8	87.0	0.8	85.1	271
Primary	99.2	98.9	98.3	97.0	89.8	99.2	98.4	93.1	95.6	90.1	0.5	82.1	1,217
Secondary and higher	99.5	99.5	99.5	98.3	91.4	99.5	99.5	97.5	98.5	96.8	0.5	77.1	128
Wealth quintile													
Lowest	98.5	98.5	98.0	95.6	86.6	98.7	98.3	90.5	94.0	86.6	1.3	82.8	398
Second	98.6	97.6	97.1	95.7	91.1	98.5	97.9	91.6	93.0	87.2	0.9	80.2	359
Middle	99.3	99.0	97.8	97.1	89.4	100.0	97.9	94.7	94.9	91.7	0.0	85.6	303
Fourth	100.0	100.0	99.6	97.9	89.6	99.6	99.2	94.3	97.0	92.1	0.0	84.4	301
Highest	99.8	99.6	99.3	98.7	92.2	99.6	99.3	97.3	97.4	95.5	0.2	77.7	254
Total	**99.1**	**98.8**	**98.3**	**96.8**	**89.6**	**99.2**	**98.5**	**93.3**	**95.0**	**90.1**	**0.5**	**82.2**	**1,616**

[1] Polio 0 is the polio vaccination given at birth.
[2] BCG, measles, and three doses each of pentavalent and polio vaccine (excluding polio vaccine given at birth)

10.3 TRENDS IN VACCINATION COVERAGE

Table 10.4 shows, by age cohort, the percentages of children age 12-59 months who received specific vaccinations during the first year of life. The data indicate that the proportion of children fully vaccinated by 12 months of age has increased over the past few years, from 78 percent of children age 48-59 months to 85 percent of children age 12-23 months.

Table 10.4 Vaccinations in first year of life

Percentage of children age 12-59 months 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, Rwanda 2010

Age in months	BCG	Pentavalent 1	Pentavalent 2	Pentavalent 3	Polio 0[1]	Polio 1	Polio 2	Polio 3	Measles	All basic vaccinations[2]	No vaccinations	Percentage with a vaccination card seen	Number of children
FINAL TABLE													
12-23	98.9	98.5	98.0	96.3	89.4	98.9	98.2	92.8	90.3	85.4	0.8	82.2	1,616
24-35	99.3	99.2	98.8	97.0	88.8	99.0	98.2	92.4	91.1	84.9	0.5	75.9	1,824
36-47	98.9	98.2	98.0	96.1	88.3	98.8	98.0	90.9	90.7	82.7	0.7	68.1	1,741
48-59	98.6	98.2	97.0	94.1	85.6	98.6	96.8	87.5	88.3	77.8	0.9	61.1	1,850
Total	**98.9**	**98.5**	**97.9**	**95.9**	**88.0**	**98.8**	**97.8**	**90.9**	**90.2**	**82.7**	**0.7**	**71.5**	**7,032**

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 tetravalent/pentavalent and polio vaccine (excluding polio vaccine given at birth)

10.4 CHILDHOOD ILLNESSES

10.4.1 Acute Respiratory Infections

Acute respiratory infections (ARIs), particularly pneumonia, constitute one of the main causes of child deaths in developing countries. To assess the prevalence of these infections, mothers were asked if their children under age 5 had been ill with a cough during the two weeks preceding the survey. If the answer was yes, they were asked if the cough had been accompanied by short, rapid breathing. It should be borne in mind that these data are subjective (i.e., based on the mother's perception of illness) and not validated by a medical examination.

Table 10.5 shows that, among children under age 5, 4 percent had been ill with a cough accompanied by short, rapid breathing in the two weeks preceding the survey. These respiratory infections were the most frequent among children age 6-11 months (6 percent) and 12-23 months (5 percent). There is little difference in ARI prevalence between boys and girls (4 percent and 3 percent, respectively). The prevalence of ARI is, surprisingly, slightly higher in urban areas (5 percent) compared with rural areas (4 percent).

Results according to province show a higher prevalence of ARIs in the West province (6 percent), the City of Kigali (5 percent), and South province (4 percent) than elsewhere. Results according to mother's level of education vary somewhat: from a high of 5 percent for children of mothers with secondary and higher education, to a low of 4 percent for children of mothers with primary education. In general, results show that ARI prevalence does not vary much by wealth quintile.

Table 10.5 Prevalence and treatment of symptoms of ARI

Among children under age 5, the percentage who had symptoms of acute respiratory infection (ARI) in the two weeks preceding the survey, and among children with symptoms of ARI, and the percentage for whom advice or treatment was sought from a health facility or provider, according to background characteristics, Rwanda 2010

	Among children under age 5:		Among children under age 5 with symptoms of ARI:		
Background characteristic	Percentage with symptoms of ARI[1]	Number of children	Percentage for whom advice or treatment was sought from a health facility or provider[2]	Percentage for whom advice or treatment was sought from a community health worker	Number of children
Age in months					
<6	4.0	732	(39.0)	(16.5)	29
6-11	6.3	841	62.7	9.3	53
12-23	5.1	1,616	57.8	15.7	82
24-35	3.1	1,824	50.7	15.3	56
36-47	3.4	1,741	35.1	6.1	60
48-59	2.2	1,850	(48.4)	(16.6)	41
Sex					
Male	4.1	4,364	50.1	14.6	179
Female	3.4	4,241	50.5	10.9	143
Residence					
Urban	5.2	1,033	75.8	9.8	54
Rural	3.5	7,572	45.1	13.6	269
Province					
Kigali City	4.6	830	(74.2)	(1.8)	38
South	3.5	2,049	46.7	24.7	71
West	6.1	2,159	45.3	11.7	131
North	2.9	1,342	(47.1)	(4.6	39
East	1.9	2,225	(52.4)	(15.1)	43
Education					
No education	4.1	1,629	40.6	14.2	66
Primary	3.5	6,214	49.2	13.1	219
Secondary and higher	4.9	762	(73.3)	(9.8)	37
Wealth quintile					
Lowest	5.1	1,992	40.3	12.4	101
Second	3.4	1,852	49.6	15.2	64
Middle	3.2	1,709	48.7	16.6	54
Fourth	3.1	1,598	(46.6)	(9.4)	50
Highest	3.7	1,454	74.8	11.1	53
Total	**3.7**	**8,605**	**50.2**	**13.0**	**322**

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Symptoms of ARI (cough accompanied by short, rapid breathing that was chest-related and/or by difficult breathing that was chest-related) is considered a proxy for pneumonia
[2] Excludes pharmacy, shop, and traditional practitioner

Table 10.5 also shows the proportion of children for whom treatment was sought. Half (50 percent) of children with the symptoms of acute respiratory infection sought treatment or advice from a health facility or health provider, including 13 percent who sought help from a community health worker. Treatment was sought most often for children age 6-11 months (63 percent) and 12-23 months (58 percent), who, as seen above, have the highest prevalence of ARI.

Whether treatment for an ARI is sought from a health facility is influenced by residence, mother's level of education, and wealth quintile. In urban areas, treatment was sought for 76 percent of children, compared with 45 percent in rural areas. Similarly, treatment or advice was sought for 49 percent of children whose mothers have a primary education, compared with 41 percent of children whose mothers have no education.

Finally, treatment was sought for 75 percent of children in the richest households; in the poorest households, this proportion was only 40 percent. The treatment data show no significant variation by sex of child.

The results, according to province, show that seeking treatment is not necessarily linked to prevalence of ARI. Treatment was less often sought in the West province (45 percent), which has the highest prevalence of ARIs.

10.4.2 Fever

Fever is the primary symptom of many illnesses, including malaria and measles, which cause numerous deaths in developing countries. For this reason, mothers were asked whether their children had suffered from a fever during the two weeks preceding the survey.

Table 10.6 shows that during this time period 16 percent of the children had a fever. As with ARI, age seems to be the most important factor affecting fever prevalence: children age 6-11 months (25 percent) and 12-23 months (22 percent) were the most likely to have had a fever. Fever prevalence does not vary much by sex of the child (17 percent for boys; 15 percent for girls) or residence (17 percent for urban; 16 percent for rural). There are in general slight variations among the provinces, with the highest prevalence in the South and West provinces (almost 18 percent for both). Similarly, children whose mothers have some education (16 percent) are more likely to have suffered from fever than those whose mothers have no education (14 percent). In general, household wealth does not significantly affect the prevalence of fever in children under age 5.

Table 10.6 Prevalence and treatment of fever

Among children under age 5, the percentage who had a fever in the two weeks preceding the survey; and among children with fever, and the percentage of children for whom treatment was sought from a health facility or provider, by background characteristics, Rwanda 2010

Background characteristic	Among children under age 5:		Among children under age 5 with fever		
	Percentage with fever	Number of children	Percentage for whom advice or treatment was sought from a health facility or provider[1]	Percentage for whom advice or treatment was sought from a community health worker	Number of children
Age in months					
<6	12.6	732	27.4	4.7	92
6-11	24.7	841	46.5	17.2	208
12-23	21.9	1,616	47.7	15.7	353
24-35	15.4	1,824	45.5	16.8	282
36-47	13.6	1,741	36.5	15.8	237
48-59	9.9	1,850	40.3	17.2	184
Sex					
Male	16.5	4,364	43.2	15.5	722
Female	14.9	4,241	42.2	15.7	634
Residence					
Urban	16.7	1,033	55.9	13.5	172
Rural	15.6	7,572	40.8	15.9	1,183
Province					
Kigali City	17.4	830	51.9	7.8	144
South	17.9	2,049	46.8	26.1	367
West	17.5	2,159	42.3	12.6	378
North	17.1	1,342	30.8	5.4	229
East	10.7	2,225	43.2	18.8	237
Education					
No education	14.0	1,629	34.0	13.1	228
Primary	16.2	6,214	42.8	17.3	1,008
Secondary and higher	15.6	762	59.1	6.4	119
Wealth quintile					
Lowest	17.8	1,992	35.1	15.6	355
Second	16.9	1,852	35.9	17.3	313
Middle	15.4	1,709	42.3	16.4	264
Fourth	11.9	1,598	50.2	17.5	190
Highest	16.1	1,454	57.9	11.1	234
Total	**15.8**	**8,605**	**42.7**	**15.6**	**1,355**

[1] Excludes pharmacy, shop, and traditional practitioner

Table 10.6 also shows the proportion of children for whom treatment for fever was sought. Treatment or advice was sought from a health facility or provider for 43 percent of children with the symptoms of fever; including 16 percent who sought help from a community health worker. Treatment was sought most often for children age 12-23 months (48 percent) and 6-11 months (47 percent), who, as seen above, have the highest prevalence of fever.

Whether or not treatment is sought from a health facility for fever is influenced by residence, mother's level of education, and wealth quintile. In urban areas, treatment was sought for 56 percent of children, compared with 41 percent in rural areas. Similarly, treatment or advice was sought for 59 percent of children whose mothers have a secondary education or higher, compared with 43 percent of children whose mothers have a primary education, and only 34 percent of those whose mothers have no education.

Finally, treatment was sought for 58 percent of children in the richest households, while in the poorest households, this proportion was only 35 percent. The data for treatment seeking show no significant variation by sex of the child.

The results according to province show that seeking treatment is not necessarily linked to prevalence of fever. Treatment was less often sought in the North province (31 percent), which has a higher prevalence of fever compared with other provinces.

10.5 DIARRHEAL DISEASE

10.5.1 Prevalence of Diarrhea

Diarrheal diseases constitute one of the main causes of death among young children in developing countries because of associated dehydration and malnutrition. To combat the effects of dehydration, WHO promotes the use of oral rehydration therapy (ORT), which includes a prepared solution of oral rehydration salts (ORS) made from packets; a solution prepared at home using clean water, sugar, and salt (recommended home fluids, or RHF); or simply increased intake of fluids.

To assess the prevalence of diarrheal diseases in children under age 5, mothers were asked whether their children had suffered from diarrhea during the two weeks preceding the survey (Table 10.7). Information was also gathered on the percentage of mothers who had heard of ORS packets (Table 10.8), the percentage of children for whom treatment or advice was sought, and the type of treatment used to treat the diarrhea. Regarding treatment, mothers were asked whether they had used ORS packets, RHF, or other treatments during the diarrheal episodes (Table 10.9).

Table 10.7 shows that, according to mothers' reports, 13 percent of children had suffered from diarrhea in the two weeks preceding the survey. The prevalence of diarrhea is especially high among children age 12-23 months and 6-11 months (25 percent and 22 percent respectively). These high-prevalence ages are also the ages at which children begin to be weaned and consume foods other than breast milk. They also correspond to the ages at which children begin to explore their environment, resulting in greater exposure to pathogens. Diarrhea prevalence seems to bear little relation to a child's sex or residence: 14 percent of male children suffered from diarrhea, compared with 12 percent of female children, and 14 percent of children in urban areas were affected by diarrhea, compared with 13 percent in rural areas.

By province, the East and City of Kigali have the lowest prevalence of diarrhea (11 percent); variations are small among the other provinces, with the proportion of children with diarrhea ranging between 13 percent in the West province and 16 percent in the South province. However, mother's level of education seems to play no great role, with prevalence being higher among children whose mothers have a primary education than among those whose mothers have no education (14 percent, compared with 11 percent). Moreover, children who drink from an improved water source have the lower prevalence of diarrhea (13 percent) compared with those who drink from a nonimproved water source (15 percent).

There is an apparent strong link between diarrhea prevalence and household wealth. Prevalence varies from 16 percent of children in the poorest quintile to 11 percent of children in the richest quintile.

Table 10.7 Prevalence of diarrhea

Percentage of children under age 5 who had diarrhea in the two weeks preceding the survey, by background characteristics, Rwanda 2010

Background characteristic	Diarrhea in the two weeks preceding the survey		Number of children
	All diarrhea	Diarrhea with blood	
Age in months			
<6	6.6	0.7	732
6-11	21.8	3.3	841
12-23	25.0	3.2	1,616
24-35	13.3	2.6	1,824
36-47	8.7	1.4	1,741
48-59	5.6	0.8	1,850
Sex			
Male	14.0	2.2	4,364
Female	12.3	1.8	4,241
Source of drinking water[1]			
Improved	12.7	1.9	6,190
Not improved	14.5	2.3	2,408
Toilet facility[2]			
Improved, not shared	11.7	2.0	5,000
Non-improved	15.1	2.1	3,597
Residence			
Urban	13.6	2.0	1,033
Rural	13.1	2.0	7,572
Province			
Kigali City	11.4	1.5	830
South	15.6	2.3	2,049
West	13.4	2.6	2,159
North	13.7	1.5	1,342
East	11.0	1.7	2,225
Education			
No education	11.2	2.0	1,629
Primary	13.9	2.1	6,214
Secondary and higher	11.6	1.5	762
Wealth quintile			
Lowest	16.1	2.4	1,992
Second	13.6	2.0	1,852
Middle	12.2	2.0	1,709
Fourth	11.8	1.5	1,598
Highest	11.3	2.0	1,454
Total	**13.2**	**2.0**	**8,605**

[1] See Table 2.1 for definition of categories.
[2] See Table 2.2 for definition of categories.

10.5.2 Treatment of Diarrhea

Table 10.8 shows that advice or treatment was sought for 37 percent of children with diarrhea; including 13 percent who sought help from a community health worker. Treatment was most often sought for children age 12-23 months (47 percent). Forty-three percent of children age 6-11 months—who have one of the highest prevalence rates of diarrhea—received treatment. Boys (40 percent) were more likely to be taken to health facilities for treatment than girls (34 percent).

There is little difference in treatment seeking for diarrhea between urban (33 percent) and rural (38 percent) areas. However, there are major differences with respect to provinces: the proportion of children taken to a health facility ranges from a high of 46 percent in the West province to a low of 32 percent in the North province. Children whose mothers have a secondary education or higher (47 percent, compared with 28 percent for those whose mothers have no education) and those living in the richest households (50 percent, compared with 27 percent in the poorest quintile) received treatment more frequently than other children.

Table 10.8 Diarrhea treatment

Among children under age 5 who had diarrhea in the two weeks preceding the survey, the percentage for whom advice or treatment was sought from a health facility or provider, the percentage given oral rehydration therapy (ORT), the percentage given increased fluids, the percentage given ORT or increased fluids, and the percentage who were given other treatments or no treatment, by background characteristics, Rwanda 2010

Background characteristic	Percentage of children with diarrhea for whom advice or treatment was sought from a health facility or provider[1]	Percentage for whom advice or treatment was sought from a community health worker	Oral rehydration therapy (ORT)					Other treatments						
			Fluid from ORS packet or pre-packaged ORS fluid	Recommended home fluids (RHF)	Either ORS or RHF	Increased fluids	ORT or increased fluids	Antibiotic drugs	Anti-motility drugs	Intravenous solution	Home remedy/ other	Missing	No treatment	Number of children with diarrhea
Age in months														
<6	15.8	4.7	9.0	2.0	11.0	10.9	20.0	6.1	2.4	0.0	21.8	0.0	54.0	48
6-11	42.9	15.4	29.4	6.0	33.8	18.9	45.2	12.0	0.6	0.6	51.0	0.0	25.9	184
12-23	46.5	16.4	38.4	9.2	44.4	20.9	54.3	10.3	3.0	0.2	44.6	1.6	19.9	404
24-35	35.5	13.2	25.1	7.5	30.9	25.5	47.3	8.0	0.6	0.4	51.2	0.8	22.4	242
36-47	22.3	10.1	22.3	4.7	26.3	28.6	45.7	7.4	4.4	0.0	45.4	1.4	28.2	152
48-59	27.0	2.0	21.1	8.8	28.9	34.1	47.7	6.4	1.1	0.0	48.2	0.0	24.0	103
Sex														
Male	40.0	14.2	31.3	7.6	36.5	23.8	50.2	10.6	2.6	0.3	46.4	0.6	22.6	610
Female	33.9	11.3	26.6	7.0	32.2	22.9	45.7	7.4	1.5	0.2	46.7	1.4	26.4	522
Type of diarrhea														
Non-bloody	34.9	12.3	26.9	6.6	31.9	22.9	46.0	8.2	2.3	0.1	45.2	1.0	26.3	921
Bloody	52.0	16.2	41.3	10.2	48.5	25.2	59.2	15.4	1.2	0.7	54.3	0.0	13.9	173
Missing	(28.1)	(11.8)	(27.9)	(11.8)	(36.4)	(28.5)	(50.7)	(4.5)	(0.0)	(2.5)	(43.4)	(2.8)	(23.2)	36
Residence														
Urban	33.0	6.1	26.3	7.7	32.1	18.5	46.0	8.8	2.8	0.0	46.5	0.0	30.2	140
Rural	37.8	13.9	29.5	7.3	34.9	24.1	48.4	9.2	2.0	0.3	46.5	1.1	23.5	992
Province														
Kigali City	33.1	4.6	32.5	10.0	40.9	6.3	47.2	8.0	2.7	0.0	56.1	0.0	28.0	95
South	33.0	15.9	27.1	8.7	34.2	32.4	51.1	6.5	0.8	0.3	47.0	0.7	23.6	319
West	45.5	16.2	29.4	8.5	34.8	24.3	50.9	10.8	2.3	0.0	43.9	0.0	22.7	290
North	31.5	4.4	25.5	2.9	27.3	12.5	34.0	5.2	2.7	0.0	42.1	1.9	36.2	183
East	38.9	14.6	32.8	6.5	37.5	25.3	51.9	14.1	2.8	0.8	48.6	2.1	17.0	245
Education														
No education	28.4	10.7	21.3	8.6	28.1	23.6	41.2	2.9	1.2	0.0	46.7	0.5	26.8	182
Primary	38.1	13.6	30.1	6.8	35.0	23.2	49.2	10.0	2.5	0.4	46.7	1.1	24.1	862
Secondary and higher	47.1	10.4	35.4	10.0	43.3	24.9	52.3	13.8	0.0	0.0	44.1	0.0	21.5	88
Wealth quintile														
Lowest	26.5	11.4	21.9	6.0	26.7	23.8	42.7	6.1	2.0	0.0	42.9	1.0	29.4	321
Second	38.2	15.8	30.4	6.7	34.5	24.1	47.1	8.8	1.5	0.8	47.3	0.4	23.7	251
Middle	40.5	14.1	32.0	7.9	36.7	31.0	56.5	9.4	1.5	0.0	50.4	0.5	18.0	208
Fourth	39.1	15.4	29.6	8.5	37.0	16.3	45.2	9.5	3.1	0.0	46.3	0.6	27.0	188
Highest	50.4	7.0	37.0	8.8	44.2	19.9	52.9	14.9	2.8	0.7	47.7	2.5	20.5	165
Total	**37.2**	**12.9**	**29.1**	**7.4**	**34.5**	**23.4**	**48.1**	**9.2**	**2.1**	**0.3**	**46.5**	**0.9**	**24.3**	**1,132**

Note: Figures in the parentheses are based on 25-49 unweighted cases. ORT includes fluid prepared from oral rehydration salt (ORS) packets, pre-packaged ORS fluid, and recommended home fluids (RHF).
[1] Excludes pharmacy, shop, and traditional practitioner

During diarrheal episodes, only 29 percent of children received ORS, 7 percent received RHF, and 35 percent received either ORS or RHF. In addition, 23 percent of children received increased fluids. Almost half, 48 percent of children, were treated with some form of oral rehydration (ORT) or increased fluids. In addition, 9 percent of children received antibiotic drugs, and a very small proportion of children (2 percent) received anti-motility drugs. The proportion of children treated with a home remedy/other is high (47 percent), and nearly identical to that of children who received ORT or increased fluid (48 percent). Almost one quarter of the children (24 percent) received no treatment at all. This proportion is particularly high among children younger than 6 months (54 percent).

10.5.3 Feeding Practices during Diarrhea

Mothers are encouraged to continue feeding children normally when they suffer from diarrheal illnesses and to increase the fluids that children receive. These practices help to reduce the likelihood that the child will become dehydrated. They also minimize the adverse consequences of diarrhea on the child's nutritional status. Mothers were specifically asked whether they gave the child more or less fluid and food than usual when their child had diarrhea.

Table 10.9 shows that 26 percent of children who had diarrhea were offered the same amount of liquid as usual while they were sick; 21 percent were offered somewhat less than usual, and 24 percent were offered much less than usual. Only 23 percent of children were offered more liquids than usual. Five percent of children were offered no liquid at all.

Regarding food intake, 23 percent of children with diarrhea were offered the same amount of food as usual, 22 percent were offered somewhat less than usual, and 39 percent were offered much less than usual. Only 4 percent of children were offered more food than usual. Finally, 6 percent were never given any food.

Table 10.9 Feeding practices during diarrhea

Percent distribution of children under age 5 who had diarrhea in the two weeks preceding the survey by amount of liquids and food offered compared with normal practice, the percentage of children given increased fluids and continued feeding during the diarrhea episode, and the percentage of children who continued feeding and were given ORT and/or increased fluids during the episode of diarrhea, by background characteristics, Rwanda 2010

Background characteristic	Amount of liquids given						Amount of food given								Percentage given increased fluids and continued feeding[1]	Percentage who continued feeding and were given ORT and/or increased fluids[1]	Number of children with diarrhea
	More	Same as usual	Somewhat less	Much less	None	Total	More	Same as usual	Somewhat less	Much less	None	Never gave food	Don't know/ missing	Total			
Age in months																	
<6	10.9	33.1	10.3	13.3	32.4	100.0	0.0	3.6	0.0	2.4	1.8	92.1	0.0	100.0	0.0	0.0	48
6-11	18.9	24.7	14.9	35.0	6.5	100.0	3.2	17.6	17.1	41.7	9.5	10.3	0.5	100.0	8.3	16.5	184
12-23	20.9	24.1	24.9	25.7	4.3	100.0	3.4	24.8	20.5	44.4	6.0	0.8	0.0	100.0	6.9	22.1	404
24-35	25.5	26.6	22.1	23.7	2.0	100.0	5.5	24.8	24.6	40.8	4.3	0.0	0.0	100.0	9.8	22.1	242
36-47	28.6	28.8	19.9	16.0	6.6	100.0	4.0	30.2	29.6	31.7	4.5	0.0	0.0	100.0	15.7	26.6	152
48-59	34.1	26.1	22.3	16.6	0.9	100.0	3.9	22.8	31.7	38.1	3.5	0.0	0.0	100.0	14.3	21.5	103
Sex																	
Male	23.8	26.5	19.5	24.8	5.5	100.0	3.8	22.6	20.4	41.5	5.2	6.6	0.0	100.0	10.0	21.1	610
Female	22.9	25.3	23.2	23.4	5.2	100.0	3.8	24.0	24.4	36.4	6.1	5.1	0.2	100.0	8.5	20.4	522
Type of diarrhea																	
Non-bloody	22.9	28.7	21.2	22.4	4.7	100.0	4.0	24.7	23.2	36.4	5.3	6.3	0.1	100.0	9.4	21.0	921
Bloody	25.2	10.4	21.4	35.4	7.6	100.0	2.1	12.6	18.6	55.8	7.5	3.5	0.0	100.0	7.4	17.6	173
Missing	(28.5)	(30.5)	(15.8)	(14.7)	(10.4)	(100.0)	(7.7)	(38.8)	(12.9)	(30.8)	(3.6)	(6.2)	(0.0)	(100.0)	(17.3)	(31.3)	36
Residence																	
Urban	18.5	34.2	16.0	27.5	3.7	100.0	1.6	30.1	19.1	36.0	5.8	7.4	0.0	100.0	6.0	20.3	140
Rural	24.1	24.8	21.9	23.7	5.6	100.0	4.1	22.3	22.6	39.6	5.6	5.7	0.1	100.0	9.8	20.9	992
Province																	
Kigali City	6.3	43.6	12.6	29.0	8.4	100.0	1.0	33.6	16.3	28.3	7.4	13.4	0.0	100.0	2.3	23.6	95
South	32.4	29.7	18.0	15.7	4.2	100.0	4.6	24.0	20.5	35.1	10.5	5.2	0.0	100.0	12.1	21.9	319
West	24.3	13.7	18.6	36.3	7.0	100.0	1.7	12.4	20.5	54.9	4.3	6.1	0.0	100.0	7.8	16.0	290
North	12.5	30.3	32.7	19.7	4.8	100.0	3.3	31.7	30.8	25.6	2.9	5.7	0.0	100.0	7.0	20.6	183
East	25.3	25.3	23.0	22.1	4.2	100.0	6.7	24.8	22.2	40.2	2.1	3.7	0.4	100.0	12.0	24.1	245
Education																	
No education	23.6	24.1	22.6	25.5	4.2	100.0	6.2	21.0	23.3	38.0	4.6	6.8	0.0	100.0	9.5	18.1	182
Primary	23.2	26.4	21.0	23.8	5.7	100.0	3.6	23.6	22.4	38.9	5.8	5.6	0.1	100.0	9.5	21.4	862
Secondary and higher	24.9	25.6	20.3	24.5	4.7	100.0	1.2	25.0	17.7	43.6	5.9	6.5	0.0	100.0	7.3	20.7	88
Wealth quintile																	
Lowest	23.8	28.7	22.5	19.0	6.0	100.0	3.2	27.0	22.8	35.3	6.5	5.1	0.0	100.0	9.9	21.8	321
Second	24.1	24.6	21.4	25.0	4.9	100.0	5.9	20.5	24.3	39.5	4.7	4.8	0.4	100.0	10.2	21.0	251
Middle	31.0	21.7	21.2	21.8	4.3	100.0	3.8	20.0	23.6	41.0	4.3	7.3	0.0	100.0	11.6	20.4	208
Fourth	16.3	28.5	22.9	26.3	6.1	100.0	4.2	24.6	19.8	39.6	5.3	6.4	0.0	100.0	7.4	18.1	188
Highest	19.9	25.2	16.2	33.4	5.3	100.0	1.4	22.9	18.7	43.3	7.1	6.6	0.0	100.0	6.3	22.0	165
Total	**23.4**	**25.9**	**21.2**	**24.1**	**5.4**	**100.0**	**3.8**	**23.3**	**22.2**	**39.2**	**5.6**	**5.9**	**0.1**	**100.0**	9.3	20.8	**1,**132

Note: It is recommended that children should be given more liquids to drink during diarrhea and food should not be reduced. Figures in parentheses are based on 25-49 unweighted cases.
[1] Continued feeding practices include children who were given more, same as usual, or somewhat less food during the diarrhea episode.

10.6 KNOWLEDGE OF ORS PACKETS

A simple and effective response to dehydration caused by diarrhea is a prompt increase in the child's fluid intake through some form of oral rehydration therapy (ORT). ORT may include the use of a solution prepared from commercially produced packets of oral rehydration salts (ORS), a homemade mixture usually prepared from sugar, salt, and water; any kind of thin, nutritious fluids such as rice water, coconut milk, or watery soup; or simply increased fluids.

Table 10.10 shows that almost all women with children under age 5 know about ORS packets (92 percent). With respect to age, the data show that the proportion of women with children under 5 who know about ORS packets or ORS pre-packaged liquids varies from a high of 94 percent for those age 35-49 to a low of 85 percent for those age 15-19. In the City of Kigali 95 percent of women with children under age 5 know of ORS packets compared with 88 percent of those living in the West province. However, by educational level, the proportion of women with children under 5 who know of ORS varies from a low of 89 percent for those with no education to a high of 97 percent for those with secondary or higher education. There are only small variations by other background characteristics.

Table 10.10 Knowledge of ORS packets or pre-packaged liquids

Percentage of women age 15-49 with a live birth in the five years preceding the survey who know about ORS packets or ORS pre-packaged liquids for treatment of diarrhea by background characteristics, Rwanda 2010

Background characteristic	Percentage of women who know about ORS packets or ORS pre-packaged liquids	Number of women
Age		
15-19	84.8	139
20-24	86.1	1,133
25-34	93.0	3,293
35-49	93.9	1,839
Residence		
Urban	93.5	819
Rural	91.6	5,586
Province		
City of Kigali	94.9	635
South	94.2	1,532
West	87.9	1,545
North	90.9	1,035
East	92.9	1,658
Education		
No education	89.1	1,211
Primary	91.9	4,571
Secondary and higher	96.8	623
Wealth quintile		
Lowest	88.6	1,475
Second	90.8	1,369
Middle	90.8	1,250
Fourth	95.1	1,188
Highest	95.3	1,122
Total	**91.9**	**6,405**

ORS = Oral rehydration salts

10.7 STOOL DISPOSAL

The proper disposal of children's feces is extremely important in preventing the spread of disease. If feces are left uncontained, disease may spread by direct contact or through animal contact. Table 10.11 presents information on the disposal of fecal matter from children under age 5, by background characteristics. Almost nine of

ten (87 percent) of children's stools are usually contained. Children's stools are more likely to be contained in urban than in rural areas (91 and 86 percent, respectively). Regional differentials are also observed. For example, in the City of Kigali, 94 percent of children's stools were disposed of safely compared with only 83 percent in the North province. There is a positive relationship between containment of children's stools and mother's educational level and wealth quintile.

Table 10.11 Disposal of children's stools

Percent distribution of youngest children under age 5 living with the mother by the manner of disposal of the child's last fecal matter, and percentage of children whose stools are disposed of safely, according to background characteristics, Rwanda 2010

Background characteristic	Manner of disposal of children's stools								Total	Percentage of children whose stools are disposed of safely[1]	Number of children
	Child used toilet or latrine	Put/ rinsed into toilet or latrine	Buried	Put/ rinsed into drain or ditch	Thrown into garbage	Left in the open	Other	Missing			
Age in months											
<6	0.7	42.3	0.5	16.7	9.7	5.3	24.7	0.2	100.0	43.5	718
6-11	0.9	71.5	3.0	6.6	4.1	2.5	11.1	0.3	100.0	75.5	833
12-23	2.1	89.3	1.6	1.7	1.0	1.9	2.2	0.1	100.0	93.0	1,539
24-35	14.4	79.9	1.2	0.9	0.8	1.3	1.3	0.2	100.0	95.5	1,404
36-47	51.2	46.0	0.6	0.1	0.2	0.6	1.0	0.4	100.0	97.8	968
48-59	74.5	22.4	0.1	0.3	0.1	1.4	0.7	0.5	100.0	97.0	725
Toilet facility											
Improved, not shared[2]	23.8	64.4	1.0	3.4	1.6	1.3	4.2	0.3	100.0	89.2	3,614
Non-improved or shared	16.5	65.1	1.6	3.6	3.0	2.9	7.2	0.2	100.0	83.2	2,569
Residence											
Urban	19.6	71.4	0.3	2.5	1.3	0.8	4.1	0.0	100.0	91.2	765
Rural	20.9	63.7	1.4	3.6	2.3	2.1	5.6	0.3	100.0	86.0	5,423
Province											
Kigali City	18.4	74.8	0.5	2.2	1.9	0.6	1.6	0.0	100.0	93.7	593
South	22.4	60.7	1.4	2.8	2.9	3.1	6.5	0.1	100.0	84.6	1,495
West	17.7	64.4	1.6	4.1	1.3	2.3	8.2	0.4	100.0	83.7	1,504
North	25.2	57.3	0.5	7.4	1.7	2.5	5.0	0.4	100.0	83.0	996
East	20.2	69.5	1.5	1.6	2.7	0.8	3.6	0.2	100.0	91.1	1,600
Education											
No education	22.8	61.3	1.2	3.3	2.2	2.5	6.5	0.2	100.0	85.3	1,165
Primary	19.8	65.4	1.3	3.7	2.3	2.0	5.2	0.3	100.0	86.5	4,426
Secondary and higher	24.1	66.3	0.5	2.3	0.8	0.5	5.3	0.2	100.0	90.9	596
Wealth quintile											
Lowest	16.8	63.5	2.1	3.5	2.8	3.4	7.5	0.4	100.0	82.4	1,422
Second	19.3	63.6	1.5	4.5	2.9	2.5	5.6	0.2	100.0	84.4	1,332
Middle	21.0	64.8	1.4	3.4	1.8	1.7	5.8	0.1	100.0	87.2	1,220
Fourth	24.4	64.5	0.5	3.9	1.7	0.9	3.8	0.3	100.0	89.4	1,151
Highest	23.5	67.8	0.4	2.0	1.2	1.0	3.9	0.2	100.0	91.6	1,064
Total	**20.7**	**64.7**	**1.2**	**3.5**	**2.1**	**2.0**	**5.5**	**0.2**	**100.0**	**86.7**	**6,188**

[1] Children's stools are considered to be disposed of safely if the child used a toilet or latrine, if the fecal matter was put/rinsed into a toilet or latrine, or if it was buried.
[2] Non-shared facilities that are of the types: flush or pour flush into a piped sewer system/septic tank/pit latrine; ventilated, improved pit (VIP) latrine; pit latrine with a slab; and a composting toilet.

NUTRITION OF CHILDREN AND ADULTS 11

Nutritional status is the result of complex interactions between food consumption and the overall status of health and care practices. Numerous socioeconomic and cultural factors influence decisions on patterns of feeding and nutritional status. Adequate nutrition is critical to child growth, health, and development, especially during the period from conception to 2 years of age. During this period, children who do not receive adequate nutrition can be susceptible to growth faltering, micronutrient deficiencies, and common childhood illnesses such as diarrhea and acute respiratory infections. Among women, malnutrition can result in reduced productivity, an increased susceptibility to infections, slow recovery from illness, and a heightened risk of adverse pregnancy outcomes. A woman who has poor nutritional status, as indicated by a low body mass index (BMI), short stature, anemia, or other micronutrient deficiency, has a greater risk of obstructed labour, of having a baby with a low birth weight, of producing lower quality breast milk, of mortality due to postpartum haemorrhage, and of morbidity for both herself and her baby.

Nutrition continues to be a public health concern in Rwanda. However, there is a strong commitment from the Government of Rwanda, together with its development partners and educational institutions, to find solutions. Under the leadership of the Ministry of Health, multisectoral initiatives and interventions have been put into place over the past decade aimed at accelerating improvement of the nation's nutritional status. These efforts include the promulgation of the National Nutrition Policy in 2007, adoption of the National Protocol on Management of Malnutrition at the facility and community levels in 2009, and the 2010 National Multisectoral Strategy to Eliminate Malnutrition. The National Multisectoral Strategy for the Elimination of Malnutrition seeks to create a more coherent institutional approach to solving the problem of both acute and chronic childhood malnutrition by extending nutrition interventions throughout all communities.

The 2010 Rwanda Demographic and Health Survey (RDHS) asked questions about early initiation of breastfeeding, exclusive breastfeeding during the first six months of life, continued breastfeeding until at least age 2, time of introducing complementary foods (with increasing frequency of feeding solid and semisolid foods), and diet diversity. The height and weight of all children under age 5 and women age 15-49 were measured. This chapter presents findings on infant feeding practices, maternal eating patterns, household testing of salt for adequate levels of iodine, and the nutritional status of women and children.

11.1 NUTRITIONAL STATUS OF CHILDREN

Nutritional status of children under age 5 is an important measure of children's health. The anthropometric data on height and weight collected in the 2010 RDHS permit the measurement and evaluation of the nutritional status of young children in Rwanda.

11.1.1 Measurement of Nutritional Status among Young Children

In addition to questions on feeding practices of infants and young children, the 2010 RDHS included an anthropometric component in which children under age 5 in a subsample of 50 percent of the households were measured for height and weight. Weight measurements were taken using a lightweight electronic SECA scale designed and manufactured under the guidance of the United Nations Children's Fund (UNICEF). The scale allowed for the weighing of very young children through an automatic mother-child adjustment that eliminated the mother's weight while she was standing on the scale with her baby. Height measurements were carried out using a Shorr measuring board also produced under the guidance of UNICEF. Children younger than 24 months were measured lying down (recumbent length) on the board, whereas standing height was measured for older children. Based on

these measurements, three internationally accepted indices were constructed and are used to reflect the nutritional status of children. These are:

- Height-for-age (stunting)
- Weight-for-height (wasting)
- Weight-for-age (underweight)

In the 2005 RDHS, children's anthropometric measurements were compared with an international reference population defined by the U.S. National Center for Health Statistics (NCHS) and accepted by the U.S. Centers for Disease Control and Prevention (CDC). In the 2010 RDHS, as recommended by the World Health Organization (WHO), the nutritional status of children in the survey population was compared with the 2006 WHO Child Growth Standards (WHO, 2006), which are based on an international sample (from Brazil, Ghana, India, Norway, Oman, and the United States) of ethnically, culturally, and genetically diverse healthy children living under optimum conditions conducive to achieving a child's full genetic growth potential. The 1977 NCHS/CDC/WHO reference was replaced with the 2006 WHO Child Growth Standards because of the prescriptive rather than descriptive nature of the WHO standards versus the NCHS reference. Also, the 2006 WHO Child Growth Standards identify the breastfed child as the normative model for growth and development and document how children should grow under optimum conditions and infant feeding and child health practices.

The use of the 2006 WHO Child Growth Standards is based on the finding that well-nourished children in all population groups for which data exist follow very similar growth patterns before puberty. The internationally based standard population serves as a point of comparison, facilitating examination of differences in the anthropometric status of subgroups in a population and of changes in nutritional status over time.

The height-for-age index is an indicator of linear growth retardation and cumulative growth deficits. Children whose height-for-age Z-score is below minus two standard deviations (-2 SD) from the mean 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 mean 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 effects 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 height and describes current nutritional status. Children whose Z-scores are below minus two standard deviations (-2 SD) from the mean 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 mean 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 (-2 SD) from the mean of the reference population are classified as underweight. Children whose weight-for-age is below minus three standard deviations (-3 SD) from the mean of the reference population are considered severely underweight.

A total of 4,356 children under age 5 were eligible to be measured for weight and height and had complete and valid anthropometric data collected.

11.1.2 Measures of Child Nutritional Status

Nationally, 44 percent of children under age 5 are stunted, and 17 percent are severely stunted (Table 11.1 and Figure 11.1). Analysis by age group indicates that stunting is apparent even among children less than 6 months of age (17 percent). Stunting increases with the age of the child, rising from 26 percent among children age 9-11 months to the highest level of 55 percent among children age 18-23 months, with little change from 24 months to 59 months. There is a difference in the level of stunting by gender (47 percent among boys and 41 percent among girls). Stunting is highest when the birth interval is less than 24 months (47 percent) or between 24 and 47 months (48 percent). The disparity in stunting prevalence between rural and urban children is substantial: 47 percent of rural children are stunted, as compared with 27 percent of urban children. Variation in nutritional status of children by province is quite evident, with stunting being highest in the North (51 percent) and West (50 percent) provinces and lowest in the City of Kigali (24 percent). Mother's level of education and wealth quintile have a clear inverse relationship with prevalence of stunting. For example, the prevalence of stunting is higher among children living in the poorest households (54 percent) than among children in the richest households (26 percent) and higher among children whose mothers have no education (52 percent) than among those whose mother has a secondary education or higher (23 percent).

Three percent of children under age 5 are wasted, and 1 percent are severely wasted. The wasting prevalence is highest among children age 9-11 months (8 percent) and begins to decline only after 11 months of age. The proportions of children less than 6 months and 6-8 months who are wasted are 5 percent and 6 percent, respectively. Wasting varies slightly by sex and by area of residence. Boys are more likely to be wasted than girls (3 percent and 2 percent, respectively), and urban children are slightly more likely to be wasted than rural children (4 percent and 3 percent). Wasting is more than twice as frequent among children born to malnourished mothers (BMI below 18.5 kg/m^2) as among children whose mothers have a normal BMI (18.5-24.9 kg/m^2). Wasting is highest in the City of Kigali and the South province (4 percent) and lowest in the North province (1 percent).

Overweight and obesity are other forms of malnutrition that may be on the rise among children in Rwanda. Overall, 7 percent of children below age 5 are overweight or obese (weight-for-height more than +2 SD). There are no substantial differences by sex or area of residence, but overweight and obesity increase with increasing BMI of the mother. Variation by province is small.

Eleven percent of children under 5 are underweight (low weight-for-age), and 2 percent are severely underweight. Figure 11.1 shows that the percentage of children underweight increases steadily from 6 percent among children under age 6 months to 10 percent among children age 6-8 months and 15 percent among children age 18-23 months, decreasing slightly to 14 percent among children age 48-59 months. This may be due to inappropriate and/or inadequate feeding practices because the percentage of underweight children begins to increase at the age when normal complementary feeding starts. Rural children are twice as likely to be underweight as urban children (12 percent versus 6 percent) (Table 11.1). Three of the five provinces in Rwanda (South, West, and East) have percentages of underweight children above the national average. The prevalence of underweight children is 7 percent in the City of Kigali and 10 percent in the North province. A mother's wealth status and educational level are negatively associated with the likelihood that her child is underweight. Children born to mothers in the lowest wealth quintile are more than three times as likely to be underweight as children born to mothers in the highest wealth quintile (16 percent versus 5 percent). Also, children born to undernourished mothers (BMI <18.5 kg/m^2) are twice as likely to be underweight as children whose mothers have a normal BMI (18.5-24.9 kg/m^2) (24 percent versus 12 percent).

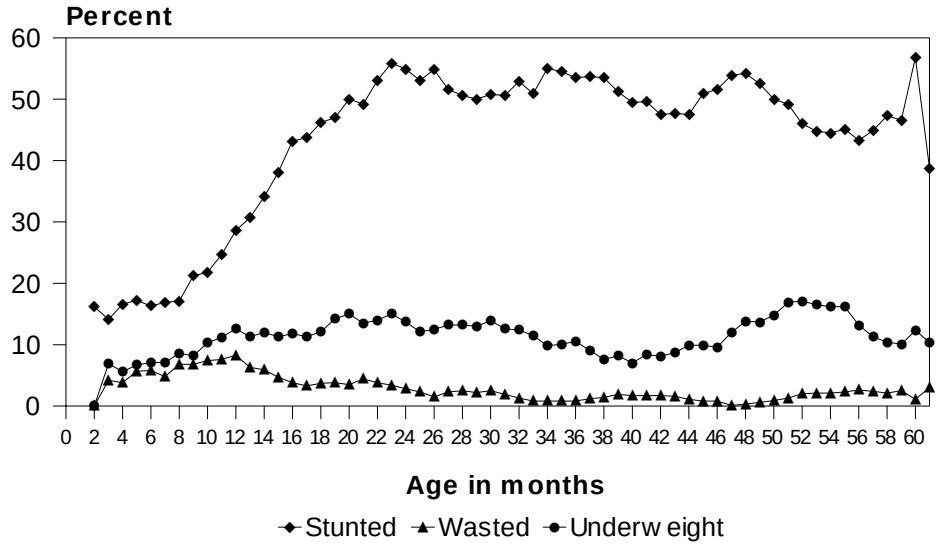
Table 11.1 Nutritional status of children

Percentage of children under 5 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, Rwanda 2010

Background characteristic	Height-for-age[1]			Weight-for-height				Weight-for-age				Number of children
	Percentage below -3 SD	Percentage below -2 SD[2]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[2]	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[2]	Percentage above +2 SD	Mean Z-score (SD)	
Age in months												
<6	4.4	16.7	-0.6	2.8	5.4	16.2	0.5	1.9	6.4	1.4	-0.2	354
6-8	6.2	18.9	-0.8	2.9	6.4	10.3	0.1	1.9	9.7	1.8	-0.5	201
9-11	9.9	25.6	-1.2	3.4	8.2	3.8	-0.1	4.8	12.2	1.2	-0.7	216
12-17	15.6	42.5	-1.7	0.8	3.8	5.0	0.1	3.3	11.2	0.8	-0.7	383
18-23	24.6	55.1	-2.1	0.4	3.3	6.4	0.3	2.7	14.7	1.1	-0.8	418
24-35	22.6	51.8	-2.0	0.3	1.6	6.5	0.5	1.9	11.9	0.7	-0.8	935
36-47	17.6	50.9	-2.0	0.3	1.0	6.7	0.5	1.1	9.4	0.3	-0.8	926
48-59	16.9	46.1	-1.9	0.4	2.2	4.1	0.3	3.0	13.8	0.2	-1.0	923
Sex												
Male	19.5	47.4	-1.9	1.0	3.3	6.6	0.3	2.6	12.7	0.7	-0.8	2,187
Female	14.5	41.1	-1.7	0.6	2.4	6.8	0.4	2.0	10.2	0.7	-0.7	2,169
Birth interval in months[3]												
First birth[4]	12.3	36.3	-1.6	1.1	2.3	8.0	0.4	1.0	7.2	0.7	-0.6	1,005
<24	16.6	46.8	-1.9	0.5	1.7	8.1	0.5	1.5	8.5	0.6	-0.7	621
24-47	19.4	47.9	-1.9	0.8	3.1	6.5	0.3	2.8	14.3	0.5	-0.9	1,864
48+	17.4	42.5	-1.7	1.2	4.5	5.2	0.2	3.3	12.8	1.2	-0.8	580
Mother's interview status												
Interviewed	16.9	44.1	-1.8	0.9	2.9	6.9	0.3	2.2	11.4	0.7	-0.8	4,070
Not interviewed but in household	(23.7)	(51.0)	(-1.9)	(0.0)	(0.0)	(4.0)	(0.2)	(3.2)	(15.3)	(0.0)	(-1.0)	34
Not interviewed and not in household[5]	18.1	45.8	-1.8	0.4	2.1	4.3	0.5	3.6	10.8	1.1	-0.8	252
Mother's nutritional status[6]												
Thin (BMI <18.5)	14.3	47.9	-1.9	2.3	6.5	2.6	-0.2	4.4	24.1	0.0	-1.2	186
Normal (BMI 18.5-24.9)	18.1	45.9	-1.8	0.8	2.8	6.3	0.3	2.3	11.6	0.5	-0.8	3,176
Overweight/ obese (BMI ≥25)	12.5	35.7	-1.5	0.6	2.2	10.2	0.6	1.3	7.6	1.7	-0.4	725
Missing	(27.1)	(27.1)	(-1.8)	(0.0)	(0.0)	(9.8)	(0.7)	(10.1)	(19.8)	(0.0)	(-0.5)	11
Residence												
Urban	7.7	27.3	-1.1	1.7	3.5	7.0	0.3	0.8	6.3	1.1	-0.4	517
Rural	18.3	46.5	-1.8	0.7	2.7	6.7	0.4	2.5	12.1	0.6	-0.8	3,839
Province												
City of Kigali	7.8	23.5	-1.1	1.4	4.4	7.5	0.3	1.1	7.4	1.5	-0.4	397
South	14.6	42.3	-1.7	1.1	3.8	5.7	0.2	2.8	12.4	0.7	-0.8	1,050
West	20.4	49.9	-1.9	0.4	2.0	6.5	0.4	2.1	12.6	0.3	-0.8	1,086
North	19.3	50.7	-2.0	0.4	1.2	6.8	0.6	1.8	10.4	0.6	-0.8	710
East	18.0	43.9	-1.7	1.1	3.2	7.6	0.4	2.7	11.5	0.8	-0.8	1,112
Mother's education[7]												
No education	22.2	52.0	-2.0	0.5	2.3	6.3	0.4	3.0	14.7	0.4	-0.9	806
Primary	16.7	44.5	-1.8	0.9	2.9	7.0	0.3	2.1	11.6	0.6	-0.8	2,947
Secondary and higher	7.3	22.9	-0.9	1.7	3.8	7.5	0.3	1.4	2.8	1.8	-0.3	351
Wealth quintile												
Lowest	23.5	54.0	-2.1	0.9	3.5	7.3	0.4	3.2	15.5	0.4	-0.9	960
Second	20.4	51.1	-1.9	1.0	3.2	6.2	0.3	2.5	13.8	0.6	-0.9	965
Middle	17.9	45.7	-1.9	0.3	2.0	6.9	0.4	2.6	11.4	0.5	-0.8	878
Fourth	12.8	39.2	-1.7	0.9	2.4	6.0	0.4	2.0	9.2	0.9	-0.7	845
Highest	7.8	25.8	-1.1	1.0	2.8	7.3	0.4	0.8	5.2	1.3	-0.4	707
Total	**17.0**	**44.2**	**-1.8**	**0.8**	**2.8**	**6.7**	**0.4**	**2.3**	**11.4**	**0.7**	**-0.8**	**4,356**

Note: Table is based on children who stayed in the household on the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the WHO Child Growth Standards adopted in 2006. The indices in this table are NOT comparable to those based on the previously used NCHS/CDC/WHO reference. Figures in parentheses are based on 25-49 unweighted cases.
Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.
[1] Recumbent length is measured for children under age 2 and less than 85 cm; standing height is measured for all other children.
[2] Includes children who are below -3 standard deviations (SD) from the WHO Child Growth Standards population median
[3] Excludes children whose mothers were not interviewed
[4] First-born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval.
[5] Includes children whose mothers are deceased
[6] Excludes children whose mothers were not weighed and measured. Mother's nutritional status in terms of BMI (body mass index) is presented in Table 11.10.
[7] For women who were not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.

Figure 11.1 Nutritional Status of Children by Age



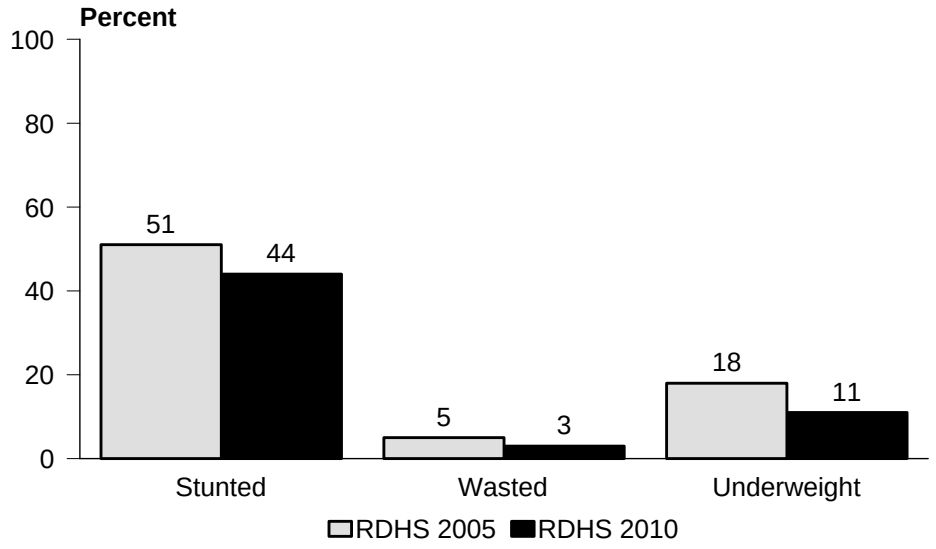
RDHS 2010

11.1.3 Trends in Children's Nutritional Status

Trends in the nutritional status of children under age 5 for the period 2005 to 2010 are shown in Figure 11.2. To allow assessment of trends, the data for 2005 were recalculated using the 2006 WHO Child Growth Standards. Results indicate that there have been improvements in the nutritional status of children in the past five years. The percentage of stunted children fell from 51 percent in 2005 to 44 percent in 2010. The percentage of children wasted declined from 5 percent in 2005 to 3 percent in 2010. Underweight declined from 18 percent in 2005 to 11 percent in 2010. These improvements are attributed to the National Plan to Eliminate Malnutrition, which includes active nutrition screening of children by community health workers (since 2009). Children who are determined to be at risk of malnourishment are referred to a health facility for appropriate treatment using therapeutic milks (F100 and F75), ready-to-use therapeutic food for severe cases, and corn-soy blend for moderate cases. Other sustainable approaches have been initiated and include infant and young child feeding, community-based nutrition programs, behaviour change communication (mainly using media), and home food fortification (using micronutrient powders).

Although there have been improvements in the nutritional status of Rwandan children in the past decade, there is still a need for more intensive interventions as the prevalence of malnutrition is still unacceptably high.

Figure 11.2 Trends in Nutritional Status of Children Under 5 years



RDHS 2010

11.2 INITIATION OF BREASTFEEDING

Early initiation of breastfeeding is encouraged for a number of reasons. Mothers benefit from early suckling because it stimulates breast milk production and facilitates the release of oxytocin, which helps the uterus contract and reduces postpartum blood loss. The first breast milk contains colostrum, which is highly nutritious and has antibodies that protect the newborn from diseases. Early initiation of breastfeeding also fosters bonding between mother and child.

Table 11.2 shows the percentage of all children born in the two years preceding the survey by breastfeeding status and the timing of initial breastfeeding, according to background characteristics. In the 2005 RDHS initial breastfeeding data were collected for all children less than age 5, and thus caution should be exercised in comparing the results of the 2010 RDHS with previous survey results.

Practically all of the children (99 percent) born in the two years preceding the survey were breastfed at some point of time. Because breastfeeding is nearly universal, variations according to background characteristics are minimal. However, young children living in rural areas at the time of the survey were slightly more likely to be breastfed than children living in urban areas.

Seventy-one percent of children are breastfed within one hour of birth, and 94 percent are breastfed within one day of birth. Only 14 percent of children receive a prelacteal feed, that is, something other than breast milk during the first three days of life.

Table 11.2 Initial breastfeeding

Among last-born children who were born in the two years preceding the survey, the percentage who were ever breastfed and the percentages who started breastfeeding within one hour and within one day of birth; and among last-born children born in the two years preceding the survey who were ever breastfed, the percentage who received a prelacteal feed, by background characteristics, Rwanda 2010

Background characteristic	Among last-born children born in the past two years:				Among last-born children born in the past two years who were ever breastfed:	
	Percentage ever breastfed	Percentage who started breastfeeding within 1 hour of birth	Percentage who started breastfeeding within 1 day of birth[1]	Number of last-born children	Percentage who received a prelacteal feed[2]	Number of last-born children ever breastfed
Sex						
Male	98.3	70.8	92.5	1,581	13.9	1,554
Female	99.1	71.8	94.4	1,628	14.3	1,613
Assistance at delivery						
Health professional[3]	98.7	73.3	94.3	2,582	11.6	2,547
Traditional birth attendant	*	*	*	*	*	21
Other	98.2	58.8	88.1	397	25.0	390
No one	100.0	69.6	92.8	204	22.9	204
Place of delivery						
Health facility	98.7	73.4	94.3	2,576	11.6	2,543
At home	98.8	64.7	90.4	569	23.8	562
Other	98.4	44.5	86.0	60	29.7	60
Residence						
Urban	97.1	66.5	92.4	381	16.6	370
Rural	98.9	71.9	93.7	2,827	13.7	2,797
Province						
City of Kigali	97.4	64.1	89.1	297	17.2	289
South	98.5	69.1	93.1	759	16.5	747
West	98.9	73.9	94.1	874	12.2	864
North	99.3	67.7	92.2	478	12.6	475
East	98.8	75.4	95.7	800	13.6	791
Education						
No education	98.7	68.8	91.7	550	17.9	543
Primary	98.8	72.4	94.0	2,364	12.9	2,336
Secondary and higher	97.8	67.4	92.6	294	16.1	288
Wealth quintile						
Lowest	99.1	70.3	93.1	776	13.9	769
Second	98.3	68.4	91.9	736	16.1	724
Middle	99.1	72.2	96.7	595	12.7	589
Fourth	98.8	77.9	93.4	578	12.1	571
Highest	98.3	68.6	92.8	523	15.4	514
Total	**98.7**	**71.3**	**93.5**	**3,208**	**14.1**	**3,167**

Note: Table is based on last-born children born in the two years preceding the survey regardless of whether the children were living or dead at the time of the interview. 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
[3] Doctor, nurse/midwife, or auxiliary midwife

There is a small difference in the timing of initial breastfeeding by sex of the child; slightly more female than male children are breastfed within one hour and one day. Other background characteristics have important influences on early breastfeeding practices. Early initiation of breastfeeding is more common among children whose mothers were assisted at delivery by a health professional and at a health facility than among children delivered with the assistance of a nonprofessional and at home. In addition, children born in the City of Kigali are slightly less likely to be breastfed within one hour and one day of birth than children born in other provinces. Differences in early breastfeeding by mother's education and wealth are small.

The proportions of children who receive a prelacteal feed in the first three days of life are higher among those delivered by a nonprofessional (25 percent), those delivered without assistance (23 percent), and those delivered at home (24 percent) or other places (30 percent) than among those attended by a health professional (12 percent) and delivered in a health facility (12 percent). Children residing in urban areas are more likely than children residing in rural areas to receive a prelacteal feed (17 percent versus 14 percent). The proportions of children who

receive a prelacteal feed are higher in the City of Kigali and the South province than in the other provinces. In addition, the percentage of children who receive a prelacteal feed is lower among those whose mothers have a primary education (13 percent) than among those whose mothers have no education (18 percent) or a secondary education or higher (16 percent). There is no clear association between prelacteal feeding and wealth quintile.

11.3 BREASTFEEDING STATUS BY AGE

UNICEF and WHO recommend that children be exclusively breastfed during the first six months of life and that children be given solid or semisolid complementary food in addition to continued breastfeeding from six months to 24 months. Exclusive breastfeeding is recommended because breast milk is uncontaminated and contains all of the nutrients necessary for children in the first six months of life. In addition, the mother's antibodies in breast milk provide immunity to disease. Early supplementation is discouraged for several reasons: First, it exposes infants to pathogens and increases their risk of infection, especially disease. Second, it decreases infants' intake of breast milk and therefore suckling, which reduces breast milk production. Third, in a harsh socioeconomic environment, supplementary food is often nutritionally inferior.

Information on complementary feeding was obtained by asking mothers about the current breastfeeding status of all children under age 2 and food (liquids or solids) given to the child the day and night before the survey.

Table 11.3 Breastfeeding status by age

Percent distribution of youngest children under 2 years who are living with their mother by breastfeeding status and the percentage currently breastfeeding; and the percentage of all children under 2 years using a bottle with a nipple, according to age in months, Rwanda 2010

		Breastfeeding and consuming:									
Age in months	Not breastfeeding	Exclusively breastfed	Breastfeeding and consuming plain water only	Breastfeeding and consuming non-milk liquids[1]	Breastfeeding and consuming other milk	Breastfeeding and consuming complementary foods	Total	Percentage currently breastfeeding	Number of youngest child under 2 years	Percentage using a bottle with a nipple	Number of children
0-1	0.6	91.4	1.8	5.5	0.7	0.0	100.0	99.4	192	0.5	196
2-3	0.4	90.4	1.6	5.6	1.4	0.4	100.0	99.6	245	1.9	251
4-5	0.7	75.7	2.1	8.4	6.8	6.3	100.0	99.3	281	4.2	284
6-8	1.5	19.5	2.0	8.7	7.2	61.2	100.0	98.5	417	5.7	420
9-11	3.0	2.9	0.1	1.8	1.0	91.2	100.0	97.0	416	6.6	421
12-17	5.6	0.3	0.0	0.8	0.0	93.3	100.0	94.4	756	2.7	772
18-23	14.1	0.6	0.1	0.1	0.0	85.0	100.0	85.9	783	1.3	844
0-3	0.5	90.9	1.7	5.6	1.1	0.2	100.0	99.5	437	1.3	447
0-5	0.6	84.9	1.9	6.7	3.3	2.6	100.0	99.4	718	2.4	732
6-9	1.5	15.5	1.6	6.7	5.9	68.9	100.0	98.5	553	6.2	558
12-15	5.0	0.2	0.0	1.0	0.0	93.8	100.0	95.0	515	3.0	527
12-23	9.9	0.4	0.1	0.4	0.0	89.1	100.0	90.1	1,539	2.0	1,616
20-23	16.5	0.5	0.0	0.0	0.0	82.9	100.0	83.5	519	1.1	566

Note: Breastfeeding status refers to a '24-hour' period (yesterday and last night). Children who are classified as breastfeeding and consuming plain water only consumed no liquid or solid supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding and consuming plain water, non-milk liquids, other milk, and complementary foods (solids and semisolids) are hierarchical and mutually exclusive, and their percentages add to 100 percent. Thus, children who receive breast milk and non-milk liquids and who do not receive other milk and who do not receive complementary foods are classified in the non-milk 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] Non-milk liquids include juice, juice drinks, clear broth, or other liquids.

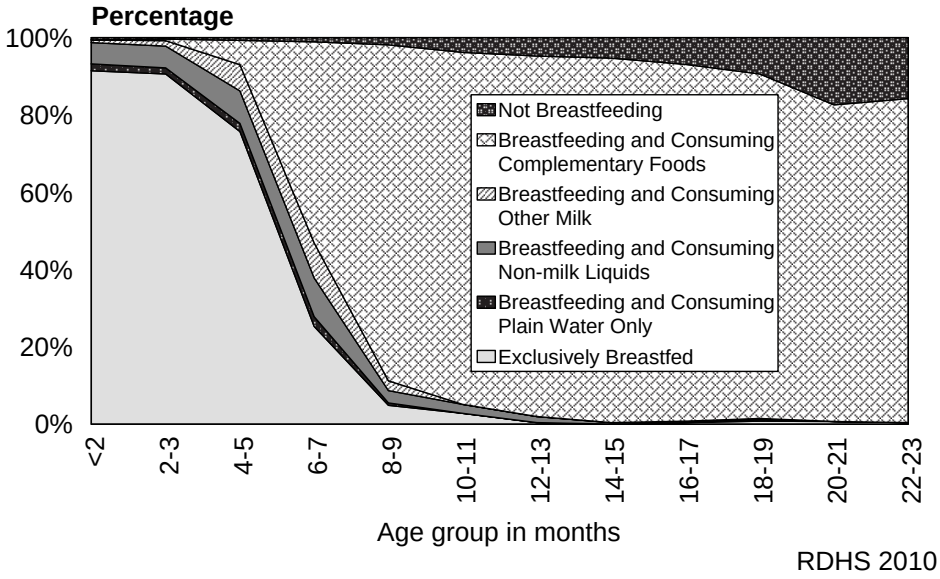
Table 11.3 shows the percent distribution of youngest children under 2 years living with their mother by breastfeeding status and the percentage of all children under 2 years using a bottle with a nipple, according to age in months. The data presented in Table 11.3 and Figure 11.3 show that, contrary to WHO's recommendations, not all children under 6 months are exclusively breastfed. Seventy-six percent of Rwandan children age 4-5 months are exclusively breastfed, which is slightly lower than the exclusive breastfeeding prevalence observed in the 2005 RDHS (80 percent).

Eighty-five percent of children under age 6 months are exclusively breastfed, 2 percent consume breast milk and plain water, 7 percent consume breast milk and non-milk liquids, and 3 percent consume other milk in addition to breast milk. Although 61 percent of children begin eating complementary foods at 6-8 months, 20 percent of children continue to be exclusively breastfed and 2 percent receive just plain water in addition to breast milk. Eighty-six percent of Rwandan children continue to breastfeed until age 2 (Table 11.3), and thus one in seven

children are deprived of valuable nutrients during this period. Exclusive breastfeeding quickly declines from birth to age 6-8 months. However, a few infants are still exclusively breastfed beyond this age, which is not recommended. Although other liquids are not needed before 6 months, 9 percent of infants under 6 months receive water or other non milk liquids.

The prevalence of bottle feeding among Rwandan children age 0-5 months is about 2 percent, similar to that in 2005 (3 percent). Six percent of children 6-9 months of age were fed with a bottle in 2010, as compared with 8 percent in 2005. In Rwanda, the bottle is used for feeding breast milk substitutes (which are most often formula or sweetened condensed milk or other canned milk usually thinned out with water) or very watery gruel made from cereal flour, both of which are contraindicated.

Figure 11.3 Infant Feeding Practices by Age



11.4 DURATION OF BREASTFEEDING

Table 11.4 shows the median duration of breastfeeding by selected background characteristics. The estimates of median and mean durations of breastfeeding are based on current status data, that is, the proportion of last-born children in the three years preceding the survey who were being breastfed at the time of the survey.

Table 11.4 Median duration of breastfeeding

Median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children born in the three years preceding the survey, by background characteristics, Rwanda 2010

Background characteristic	Median duration (months) of breastfeeding among children born in the past three years[1]		
	Any breastfeeding	Exclusive breastfeeding	Predominant breastfeeding[2]
Sex			
Male	29.8	5.1	5.9
Female	29.1	5.4	6.1
Residence			
Urban	26.4	4.6	5.5
Rural	30.1	5.3	6.0
Province			
City of Kigali	25.0	4.9	5.4
South	32.5	4.8	5.4
West	27.9	4.8	6.1
North	31.5	6.2	6.6
East	28.1	5.5	6.2
Education			
No education	29.8	5.5	6.4
Primary	30.1	5.3	6.0
Secondary and higher	26.0	4.5	4.7
Wealth quintile			
Lowest	31.2	5.1	5.8
Second	31.0	5.3	6.0
Middle	29.9	5.9	6.7
Fourth	28.6	5.2	5.9
Highest	25.5	4.7	5.3
Total	**29.4**	**5.3**	**6.0**
Mean for all children	27.2	5.9	6.8

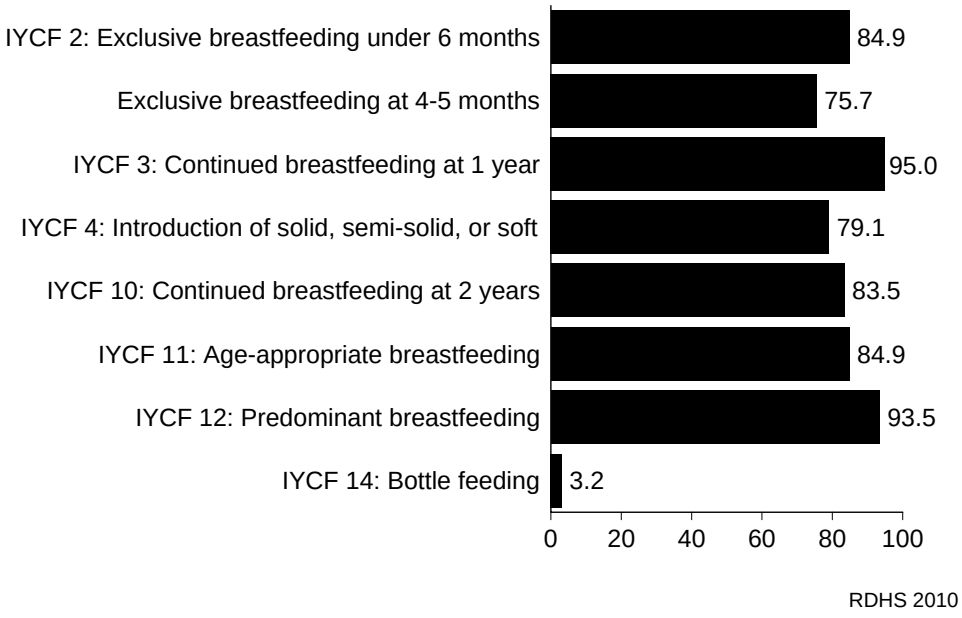
Note: Median and mean durations are based on the distribution at the time of the survey of the proportion of births by months since birth. Includes children living and deceased at the time of the survey.
[1] It is assumed that non-last-born children and last-born children not currently living with the mother are not currently breastfeeding.
[2] Either exclusively breastfed or received breast milk and plain water and/or non-milk liquids only

The median duration of any breastfeeding is 29.4 months, and the mean duration is 27.2 months. There is little difference in duration of breastfeeding by sex of the child. Rural children are breastfed for a slightly longer duration than urban children (30.1 months versus 26.4 months). Highly educated mothers breastfeed their children for a duration of 4 months less than mothers with a primary or no education; mothers from the highest wealth quintile breastfeed their children for 25.5 months, as compared with 31.2 months among mothers in the lowest wealth quintile. Children in the South province are breastfed for 32.5 months, whereas children in the City of Kigali are breastfed for 25.0 months.

The median duration of exclusive breastfeeding among Rwandan children is 5.3 months, and the mean duration is 5.9 months. In comparison with data from the 2005 RDHS, the median duration of any breastfeeding has increased by 4.2 months, whereas exclusive breastfeeding has decreased by 0.3 months.

Breastfeeding status is part of the current set of infant and young child feeding (IYCF) indicators proposed by WHO. Figure 11.4 presents selected IYCF indicators on breastfeeding status in 2010.

Figure 11.4 IYCF Indicators on Breastfeeding Status



11.5 TYPES OF COMPLEMENTARY FOODS

UNICEF and WHO recommend the introduction of solid food to infants at approximately age 6 months because by that age breast milk alone is no longer sufficient to maintain a child's optimal growth. In the transition to eating the family diet, children age 6 months and older should be fed small quantities of solid and semisolid foods throughout the day. During this transition period (age 6-23 months), the prevalence of malnutrition increases substantially in many countries because of increased infections and poor feeding practices.

Table 11.5 provides information on the types of food given to the youngest child under age 2 living with the mother on the day and night preceding the survey, according to breastfeeding status. The data show that few breastfeeding infants receive infant formula or any other kinds of milk (1 percent and 14 percent, respectively).

Table 11.5 Foods and liquids consumed by children in the day or night preceding the interview

Percentage of youngest children under age 2 who are living with the mother by type of foods consumed in the day or night preceding the interview, according to breastfeeding status and age, Rwanda 2010

	Liquids			Solid or semisolid foods										
Age in months	Infant formula	Other milk[1]	Other liquids[2]	Fortified baby foods	Food made from grains[3]	Fruits and vegetables rich in vitamin A[4]	Other fruits and vegetables	Food made from roots and tubers	Food made from legumes and nuts	Meat, fish, poultry	Eggs	Cheese, yogurt, other milk product	Any solid or semi-solid food	Number of children
BREASTFEEDING CHILDREN														
0-1	0.2	0.7	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	191
2-3	0.4	1.0	5.7	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.4	244
4-5	0.6	7.1	12.7	1.4	1.9	3.3	0.7	0.3	0.7	0.7	0.3	0.0	6.3	279
6-8	1.1	19.4	47.9	3.9	22.8	39.5	17.8	13.2	26.2	8.1	3.3	1.0	62.1	411
9-11	1.7	20.4	71.0	1.3	35.3	69.3	22.2	39.0	64.3	19.4	8.4	2.1	94.1	404
12-17	0.1	15.7	71.8	1.1	34.0	76.0	24.4	51.3	75.9	17.6	3.4	1.9	98.9	714
18-23	0.6	16.2	70.5	0.9	30.5	77.5	27.6	60.7	81.8	18.8	3.7	1.3	99.0	672
6-23	0.7	17.4	66.8	1.6	31.1	68.4	23.7	44.8	66.3	16.5	4.4	1.6	91.2	2,200
Total	**0.7**	**14.0**	**52.5**	**1.3**	**23.6**	**52.0**	**18.0**	**33.9**	**50.1**	**12.6**	**3.4**	**1.2**	**69.5**	**2,914**
NONBREASTFEEDING CHILDREN														
0-1	*	*	*	*	*	*	*	*	*	*	*	*	*	1
2-3	*	*	*	*	*	*	*	*	*	*	*	*	*	1
4-5	*	*	*	*	*	*	*	*	*	*	*	*	*	2
6-8	*	*	*	*	*	*	*	*	*	*	*	*	*	6
9-11	*	*	*	*	*	*	*	*	*	*	*	*	*	12
12-17	(1.1)	(36.1)	(77.7)	(1.1)	(43.8)	(74.9)	(29.9)	(56.5)	(81.9)	(30.2)	(4.8)	(4.6)	(95.3)	42
18-23	1.6	24.6	71.5	1.3	35.4	82.6	24.3	51.5	80.1	18.2	7.3	1.8	99.3	111
6-23	2.6	31.1	73.7	2.5	37.1	79.2	26.8	51.2	77.4	20.1	6.4	2.3	97.7	172
Total	**2.5**	**31.0**	**72.4**	**2.9**	**36.2**	**77.2**	**26.1**	**49.9**	**75.5**	**19.6**	**6.2**	**2.2**	**95.8**	**176**

Note: Breastfeeding status and food consumed refer to a '24-hour' period (yesterday and last night). 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.

[1] Other milk includes fresh, tinned, and powdered cow or other animal milk.

[2] Does not include plain water.

[3] Includes fortified baby food.

[4] Includes pumpkin, carrots, squash and sweet potatoes (that are yellow or orange inside), dark green leafy vegetables, mangoes, papayas, and other locally grown fruits and vegetables that are rich in vitamin A.

Overall, 91 percent of breastfed children age 6-23 months receive solid or semisolid complementary foods in addition to breast milk. Consumption of foods made from legumes and nuts (66 percent), fruits and vegetables rich in vitamin A (68 percent), food made from roots and tubers (45 percent), and food made from grains (31 percent) is high. Consumption of food made from animal sources (meat, fish, and poultry) is low (17 percent).

Comparing dietary intake of children by their breastfeeding status, a higher proportion of solid and semisolid foods are being consumed by nonbreastfed children. Approximately 3 percent of nonbreastfeeding children receive infant formula, and 31 percent receive other types of milk in addition to solid foods, both of which are essential because these children are not benefiting from breast milk. A larger percentage of nonbreastfed children age 6-23 months than breastfed children in the same age group are receiving grains, fruits and vegetables rich in vitamin A, and meat, fish, poultry, and eggs.

11.6 INFANT AND YOUNG CHILD FEEDING (IYCF) PRACTICES

Appropriate infant and young child feeding (IYCF) practices include timely initiation of feeding solid and semisolid foods at age 6 months and increasing the amount and variety of foods and frequency of feeding as the child gets older while maintaining frequent breastfeeding (WHO, 2008).

The age ranges of various indicators of IYCF practices presented in this chapter have been updated based on the most recent definitions of breastfeeding and complementary feeding indicators (WHO, 2010). Therefore, to compare results with those of the 2005 RDHS, one needs to first check that indicator definitions and age ranges of sampled children are the same across surveys.

Table 11.6 presents a summary indicator of IYCF practices. The indicator takes into account the percentages of children for whom feeding practices meet minimum standards with respect to food diversity (i.e., the number of food groups consumed), feeding frequency (i.e., the number of times the child is fed), and consumption of breast milk or other types of milk or milk products (accounting for number of milk feedings for nonbreastfed children). Breastfed children are considered to be fed within the minimum standards if they consume at least four food groups and receive food other than breast milk two to three times per day in the case of infants 6-8 months and three to four times per day in the case of children 9-23 months (Arimond and Ruel, 2003). Nonbreastfed children are considered to be fed in accordance with the minimum standards if they consume milk or milk products at least twice a day, are fed four food groups each day, and are fed at least four to five times per day (including milk feeds). Meal frequency is considered a proxy for energy intake from foods other than breast milk; therefore, the feeding frequency indicator for nonbreastfed children includes both milks and solid and semisolid foods (WHO, 2008).

According to the results presented in Table 11.6, 25 percent of breastfed children age 6-23 months were given foods from four or more food groups in the 24 hours preceding the survey, and 51 percent were fed the minimum number of times in the preceding 24 hours. Almost one in five (17 percent) breastfed children fell into both categories; that is, their feeding practices met minimum standards with respect to food diversity as well as feeding frequency. The proportion of breastfed children receiving the recommended variety of food the minimum number of times a day increased with age, from 9 percent among children age 6-8 months to 24 percent among those age 18-23 months. The proportion of breastfed children who met both criteria was more than twice as high in urban areas as in rural areas. This proportion did not vary by sex of the child. There were large regional differences in feeding practices. Children residing in the West province were more than three times less likely than children in the City of Kigali to be fed from four or more food groups the minimum number of times a day. The proportions of breastfed children meeting the IYCF criteria were highest among children of mothers with a secondary education or higher (36 percent) and those in the highest wealth quintile (38 percent).

Among nonbreastfed children age 6-23 months, 24 percent were given milk or milk products, 34 percent were given food from at least four food groups, and 45 percent were fed four or more times per day. However, only

10 percent were fed in accordance with all three IYCF practices. Appropriate feeding practices were more common among breastfed children than nonbreastfed children.

Overall, 17 percent of Rwandan children age 6-23 months met the minimum standard with respect to all three IYCF feeding practices (Table 11.6). The most common problem with feeding practices was an inadequate number of food groups. Ninety-five percent of all children age 6-23 months received breast milk or other milk or milk products during the 24-hour period preceding the survey, and 51 percent were fed the minimum number of times in the preceding 24 hours. However, only 26 percent had been fed foods from the minimum number of food groups for their age.

Table 11.6 Infant and young child feeding (IYCF) practices

Percentage of youngest children age 6-23 months living with their mother who are fed according to three IYCF feeding practices based on breastfeeding status, number of food groups, and times they are fed during the day or night preceding the survey, by background characteristics, Rwanda 2010

	Among breastfed children 6-23 months, percentage fed:				Among nonbreastfed children 6-23 months, percentage fed:					Among all children 6-23 months, percentage fed:				
Background characteristic	4+ food groups[1]	Minimum meal frequency[2]	Both 4+ food groups and minimum meal frequency	Number of breastfed children 6-23 months	Milk or milk products[3]	4+ food groups[1]	Minimum meal frequency[4]	With 3 IYCF practices[5]	Number of non-breastfed children 6-23 months	Breast milk or milk products[6]	4+ food groups	Minimum meal frequency[7]	With all 3 IYCF practices	Number of all children 6-23 months
Age in month														
6-8	9.5	45.7	9.3	411	*	*	*	*	6	99.2	9.4	45.7	9.2	417
9-11	25.3	38.0	12.8	404	*	*	*	*	12	98.4	25.9	38.6	13.1	416
12-17	27.2	51.4	18.2	714	(33.8)	(47.9)	(52.0)	(15.2)	42	96.3	28.4	51.5	18.0	756
18-23	32.4	62.4	24.0	672	17.1	28.4	40.5	7.8	111	88.3	31.9	59.3	21.7	783
Sex														
Male	24.4	50.2	17.5	1,088	17.8	29.1	44.9	10.9	81	94.3	24.7	49.9	17.1	1,168
Female	25.9	52.2	17.1	1,112	30.1	37.5	44.7	9.9	91	94.7	26.8	51.7	16.6	1,204
Residence														
Urban	46.5	57.3	34.0	231	(36.2)	(53.7)	(58.5)	(17.3)	30	92.7	47.4	57.4	32.1	260
Rural	22.6	50.5	15.4	1,970	21.9	29.3	41.9	8.9	142	94.7	23.1	50.0	15.0	2,112
Province														
City of Kigali	45.8	56.6	33.5	182	(37.8)	(66.1)	(65.7)	(23.9)	32	90.7	48.8	58.0	32.1	213
South	32.0	55.7	22.2	545	(28.6)	(39.3)	(39.9)	(12.0)	25	96.9	32.3	55.0	21.8	570
West	14.6	41.9	9.5	605	(15.4)	(15.5)	(29.5)	(2.9)	40	94.8	14.6	41.1	9.1	645
North	26.8	55.4	18.1	322	*	*	*	*	26	94.0	26.8	54.7	17.4	348
East	22.1	52.9	15.3	546	(22.6)	(27.9)	(45.1)	(7.8)	49	93.6	22.6	52.3	14.7	595
Education														
No education	15.0	42.4	10.4	383	(28.1)	(27.9)	(46.2)	(2.8)	29	95.0	15.9	42.7	9.9	412
Primary	24.8	51.6	16.9	1,635	17.1	25.8	37.7	8.3	118	94.4	24.9	50.7	16.3	1,753
Secondary and higher	49.5	66.4	36.2	182	(53.9)	(76.0)	(76.0)	(28.7)	25	94.4	52.7	67.6	35.3	207
Wealth quintile														
Lowest	17.1	46.8	11.5	572	*	*	*	*	22	96.5	17.1	45.7	11.3	594
Second	20.6	47.9	12.4	511	(17.0)	(20.7)	(35.2)	(8.2)	27	95.9	20.6	47.3	12.2	537
Middle	23.3	48.1	14.2	393	(14.6)	(27.0)	(29.6)	(11.7)	37	92.6	23.6	46.5	14.0	430
Fourth	24.9	57.4	18.7	403	(19.6)	(25.1)	(45.8)	(3.8)	35	93.6	24.9	56.5	17.5	437
Highest	49.1	60.6	37.6	322	46.5	58.6	71.5	17.0	51	92.6	50.5	62.1	34.8	374
Total	**25.1**	**51.2**	**17.3**	**2,200**	**24.4**	**33.6**	**44.8**	**10.4**	**172**	**94.5**	**25.8**	**50.8**	**16.8**	**2,372**

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.
[1] Food groups: a. infant formula, milk other than breast milk, cheese or yogurt or other milk products; b. foods made from grains, roots, and tubers, including porridge and fortified baby food from grains; c. vitamin A-rich fruits and vegetables (and red palm oil); d. other fruits and vegetables; e. eggs; f. meat, poultry, fish, and shellfish (and organ meats); g. legumes and nuts.
[2] For breastfed children, minimum meal frequency is receiving solid or semisolid food at least twice a day for infants 6-8 months and at least three times a day for children 9-23 months.
[3] Includes two or more feedings of commercial infant formula; fresh, tinned, and powdered animal milk; and yogurt
[4] For nonbreastfed children age 6-23 months, minimum meal frequency is receiving solid or semisolid food or milk feeds at least four times a day.
[5] Nonbreastfed children age 6-23 months are considered to be fed with a minimum standard of three infant and young child feeding practices if they receive other milk or milk products at least twice a day, receive the minimum meal frequency, and receive solid or semisolid foods from at least four food groups not including the milk/milk product group.
[6] Breastfeeding, or not breastfeeding and receiving two or more feedings of commercial infant formula; fresh, tinned, and powdered animal milk; and yogurt
[7] Children are fed the minimum recommended number of times per day according to their age and breastfeeding status as described in notes 2 and 4.

11.7 PREVALENCE OF ANEMIA IN CHILDREN

Common causes of anemia, characterized by a low level of hemoglobin in the blood, include inadequate intake of iron, folate, vitamin B_{12}, and other nutrients. Anemia can also result from thalassemia, sickle cell disease, malaria, and intestinal worm infestation. Anemia may be an underlying cause of maternal mortality, spontaneous abortion, premature birth, and low birth weight. Iron and folic acid supplementation and antimalarial prophylaxis for pregnant women, promotion of the use of insecticide-treated bednets by pregnant women and children under 5, and six-month deworming for children are some of common measures used to reduce anemia prevalence among vulnerable groups. Home (point-of-use) fortification using micronutrient powders is another measure for combating anemia, especially among children age 6 to 23 months.

Table 11.7 shows the prevalence of anemia among children age 6 to 59 months, according to selected background characteristics. Unadjusted (i.e., measured) values of hemoglobin were obtained using the HemoCue instrument. Given that hemoglobin requirements differ substantially depending on altitude, an adjustment to sea-level equivalents is typically made before classifying children by level of anemia. Based on the altitude information derived from the clusters surveyed for the 2010 RDHS, adjustment was required in the measured hemoglobin values.

Anemia is a critical public health problem in Rwanda, where more than one third (38 percent) of children age 6-59 months are anaemic, with 24 percent mildly anaemic, 14 percent moderately anaemic, and less than 1 percent severely anaemic. Anemia is highest among children less than 12 months of age (69-70 percent) and declines with increasing age (the prevalence is 25 percent among children age 48-59 months). The prevalence of anemia is higher among boys (41 percent) than girls (35 percent) but does not vary substantially between urban and rural areas. Children residing in the East province are more likely (43 percent) to be anaemic than children residing in the other provinces (31 to 38 percent). Children of uneducated mothers and those residing in the poorest households are more likely than other children to be anaemic. For example, 43 percent of children in the lowest wealth quintile are anaemic, as compared with 36 percent in each of the three highest wealth quintiles.

Table 11.7 Prevalence of anemia in children

Percentage of children age 6-59 months classified as having anemia, by background characteristics, Rwanda 2010

Background characteristic	Anemia status by hemoglobin level				
	Any anemia (<11.0 g/dl)	Mild anemia (10.0-10.9 g/dl)	Moderate anemia (7.0-9.9 g/dl)	Severe anemia (<7.0 g/dl)	Number of children[1]
Age in months					
6-8	70.2	26.2	41.4	2.6	188
9-11	69.2	36.7	30.8	1.7	219
12-17	56.7	32.3	23.9	0.5	391
18-23	44.6	29.1	15.3	0.2	423
24-35	36.1	24.0	11.7	0.4	944
36-47	29.0	21.0	7.8	0.2	943
48-59	24.8	18.8	5.9	0.1	929
Sex					
Male	41.2	25.3	15.3	0.6	2,037
Female	35.0	23.1	11.6	0.3	1,999
Mother's interview status					
Interviewed	38.7	24.5	13.7	0.4	3,731
Not interviewed but in household	(25.9)	(20.0)	(3.4)	(2.5)	31
Not interviewed and not in household[2]	32.3	20.5	11.4	0.4	275
Residence					
Urban	35.7	22.3	12.3	1.2	475
Rural	38.4	24.5	13.6	0.4	3,562

Continued…

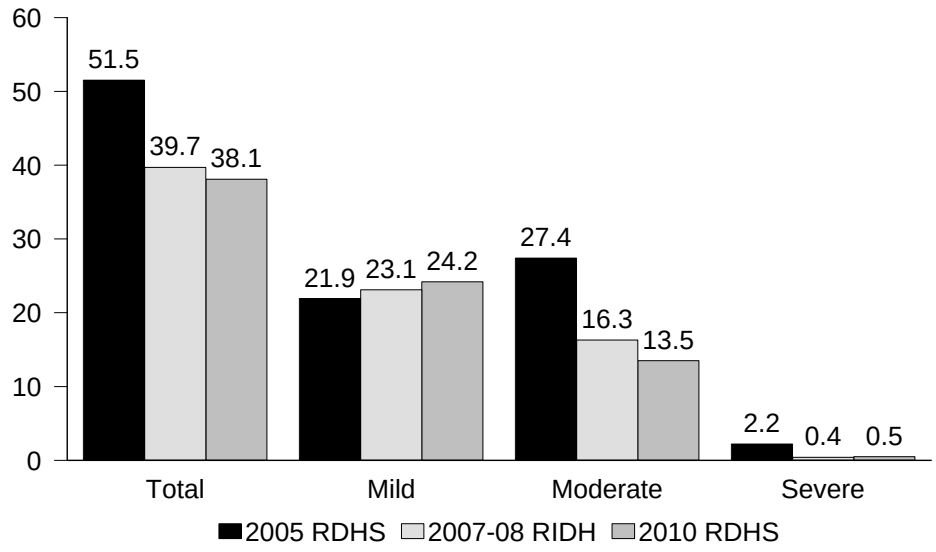
Table 11.7—Continued

Background characteristic	Anemia status by hemoglobin level: Any anemia (<11.0 g/dl)	Mild anemia (10.0-10.9 g/dl)	Moderate anemia (7.0-9.9 g/dl)	Severe anemia (<7.0 g/dl)	Number of children[1]
Province					
City of Kigali	38.1	23.2	13.3	1.6	365
South	37.5	24.1	13.0	0.4	986
West	38.4	24.5	13.9	0.1	1,003
North	30.6	21.6	8.7	0.3	656
East	43.2	26.1	16.6	0.6	1,027
Education					
No education	41.7	26.7	14.7	0.4	740
Primary	38.1	24.0	13.7	0.4	2,707
Secondary and higher	35.2	23.7	10.2	1.3	316
Wealth quintile					
Lowest	43.2	28.1	14.7	0.4	901
Second	38.3	24.7	13.3	0.2	881
Middle	36.2	23.5	12.6	0.1	812
Fourth	35.8	22.3	12.9	0.7	788
Highest	36.0	21.3	13.7	1.0	655
Total	**38.1**	**24.2**	**13.5**	**0.5**	**4,037**

Note: Table is based on children who stayed in the household on the night before the interview. Prevalence of anemia, based on hemoglobin levels, is adjusted for altitude using formulas in CDC (1998). Hemoglobin in grams per decilitre (g/dl). Figures in parentheses are based on 25-49 unweighted cases.
[1] Includes children whose mothers are deceased
[2] For women who were not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.

A comparison with the 2005 RDHS shows that the prevalence of anemia has dropped by 14 percentage points in the past five years, from 52 percent to 38 percent (Figure 11.5 and Appendix C, Table C.8). The most noticeable drop has been in the prevalence of moderate anemia, by 13 percentage points (27 percent in 2005 versus 14 percent in 2010). Severe anemia has also declined in the past five years, but mild anemia has increased slightly.

Figure 11.5 Trend in Anemia Status Among Children Under 5 Years



RDHS 2010

11.8 MICRONUTRIENT INTAKE AMONG CHILDREN

Micronutrient deficiency is an important contributor to childhood morbidity and mortality. Children can receive micronutrients from foods, food fortification, and direct supplementation. Table 11.8 looks at measures relating to intake of several key micronutrients among children.

Vitamin A is an essential micronutrient for the immune system and plays an important role in maintaining the epithelial tissue in the body. Severe vitamin A deficiency (VAD) can cause blindness. VAD can also increase the severity of infections such as measles and diarrheal diseases in children and slows recovery from illness. Vitamin A is found in breast milk, other milks, liver, eggs, fish, butter, red palm oil, mangoes, papayas, carrots, pumpkins, and dark green leafy vegetables. The liver can store an adequate amount of vitamin A for four to six months. Periodic dosing (usually every six months) of vitamin A supplements is one method of ensuring that children at risk do not develop VAD.

Rwanda, through campaigns and twice-yearly Mother and Child Health Week events, has been providing Vitamin A supplementation and deworming tablets to children age 6-59 months and iron/acid folic tablets to mothers. There is not yet an iron supplementation program targeting children.

The RDHS collected information on the consumption of foods rich in vitamin A and on the coverage of supplements. Table 11.8 shows that 73 percent of last-born children age 6-23 months living with their mother consumed foods rich in vitamin A in the 24-hour period preceding the survey. Consumption of foods rich in vitamin A increases from 42 percent among children age 6-8 months to 82 percent among children age 18-23 months. There is no significant difference between boys and girls in the consumption of foods rich in vitamin A. Breastfeeding children are slightly less likely to consume foods rich in vitamin A than nonbreastfeeding children (72 percent versus 82 percent). Children in urban areas and in the City of Kigali were more likely to consume foods rich in vitamin A the day and night preceding the survey than were children in rural areas and in the other provinces.

Vitamin A consumption was lowest among children of uneducated mothers and those residing in the poorest households.

Twenty percent of children consume foods rich in iron. The differences in consumption of iron-rich foods by background characteristics are similar to those seen for consumption of foods rich in vitamin A.

Table 11.8 Micronutrient intake among children

Among youngest children age 6-23 months who are living with the mother, the percentages who consumed vitamin A-rich and iron-rich foods in the day or night preceding the survey; among all children 6-59 months, the percentages who were given vitamin A supplements in the six months preceding the survey and who were given deworming medication in the six months preceding the survey; and among all children age 6-59 months who live in households that were tested for iodized salt, the percentage who live in households with iodized salt, by background characteristics, Rwanda 2010

	Among youngest children age 6-23 months living with the mother:			Among all children age 6-59 months:			Among children age 6-59 months living in households tested for iodized salt	
Background characteristic	Percentage who consumed foods rich in vitamin A in last 24 hours[1]	Percentage who consumed foods rich in iron in last 24 hours[2]	Number of children	Percentage given vitamin A supplements in last 6 months	Percentage given deworming medication in last 6 months[3]	Number of children	Percentage living in households with iodized salt[4]	Number of children
Age in months								
6-8	42.2	10.7	417	67.2	27.3	420	98.0	392
9-11	74.0	25.5	416	85.3	42.4	421	99.7	390
12-17	79.2	21.0	756	93.2	77.2	772	99.2	714
18-23	81.7	21.3	783	95.1	92.0	844	99.1	787
24-35	na	na	na	95.5	95.0	1,824	99.6	1,689
36-47	na	na	na	95.4	94.6	1,741	99.4	1,639
48-59	na	na	na	94.6	93.8	1,850	99.3	1,708
Sex								
Male	71.1	19.1	1,168	93.4	86.9	4,009	99.2	3,704
Female	74.2	21.0	1,204	92.4	85.2	3,864	99.4	3,614
Breastfeeding status[5]								
Breastfeeding	71.9	19.8	2,200	90.4	76.6	3,529	99.3	3,268
Not breastfeeding	81.5	24.4	172	95.1	93.9	4,319	99.3	4,028
Mother's age at birth								
15-19	73.3	19.9	65	91.4	63.6	97	100.0	92
20-29	70.0	20.6	1,311	91.7	84.0	3,697	99.5	3,451
30-39	75.3	19.9	809	93.8	88.0	3,113	99.1	2,896
40-49	79.3	18.0	187	95.0	90.6	966	99.4	880
Residence								
Urban	81.6	39.4	260	95.4	89.2	936	99.3	894
Rural	71.5	17.7	2,112	92.6	85.7	6,937	99.3	6,425
Province								
City of Kigali	79.3	38.4	213	96.9	89.6	759	99.3	731
South	71.2	21.1	570	91.0	84.0	1,884	99.2	1,730
West	72.3	17.2	645	93.6	86.2	1,959	99.4	1,778
North	74.8	13.1	348	94.9	88.7	1,225	99.6	1,138
East	70.7	19.8	595	91.4	85.2	2,045	99.1	1,941
Education								
No education	65.2	13.3	412	92.8	86.0	1,507	99.6	1,343
Primary	73.3	19.8	1,753	92.8	85.7	5,681	99.2	5,310
Secondary and higher	82.0	36.0	207	93.9	89.5	685	99.4	666
Wealth quintile								
Lowest	66.9	15.1	594	91.5	83.7	1,838	98.4	1,606
Second	70.8	13.8	537	91.7	84.2	1,677	99.3	1,554
Middle	72.5	18.3	430	92.3	86.6	1,557	99.6	1,463
Fourth	74.0	19.6	437	95.2	87.8	1,480	99.7	1,417
Highest	83.0	39.8	374	94.6	89.3	1,321	99.6	1,279
Total	**72.6**	**20.1**	**2,372**	**92.9**	**86.1**	**7,873**	**99.3**	**7,319**

Note: Information on vitamin A is based on both mother's recall and the immunization card (where available). Information on iron supplements and deworming medication is based on the mother's recall.
na = Not applicable
[1] Includes meat (and organ meat), fish, poultry, eggs, pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, dark green leafy vegetables, mangos, papayas, and other locally grown fruits and vegetables that are rich in vitamin A,
[2] Includes meat (including organ meat)
[3] Deworming for intestinal parasites is commonly done for helminthes and for schistosomiasis.
[4] Salt containing 15 parts per million of iodine or more. Excludes children in households in which salt was not tested.
[5] Does not include missing data

Ninety-three percent of children age 6-59 months received a vitamin A supplement in the six months before the survey, 9 percent higher than the figure observed in the 2005 RDHS (84 percent). Differences in the

consumption of vitamin A supplements by sex, area of residence, and wealth quintile were small. Children who were not breastfed were more likely to receive vitamin A supplements (95 percent) than children who were breastfed (90 percent). Ninety-one percent of children residing in the South and East provinces received vitamin A supplements, as compared with 97 percent of children in the City of Kigali. Nearly 9 in 10 children (86 percent) children received deworming medication in the six months preceding the survey.

11.9 USE OF IODIZED SALT

Iodine is an important micronutrient for mental development. Dietary iodine deficiencies are a major public health concern worldwide. A lack of sufficient iodine is known to cause goitre, cretinism (a severe form of neurological defect), spontaneous abortion, premature birth, infertility, stillbirth, and increased child mortality. Iodine deficiency disorder is the most common cause of preventable mental retardation and brain damage in the world. Inadequate amounts of iodine in the diet are related to serious health risks for young children.

In the 2010 RDHS, a rapid test was used to determine the presence or absence of iodine in the salt used for cooking in the household.

Table 11.9 shows the percentage of households using iodized salt. Practically all (99 percent) households used salt with iodine.

Table 11.9 Presence of iodized salt in household

Among all households, percentage of households tested for iodine content and percentage of households without salt; and among households with salt tested, the percentage with iodine present in salt, according to background characteristics, Rwanda 2010

	Among all households, percentage:			Among households with tested salt:	
Background characteristic	With salt tested	Without salt	Number of households	Percentage iodized salt	Number of households
Residence					
Urban	90.6	9.4	1,759	99.1	1,595
Rural	90.9	9.1	10,781	99.3	9,797
Province					
City of Kigali	91.2	8.8	1,284	99.3	1,171
South	88.8	11.2	3,136	99.3	2,786
West	90.7	9.3	2,967	99.3	2,691
North	91.9	8.1	2,120	99.5	1,947
East	92.2	7.8	3,033	99.2	2,797
Wealth quintile					
Lowest	85.3	14.7	2,838	98.6	2,420
Second	91.1	8.9	2,600	99.4	2,369
Middle	92.0	8.0	2,448	99.6	2,251
Fourth	94.3	5.7	2,287	99.5	2,156
Highest	92.8	7.2	2,367	99.4	2,196
Total	**90.8**	**9.2**	**12,540**	**99.3**	**11,392**

11.10 NUTRITIONAL STATUS OF WOMEN

The height and weight of women age 15-49 were measured among a 50 percent subsample of households selected in the 2010 RDHS. In this report, two indicators of nutritional status are presented: height and body mass index (BMI).

The height of a woman is associated with past socioeconomic status and nutrition during childhood and adolescence. A woman's height is used to predict the risk of difficulty in delivery because small stature is often associated with small pelvis size and the potential for obstructed labor. The risk of giving birth to a low birth weight baby is influenced by the mother's nutritional status. The cutoff point for the height at which mothers can be

considered at risk varies between populations but normally falls between 140 and 150 centimeters. As in other DHS surveys, a cutoff point of 145 cm was used for the 2010 RDHS.

The index used to measure thinness or obesity is known as the body mass index or the Quetelet index. BMI is defined as weight in kilograms divided by height in meters squared (kg/m^2). A BMI lower than 18.5 kg/m^2 indicates thinness or acute undernutrition, a BMI of 18.5-24.9 kg/m^2 is indicative of normal nutritional status, a BMI of 25.0-29.9 kg/m^2 indicates overweight, and a BMI of 30.0 kg/m^2 or higher indicates obesity.

Table 11.10 Nutritional status of women

Among women age 15-49, the percentage with height under 145 cm, mean body mass index (BMI), and the percentage with specific BMI levels, by background characteristics, Rwanda 2010

	Height		Body mass index[1]								
Background characteristic	Percentage below 145 cm	Number of women	Mean BMI	18.5-24.9 (total normal)	<18.5 (total thin)	17.0-18.4 (mildly thin)	<17 (moderately and severely thin)	≥25.0 (total over-weight or obese)	25.0-29.9 (over-weight)	≥30.0 (obese)	Number of women
Age											
15-19	7.2	1,538	21.5	76.3	12.6	9.0	3.6	11.1	10.8	0.3	1,511
20-29	2.9	2,653	22.6	78.0	4.7	3.9	0.8	17.3	15.8	1.5	2,293
30-39	2.0	1,603	22.7	76.1	5.0	3.9	1.0	19.0	15.2	3.8	1,440
40-49	1.4	1,150	22.4	73.6	8.4	6.6	1.8	18.0	13.9	4.1	1,122
Residence											
Urban	2.8	1,052	23.2	67.9	6.9	5.4	1.5	25.2	19.1	6.1	973
Rural	3.5	5,892	22.2	77.9	7.4	5.6	1.8	14.7	13.2	1.5	5,393
Province											
City of Kigali	3.6	808	23.7	63.9	6.4	5.0	1.4	29.7	22.0	7.7	743
South	4.0	1,597	21.6	78.4	10.6	8.3	2.3	11.0	10.0	1.0	1,490
West	3.8	1,696	22.3	78.6	6.1	4.8	1.2	15.3	13.8	1.5	1,556
North	2.2	1,174	22.5	80.5	4.8	3.4	1.3	14.7	13.5	1.3	1,082
East	3.1	1,669	22.3	75.2	7.7	5.5	2.1	17.1	15.1	2.0	1,495
Education											
No education	3.9	1,059	22.3	77.9	7.5	5.8	1.7	14.6	13.0	1.6	958
Primary	3.6	4,761	22.2	77.3	7.7	5.8	1.8	15.0	13.3	1.7	4,338
Secondary and higher	2.0	1,124	23.0	71.4	5.7	4.3	1.4	22.9	18.4	4.5	1,071
Wealth quintile											
Lowest	4.4	1,255	21.8	79.0	10.0	8.1	1.9	10.9	10.4	0.6	1,148
Second	3.6	1,398	21.7	81.7	8.6	6.0	2.5	9.7	9.4	0.4	1,274
Middle	3.9	1,382	22.1	79.9	6.6	4.6	2.0	13.5	12.5	1.1	1,267
Fourth	2.8	1,389	22.4	75.3	7.0	5.8	1.3	17.7	15.4	2.3	1,259
Highest	2.5	1,520	23.5	67.4	4.9	3.9	1.0	27.8	21.8	6.0	1,418
Total	**3.4**	**6,944**	**22.3**	**76.4**	**7.3**	**5.6**	**1.7**	**16.3**	**14.1**	**2.2**	**6,367**

Note: Body mass index is expressed as the ratio of weight in kilograms to the square of height in meters (kg/m^2).
[1] Excludes pregnant women and women with a birth in the preceding two months

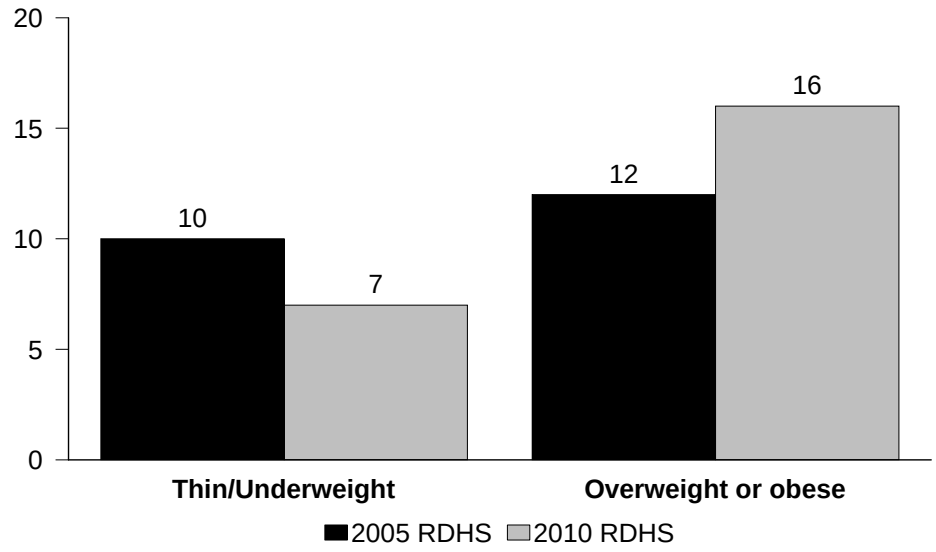
Table 11.10 presents the mean values of the two indicators of nutritional status and the proportions of women falling into high-risk categories, according to background characteristics. Women for whom there was no information on height and/or weight and for whom a BMI could not be estimated are excluded from this analysis. The data analysis on BMI is based on 6,367 women, whereas the height analysis is based on 6,944 women. Overall, 3 percent of women are shorter than 145 cm. Women living in rural areas are more likely than women living in urban areas to be below 145 cm. A smaller percentage of women in the North province are below 145 cm (2 percent) than women in other provinces. As expected, women with no schooling and those in the lowest wealth quintile are more likely to be shorter than 145 cm.

Table 11.10 shows that there are large differentials across background characteristics in the percentage of women assessed as underweight or thin (BMI less than 18.5 kg/m2) and overweight (BMI 25.0 kg/m2 or higher). Seven percent of women are underweight, and 16 percent are overweight or obese. Thirteen percent of women age 15-19 are underweight. There is no substantial difference in underweight between urban and rural women. However, as would be expected, the percentage of overweight or obese women is higher in urban areas (25 percent) than in

rural areas (15 percent). Comparisons across provinces show that the South province (11 percent) has the highest percentage of undernourished women, whereas the lowest proportion of undernourished women is found in the North province (5 percent). The percentage of overweight or obese women in the highest wealth quintile is nearly three times higher than that of the lowest quintile (28 percent versus 11 percent).

A comparison with the 2005 RDHS shows that the proportion of undernourished women in the reproductive age group has declined and that the proportion of overweight or obese women in this group has increased slightly (Figure 11.6).

Figure 11.6 **Trend in Nutritional Status Among Women 14-49**



RDHS 2010

11.11 PREVALENCE OF ANEMIA IN WOMEN

Table 11.11 shows the prevalence of anemia among women age 15-49, adjusted for smoking status. Seventeen percent of Rwandan women are anaemic, including 14 percent with mild anemia and 3 percent with moderate anemia. Less than 1 percent of women suffer from a severe form of anemia. Anemia is more prevalent among women who are of high parity (more than four children), have no education, are pregnant, and live in poor households. Prevalence of anemia does not vary significantly between the rural and urban areas. Women residing in the North province have the lowest prevalence of anemia (12 percent), and women residing in the East province have the highest prevalence (23 percent). Anemia prevalence is higher among women who smoke (25 percent) than among women who do not smoke (17 percent).

Table 11.11 Prevalence of anemia in women

Percentage of women age 15-49 with anemia, by background characteristics, Rwanda 2010

Background characteristic	Anemia status by hemoglobin level				
	Any anemia	Mild anemia	Moderate anemia	Severe anemia	Number of women
Age					
15-19	15.0	12.8	2.1	0.2	1,539
20-29	16.1	13.1	2.7	0.2	2,654
30-39	18.4	15.2	2.9	0.3	1,603
40-49	21.4	16.9	4.1	0.4	1,150
Number of children ever born					
0	15.0	12.6	2.2	0.2	2,642
1	17.2	14.4	2.7	0.2	865
2-3	17.3	13.3	3.7	0.2	1,375
4-5	20.8	16.6	3.8	0.4	997
6+	19.5	16.7	2.7	0.2	1,066
Maternity status					
Pregnant	19.5	12.4	6.7	0.4	487
Breastfeeding	18.0	15.3	2.6	0.1	2,088
Neither	16.6	13.8	2.5	0.3	4,369
Smoking status					
Smokes cigarettes/tobacco	25.3	19.7	5.6	0.0	254
Does not smoke	16.9	13.9	2.8	0.2	6,691
Residence					
Urban	16.2	13.1	2.9	0.2	1,050
Rural	17.4	14.4	2.9	0.2	5,895
Province					
City of Kigali	18.0	13.8	4.0	0.2	807
South	17.4	14.4	2.8	0.1	1,593
West	15.3	13.7	1.5	0.1	1,698
North	11.6	10.2	1.3	0.1	1,178
East	22.8	17.3	4.8	0.6	1,668
Education					
No education	21.0	17.2	3.4	0.4	1,060
Primary	16.6	13.7	2.7	0.2	4,762
Secondary and higher	16.5	13.3	3.0	0.2	1,124
Wealth quintile					
Lowest	19.2	15.1	3.9	0.2	1,258
Second	19.3	16.6	2.4	0.3	1,399
Middle	16.5	13.8	2.5	0.2	1,382
Fourth	16.1	13.2	2.5	0.4	1,387
Highest	15.5	12.3	3.1	0.2	1,518
Total	**17.3**	**14.2**	**2.9**	**0.2**	**6,945**

Note: Prevalence is adjusted for altitude and for smoking status if known using formulas in CDC (1998). Women with <7.0 g/dl of hemoglobin have severe anemia, women with 7.0-9.9 g/dl have moderate anemia, and pregnant women with 10.0-10.9 g/dl and nonpregnant women with 10.0-11.9 g/dl have mild anemia.

Figure 11.7 Trend in Anemia Status Among Women 15-49

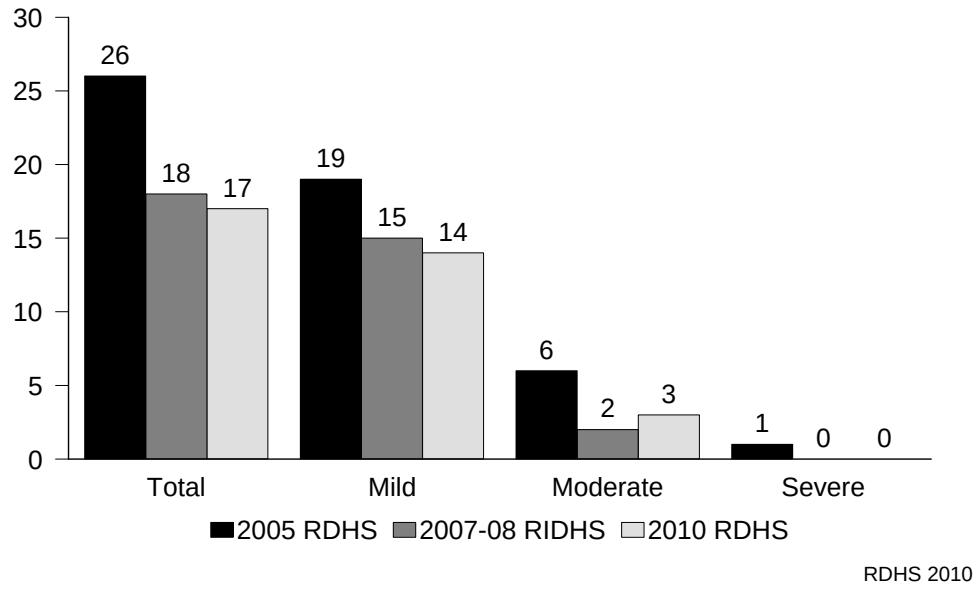


Figure 11.7 indicates that the overall prevalence of anemia has decreased by 8 percentage points since the 2005 RDHS. The proportion of mildly anaemic women decreased from 19 percent in 2005 to 14 percent in 2010. Moderate anemia has also declined by half since 2005 (Appendix C, Table C.9).

11.12 MICRONUTRIENT INTAKE AMONG MOTHERS

Adequate micronutrient intake by women has important benefits for both women and their children. Breastfeeding children benefit from micronutrient supplementation that mothers receive, especially vitamin A. Iron supplementation of women during pregnancy protects mother and infant against anemia. It is estimated that one fifth of perinatal mortality and one tenth of maternal mortality are attributable to iron deficiency anemia. Anemia results in an increased risk of premature delivery and low birth weight as well. Finally, iodine deficiency is also related to a number of adverse pregnancy outcomes.

VAD can be prevented through the provision of a high-dose (200,000 IU) vitamin A capsule in the first six to eight weeks after delivery (when women are considered not at risk of being pregnant). Due to possible adverse effects (birth defects) resulting from high doses of vitamin A, a high-dose vitamin A supplement should not be given to pregnant women.

Table 11.12 shows the extent to which women receive vitamin A following delivery. Fifty-two percent of women reported that they had received vitamin A within the two-month period following the delivery of their last-born child.

Table 11.12 also shows the proportion of women who took iron tablets during pregnancy. Overall, one quarter of women (27 percent) took no iron during pregnancy. Among those who did take iron, 67 percent took it for fewer than 60 days, 2 percent took it for two to three months, and 1 percent took it for three months or more. There

was no significant difference in iron consumption by residence. The proportion of women who reported taking iron for fewer than 60 days varied only minimally by province, level of education, and wealth quintile.

As was the case among children, practically all women live in households with iodized salt.

Table 11.12 Micronutrient intake among mothers

Among women age 15-49 with a child born in the past five years, the percentage who received a vitamin A dose in the first two months after the birth of the last child, and the percentages who, during the pregnancy of the last child born in the five years prior to the survey, took iron tablets or syrup for specific numbers of days and took deworming medication; and among women age 15-49 with a child born in the past five years and who live in households that were tested for iodized salt, the percentage who live in households with iodized salt, by background characteristics, Rwanda 2010

Background characteristic	Percentage who received vitamin A dose postpartum[1]	Number of days women took iron tablets or syrup during pregnancy of last birth					Percentage who took deworming medication during pregnancy of last birth	Number of women	Among women with a child born in the last five years who live in households that were tested for iodized salt	
		None	<60	60-89	90+	Don't know/ missing			Percentage living in households with iodized salt[2]	Number of women
Age										
15-19	46.8	26.5	68.5	2.1	2.2	0.7	39.4	139	100.0	133
20-29	50.8	25.6	68.3	2.5	1.3	2.3	41.3	3,012	99.4	2,818
30-39	53.6	27.9	65.8	1.8	1.6	2.9	38.3	2,380	99.1	2,217
40-49	54.2	27.3	66.6	1.6	1.0	3.5	33.5	874	99.2	790
Residence										
Urban	55.1	26.9	66.8	1.2	1.2	3.8	35.5	819	99.1	778
Rural	51.8	26.7	67.2	2.3	1.4	2.5	39.6	5,586	99.3	5,180
Province										
City of Kigali	53.1	27.6	64.4	1.9	1.4	4.7	33.2	635	99.1	613
South	54.7	23.9	67.1	2.9	1.5	4.6	32.7	1,532	99.1	1,404
West	48.2	28.0	67.4	2.4	1.4	0.7	42.4	1,545	99.4	1,413
North	53.0	21.4	70.4	2.5	2.6	3.2	44.8	1,035	99.7	959
East	52.9	31.0	65.9	1.0	0.6	1.5	40.7	1,658	99.1	1,569
Education										
No education	49.6	30.9	63.2	2.1	1.3	2.5	37.3	1,211	99.4	1,072
Primary	52.2	25.8	68.3	2.0	1.3	2.6	39.4	4,571	99.3	4,280
Secondary and higher	57.8	25.4	66.5	2.9	2.1	3.1	40.1	623	99.3	606
Wealth quintile										
Lowest	52.6	28.5	65.4	1.9	1.2	3.1	37.0	1,475	98.6	1,282
Second	48.7	27.7	66.6	1.8	1.8	2.0	38.0	1,369	99.4	1,268
Middle	51.3	24.5	69.3	2.9	1.2	2.1	39.6	1,250	99.6	1,182
Fourth	54.2	25.8	68.7	1.8	1.5	2.2	43.2	1,188	99.5	1,137
Highest	55.0	26.6	66.0	2.3	1.3	3.7	38.4	1,122	99.4	1,090
Total	**52.2**	**26.7**	**67.1**	**2.1**	**1.4**	**2.6**	**39.1**	**6,405**	99.3	**5,958**

[1] In the first two months after delivery
[2] Excludes women in households where salt was not tested

11.13 NUTRITIONAL STATUS OF MEN

Table 11.13 presents the nutritional status of men according to background characteristics. Men 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. The analysis of BMI is based on 5,667 men age 15-49 and 6,304 men age 15-59.

Overall, 16 percent of men 15-49 are underweight or thin (BMI less than 18.5 kg/m^2), more than twice the percentage among women (7 percent). Only 4 percent of men are overweight or obese (BMI 25.0 kg/m^2 or higher), which is one fourth the proportion observed among women (16 percent).

Thirty-five percent of men age 15-19 are underweight. There is no substantial difference in underweight between urban and rural men. As would be expected, the percentage of overweight or obese men is higher in urban areas (9 percent) than in rural areas (3 percent). Comparisons across provinces show that the South province has the highest percentage of undernourished men (22 percent), whereas the North Province has the lowest (12 percent).

The percentage of overweight or obese men in the highest wealth quintile is more than five times that in the lowest quintile.

Table 11.13 Nutritional status of men

Among men age 15-49, mean body mass index (BMI) and the percentage with specific BMI levels, by background characteristics, Rwanda 2010

	Body mass index								
Background characteristic	Mean BMI	18.5-24.9 (total normal)	<18.5 (total thin)	17.0-18.4 (mildly thin)	<17 (moderately and severely thin)	≥25.0 (total over-weight or obese)	25.0-29.9 (over-weight)	≥30.0 (obese)	Number of men
Age									
15-19	19.3	64.5	35.2	21.7	13.6	0.3	0.3	0.0	1,444
20-29	21.3	89.0	7.3	6.2	1.2	3.7	3.6	0.1	2,188
30-39	21.3	84.4	9.6	7.8	1.7	6.1	5.7	0.4	1,195
40-49	21.0	82.2	12.1	8.7	3.4	5.7	5.2	0.6	840
Residence									
Urban	21.1	75.4	15.6	11.5	4.2	9.0	8.0	1.0	931
Rural	20.7	81.8	15.6	10.7	4.9	2.6	2.5	0.1	4,735
Province									
City of Kigali	21.3	75.9	13.5	10.6	2.8	10.6	9.8	0.8	732
South	20.0	76.4	22.1	14.0	8.1	1.5	1.5	0.0	1,304
West	21.1	83.0	12.6	8.1	4.5	4.4	4.1	0.3	1,299
North	21.0	85.8	11.5	9.7	1.9	2.7	2.7	0.0	897
East	20.6	82.0	16.1	11.3	4.8	1.9	1.7	0.2	1,435
Education									
No education	20.9	86.5	11.1	8.0	3.0	2.5	2.0	0.5	581
Primary	20.6	80.5	16.5	11.2	5.3	2.9	2.8	0.1	3,904
Secondary and higher	20.9	78.6	14.9	10.9	3.9	6.5	6.1	0.4	1,182
Wealth quintile									
Lowest	20.2	77.6	20.9	13.3	7.6	1.6	1.6	0.0	852
Second	20.4	81.7	17.0	11.8	5.2	1.3	1.3	0.0	985
Middle	20.6	83.4	14.7	10.1	4.6	1.9	1.9	0.0	1,136
Fourth	20.7	83.5	14.3	10.4	4.0	2.2	2.0	0.2	1,230
Highest	21.3	77.6	13.4	9.7	3.7	8.9	8.3	0.7	1,463
Total 15-49	**20.7**	**80.8**	**15.6**	**10.8**	**4.8**	**3.6**	**3.4**	**0.2**	**5,667**
50-59	20.5	71.7	22.2	14.3	7.9	6.1	4.4	1.7	638
Total 15-59	**20.7**	**79.8**	**16.3**	**11.2**	**5.1**	**3.9**	**3.5**	**0.4**	**6,304**

Note: Body mass index is expressed as the ratio of weight in kilograms to the square of height in meters (kg/m^2).

MALARIA 12

12.1 INTRODUCTION

Malaria has been the main cause of morbidity and mortality in Rwanda for several years, with periodic epidemics in high-altitude areas. The Government of Rwanda established the National Malaria Control Program as a national strategy to combat malaria and reach the goals for 2010 set by the Abuja summit of African heads of state. To achieve these objectives, the country has adopted a strategy based on the availability of services in communities, with the goal of increasing accessibility to health care. This plan would contribute to the achievement of the millennium development goals as set forth in the Vision 2020 strategic plan for the national health sector.

With the commitment of the government, Rwanda launched an aggressive nationwide campaign in 2006 to scale up malaria control tools and adopted prevention as its main strategy for controlling malaria, through use of long-lasting insecticidal mosquito nets (LLINs) as well as appropriate and timely treatment of malaria cases with efficacious antimalarial drugs. Over the past few years, malaria has also been the focus of the country's comprehensive poverty reduction strategy, health policy reforms, and overall investment on health.

While insecticide-treated mosquito nets (ITNs) have been shown for years to be an effective preventive measure in combating malaria, used often and with extensive coverage in the community, Rwanda (similar to other African countries) has benefited from massive distribution of LLINs and scale-up of artemisinin combination therapy (ACT). In 2006, following the mass distribution of 1.96 million LLINs to children under 5 during the integrated measles vaccination campaign and the introduction of ACT throughout the country in all public and faith-based health facilities (with the support of the Global Fund to Fight AIDS, Malaria and Tuberculosis), malaria declines were seen countrywide. Comparing 2007 figures against the average figures from 2001 to 2006, inpatient malaria cases and deaths among children under 5 in Rwanda fell by 55 percent and 67 percent, respectively, and there was a decrease of 58 percent in outpatient laboratory-confirmed cases.

Since 2005, more than 9.3 million LLINs have been distributed, including 6.1 million since December 2009 with the support of the Global Fund to Fight AIDS, Malaria and Tuberculosis (80 percent of all LLINs distributed), the President's Malaria Initiative, and UNICEF. Most of LLINs were distributed to children under 5 during integrated measles vaccination campaigns in September 2006 (1.4 million) and April 2010 (1.6 million), through EPI for under 5 children and antenatal care (ANC) clinics for pregnant women (2.4 million distributed from 2005 onward), and through a massive household distribution campaign in 2010 (2.2 million). Other groups receiving LLINs included people living with HIV, the poorest segments of the population, and boarding school students.

12.2 MOSQUITO NETS

The ownership and use of treated mosquito nets is the primary prevention strategy for reducing malaria transmission in Rwanda. Since 2006, the ITN policy has included free distribution of LLINs to all children under 5 years every three years during vaccination campaigns or maternal and child health weeks, free distribution of ITNs to pregnant women at their first visit to an ANC clinic, and free distribution of ITNs to children during their final visit under the Expanded Program of Immunization for measles immunization; in addition, there has been universal coverage of LLINs since 2010, with free distribution of one LLINs per 2 persons through household campaigns. To increase coverage, timely mass ITN distribution campaigns are conducted. Since 2005, Rwanda has been moving to

the use of LLINs, which are heavy duty and pretreated. In the past five years, more than 9.3 million ITNs have been distributed country-wide in Rwanda.

This chapter presents the 2010 Rwanda Demographic and Health Survey (RDHS) household-level findings on ownership and use of mosquito nets, particularly among children under 5 and pregnant women.

12.2.1 Ownership of Mosquito Nets

All household respondents in the 2010 RDHS were asked whether their household owned any mosquito nets and, if so, how many and what type. Interviewers were instructed to look at the nets whenever possible.

Table 12.1 shows that 83 percent of all households owned at least one net, 82 percent owned at least one ITN, and 82 percent owned at least one LLIN. About 55 percent of households had more than one ITN, and 54 percent had more than one LLIN. Average numbers of any type of mosquito net, ITNs, and LLINs per household were 1.7, 1.6, and 1.6, respectively. This indicates that practically all of the mosquito nets own by households in Rwanda are LLINs.

Table 12.1 Household possession of mosquito nets

Percentage of households with at least one and more than one mosquito net (treated or untreated), insecticide-treated net (ITN), and long-lasting insecticidal net (LLIN), and the average number of nets per household, by background characteristics, Rwanda 2010

	Any type of mosquito net			Insecticide treated mosquito nets (ITN)[1]			Long-lasting insecticide net (LLIN)			
Background characteristic	Percentage with at least one	Percentage with more than one	Average number of nets per household	Percentage with at least one	Percentage with more than one	Average number of ITNs per household	Percentage with at least one	Percentage with more than one	Average number of LLINs per household	Number of households
Residence										
Urban	85.4	59.0	1.9	84.5	57.8	1.9	84.0	57.1	1.8	1,759
Rural	82.2	54.8	1.6	81.6	54.0	1.6	81.1	53.4	1.6	10,781
Province										
City of Kigali	87.0	63.3	2.1	86.5	62.1	2.0	86.1	61.5	2.0	1,284
South	83.7	54.9	1.6	82.9	53.6	1.6	82.2	52.8	1.6	3,136
West	79.6	51.0	1.5	79.0	50.5	1.5	78.7	50.3	1.5	2,967
North	71.1	38.8	1.3	70.2	37.7	1.2	69.7	37.1	1.2	2,120
East	90.8	68.6	2.0	90.4	67.9	1.9	89.8	67.3	1.9	3,033
Wealth quintile										
Lowest	73.6	39.3	1.2	73.0	38.8	1.2	72.5	38.2	1.2	2,838
Second	79.7	48.4	1.4	78.9	47.5	1.4	78.7	47.3	1.4	2,600
Middle	85.0	58.3	1.7	84.4	57.3	1.7	83.8	56.8	1.6	2,448
Fourth	88.8	65.9	1.9	88.1	65.1	1.9	87.7	64.6	1.9	2,287
Highest	88.5	69.3	2.2	87.8	68.0	2.2	87.0	66.9	2.1	2,367
Total	**82.7**	**55.4**	**1.7**	**82.0**	**54.5**	**1.6**	**81.5**	**53.9**	**1.6**	**12,540**

[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN), or (2) a pretreated net obtained within the past 12 months, or (3) a net that has been soaked with insecticide within the past 12 months.

The proportion of households owning at least one net did not vary by area of residence (85 percent in urban areas versus 82 percent in rural areas). Eighty-five percent of households in urban areas reported having at least one ITN, as compared with 82 percent of households in rural areas. By province, household ownership of ITNs and LLINs was highest in the East province (90 percent for each) and lowest in the North province (70 percent for each). Ownership of any type of mosquito net was also highest in the East province and lowest in the North province. Wealthier households were slightly more likely to own mosquito nets. Eighty-nine percent of the households in the highest wealth quintile owned any type of mosquito net, 88 percent owned an ITN, and 87 percent owned an LLIN. Seventy-three percent of the households in the lowest wealth quintile owned at least one ITN.

There has been remarkable progress in net ownership, which has increased from 59 percent in the 2007-08 RIDHS to 83 percent in the 2010 RDHS. However, data on the final round of the LLIN distribution mass campaign

were not completely captured by the 2010 RDHS because the campaign was organized after the RDHS fieldwork started.

12.2.2 Use of Mosquito Nets by Persons in the Household

Table 12.2 shows that 59 percent of the household population slept under any net the night before the survey. The same percentage of the household population (58 percent) slept under an ITN and under an LLIN.

Table 12.2 Use of mosquito nets by persons in the household

Percentage of the de facto household population who slept the night before the survey under a mosquito net (treated or untreated), under an insecticide-treated net (ITN), under a long-lasting insecticidal net (LLIN), and under an ITN or in a dwelling in which the interior walls have been sprayed against mosquitoes (IRS) in the past 12 months; and among the de facto household population in households with at least one ITN, the percentage who slept under an ITN the night before the survey, by background characteristics, Rwanda 2010

	Household population				Household population in households with at least one ITN[1]	
Background characteristic	Percentage who slept under any net last night	Percentage who slept under an ITN[1] last night	Percentage who slept under an LLIN last night	Number	Percentage who slept under an ITN[1] last night	Number
Age						
<5	70.3	69.6	70.2	8,942	75.1	8,288
5-14	48.7	47.9	48.5	15,724	55.3	13,618
15-34	57.4	56.8	57.3	18,657	67.0	15,823
35-39	71.1	69.7	70.8	6,414	80.3	5,566
50+	57.1	55.9	56.9	5,548	74.3	4,174
Sex						
Male	57.2	56.4	57.0	26,029	65.7	22,372
Female	59.8	58.9	59.7	29,264	68.7	25,100
Residence						
Urban	64.0	62.8	63.8	7,424	70.5	6,618
Rural	57.7	56.9	57.6	47,868	66.7	40,854
Province						
City of Kigali	65.0	64.3	64.9	5,456	70.6	4,972
South	58.7	57.6	58.5	13,400	66.7	11,564
West	57.1	56.5	57.0	13,522	67.7	11,294
North	45.1	44.2	44.9	9,375	58.6	7,070
East	66.6	65.8	66.5	13,540	70.9	12,571
Wealth quintile						
Lowest	49.6	49.0	49.5	10,980	62.8	8,568
Second	54.3	53.4	54.0	11,065	64.7	9,134
Middle	58.9	58.3	58.8	11,018	67.5	9,509
Fourth	63.1	62.2	63.0	11,088	68.6	10,050
Highest	66.8	65.7	66.6	11,141	71.7	10,211
Total	**58.6**	**57.7**	**58.4**	**55,292**	**67.2**	**47,472**

[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN), or (2) a pretreated net obtained within the past 12 months, or (3) a net that has been soaked with insecticide within the past 12 months.

12.2.3 Use of Mosquito Nets by Children Under 5

Children under age 5 are most vulnerable to severe complications of malarial infection due to their reduced immunity.

Table 12.3 shows the use of mosquito nets by children under age 5. Seventy percent of children under age 5 slept under a mosquito net the night before the survey. However, in households with at least one ITN, 75 percent of children slept under an ITN the night before the survey.

Table 12.3 Use of mosquito nets by children

Percentage of children under age 5 who, the night before the survey, slept under a mosquito net (treated or untreated), under an insecticide-treated net (ITN), under a long-lasting insecticidal net (LLIN), and under an ITN or in a dwelling in which the interior walls have been sprayed against mosquitoes in the past 12 months; and among children under age 5 in households with at least one ITN, the percentage who slept under an ITN the night before the survey, by background characteristics, Rwanda 2010.

	Children under age 5 in all households				Children under age 5 in households with at least one ITN[1]	
Background characteristic	Percentage who slept under any net last night	Percentage who slept under an ITN[1] last night	Percentage who slept under an LLIN last night	Number of children	Percentage who slept under an ITN[1] last night	Number of children
Age (in months)						
<12	72.6	72.1	72.4	1,577	78.9	1,440
12-23	76.9	76.2	76.7	1,632	80.5	1,544
24-35	72.9	71.9	72.7	1,881	77.4	1,748
36-47	66.8	66.1	66.7	1,861	71.4	1,721
48-59	64.1	63.4	64.0	1,991	68.8	1,835
Sex						
Male	69.3	68.6	69.1	4,563	74.0	4,233
Female	71.5	70.6	71.4	4,379	76.3	4,055
Residence						
Urban	76.0	75.3	75.9	1,060	79.3	1,007
Rural	69.6	68.8	69.4	7,882	74.5	7,281
Province						
City of Kigali	76.1	75.9	76.1	826	78.6	797
South	69.5	68.6	69.4	2,171	74.6	1,997
West	70.2	69.8	70.1	2,235	76.8	2,033
North	66.4	65.3	66.1	1,388	71.7	1,264
East	71.6	70.7	71.4	2,323	74.7	2,197
Wealth quintile						
Lowest	62.8	62.4	62.7	2,069	71.4	1,809
Second	66.2	65.4	66.0	1,925	71.4	1,762
Middle	72.3	71.6	72.1	1,775	76.6	1,660
Fourth	75.2	74.3	75.2	1,673	77.1	1,612
Highest	78.3	77.5	78.2	1,499	80.4	1,445
Total	**70.3**	**69.6**	**70.2**	**8,942**	**75.1**	**8,288**

Note: Table is based on children who stayed in the household the night before the interview.
[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN), or (2) a pretreated net obtained within the past 12 months, or (3) a net that has been soaked with insecticide within the past 12 months.

There is no variation by sex in the use of mosquito nets in Rwanda. Children in urban areas are more likely to use ITNs (75 percent) than those in rural areas (69 percent); children in urban areas are also more likely to use LLINs. Additionally, children under age 3 are slightly more likely to use a mosquito net for sleeping than children age 3 and older.

Net usage among children under age 5 was higher in the 2010 RDHS (70.3 percent) than in the 2007-08 RIDHS (60.2 percent).

12.2.4 Use of Mosquito Nets by Pregnant Women

To prevent complications from malaria during pregnancy, such as anemia, low birth weight, and trans-placental parasitaemia, all pregnant women are encouraged to sleep under ITNs.

Table 12.4 shows that 73 percent of all pregnant women age 15 to 49 years slept under any net the night before the survey. Since practically all of the mosquito nets in Rwanda are LLINs, the percentages of pregnant women who slept under ITNs and LLINs were similar to the percentage of women who slept under any net. Use of any net was higher among urban pregnant women (81 percent) than rural women (71 percent). Among pregnant

women in households with at least one ITN, 81 percent slept under an ITN the night preceding the survey; in these households, more urban women slept under an ITN (87 percent) than their rural counterparts (80 percent).

Women without a formal education were less likely to have slept under a mosquito net the night before the survey (62 percent) than those with a primary education or a secondary education or higher (75 percent). Women in the highest three wealth quintiles were more likely to have slept under an ITN than those in the lowest two quintiles.

Table 12.4 Use of mosquito nets by pregnant women

Percentages of pregnant women age 15-49 who, the night before the survey, slept under a mosquito net (treated or untreated), under an insecticide-treated net (ITN), under a long-lasting insecticidal net (LLIN), and under an ITN or in a dwelling in which the interior walls have been sprayed against mosquitoes in the past 12 months; and among pregnant women age 15-49 in households with at least one ITN, the percentage who slept under an ITN the night before the survey, by background characteristics, Rwanda 2010

	Among pregnant women age 15-49 in all households				Among pregnant women age 15-49 in households with at least one ITN[1]	
Background characteristic	Percentage who slept under any net last night	Percentage who slept under an ITN[1] last night	Percentage who slept under an LLIN last night	Number of women	Percentage who slept under an ITN[1] last night	Number of women
Residence						
Urban	80.9	80.2	80.9	149	86.7	138
Rural	71.0	70.8	71.0	803	79.9	712
Province						
City of Kigali	80.3	80.3	80.3	114	85.7	107
South	74.6	74.1	74.6	198	83.7	176
West	68.0	67.6	68.0	241	77.7	210
North	66.6	66.6	66.6	148	74.7	131
East	75.2	74.8	75.2	251	83.3	226
Education						
No education	62.1	62.1	62.1	157	73.3	133
Primary	74.6	74.2	74.6	700	82.4	630
Secondary and higher	74.6	74.6	74.6	95	82.4	86
Wealth quintile						
Lowest	67.1	67.1	67.1	197	77.8	169
Second	66.6	65.5	66.6	194	75.7	168
Middle	76.6	76.6	76.6	200	86.7	176
Fourth	75.9	75.9	75.9	186	82.6	170
Highest	77.0	76.4	77.0	176	81.8	165
Total	**72.5**	**72.2**	**72.5**	**952**	**81.0**	**849**

Note: Table is based on women who stayed in the household the night before the interview.
[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN), or (2) a pretreated net obtained within the past 12 months, or (3) a net that has been soaked with insecticide within the past 12 months.

12.3 PREVALENCE AND PROMPT TREATMENT OF FEVER

Malaria case management, including the detection, diagnosis, and rapid treatment of all malaria cases with appropriate and effective antimalarial drugs, is one of the key strategic areas for malaria control in Rwanda. Since 2006, ACTs have been widely available in public health and faith-based facilities, as well as in the community via community health workers and private pharmacies. In December 2009, the National Malaria Control Program revised its malaria treatment guidelines requiring that laboratory diagnostic results be confirmed via either microscopy or rapid diagnostic test before any treatment is initiated. In 2010, Rwanda achieved one of the highest parasitological diagnosis rates in Africa, with an estimated 94 percent of suspected malaria cases being parasitologically diagnosed (Malaria Program Review, 2011).

Table 12.5 shows that 16 percent of children under age 5 had a fever during the two weeks preceding the survey; the proportion was higher among children age 12-23 months (22 percent) than among other children.

Children in the East province were slightly less likely to have experienced fever (11 percent) than those in the other provinces (17 percent or higher).

Table 12.5 Prevalence, diagnosis, and prompt treatment of children with fever

Percentage of children under age 5 with fever in the two weeks preceding the survey, and among children under age 5 with fever, the percentage who had blood taken from a finger or heel, the percentage who took antimalarial drugs, and the percentage who took the drugs the same or next day following the onset of fever, by background characteristics, Rwanda 2010

	Among children under age 5:		Among children under age 5 with fever:			
Background characteristic	Percentage with fever in the two weeks preceding the survey	Number of children	Percentage who had blood taken from a finger or heel for testing	Percentage who took antimalarial drugs	Percentage who took antimalarial drugs same or next day	Number of children
Age (in months)						
<12	19.1	1,573	18.8	6.7	3.6	300
12-23	21.9	1,616	26.9	11.8	9.0	353
24-35	15.4	1,824	21.5	11.5	7.3	282
36-47	13.6	1,741	15.8	11.4	8.7	237
48-59	9.9	1,850	19.0	13.9	11.1	184
Sex						
Male	16.5	4,364	22.8	10.7	7.4	722
Female	14.9	4,241	18.9	11.0	8.0	634
Residence						
Urban	16.7	1,033	39.3	7.9	7.1	172
Rural	15.6	7,572	18.3	11.3	7.8	1,183
Province						
City of Kigali	17.4	830	42.0	6.7	5.0	144
South	17.9	2,049	19.7	17.6	12.0	367
West	17.5	2,159	17.4	8.0	5.8	378
North	17.1	1,342	11.8	1.8	1.8	229
East	10.7	2,225	24.8	16.1	11.1	237
Mother's education						
No education	14.0	1,629	14.9	11.1	7.8	228
Primary	16.2	6,214	19.4	11.2	8.1	1,008
Secondary and higher	15.6	762	46.3	7.4	4.2	119
Wealth quintile						
Lowest	17.8	1,992	13.6	12.2	8.5	355
Second	16.9	1,852	13.2	8.9	4.6	313
Middle	15.4	1,709	17.8	12.3	9.4	264
Fourth	11.9	1,598	26.8	9.1	7.2	190
Highest	16.1	1,454	41.5	11.1	9.0	234
Total	**15.8**	**8,605**	**21.0**	**10.8**	**7.7**	**1,355**

Among children under age 5 with fever, 21 percent had blood taken from a finger or heel for testing. The percentage of children with fever who had blood taken from a finger or heel for testing was highest in urban areas, in the City of Kigali, in the highest wealth quintile, and among those whose mother had a secondary education or higher. Eleven percent of children under age 5 with fever took antimalarial drugs. However, only 8 percent of children under age 5 took antimalarial drugs the same day or the day after the fever started. There were substantial differences among children under age 5 who took antimalarial drugs the same or next day by mothers' educational level and region. Children under age 12 months were less likely than older children to take antimalarial drugs or to take them the same day or the day after the fever started.

Table 12.6.1 Type of antimalarial drugs taken by children who took antimalarial drugs

Among children under age 5 who had a fever and took any antimalarial medication in the two weeks preceding the survey, the percentage who took specific antimalarial drugs by background characteristics, Rwanda 2010

Antimalarial drug	Percent
Quinine	3.5
Coartem[1]	37.2
Primo[1]	60.1
Other	1.3
Number of children who took any antimalarial drug	147

[1] Artemisinin combination therapy (ACT)

In line with the malaria treatment policy of the National Malaria Control Program, antimalarial medicines (Table 12.6.1) are given to children only after the presence of malaria parasites is confirmed by microscope or the rapid diagnostic test. Table 12.6.2 shows that 11 percent of children under age 5 with fever took an antimalarial medicine, about half the percentage of children who had blood taken from a finger or heel for testing (21 percent). Almost all of these children were treated with ACT (120 mg Lumefantrine and 20 mg Artemether, commonly known as Primo or Coartem). Less than 1 percent of children took quinine or other antimalarial medicines (Tables 12.6.1 and 12.6.2). On the same or the next day following the onset of fever, 8 percent of children took an antimalarial medicine, with most children treated with a type of ACT. There were substantial differences in the use of ACT for treatment of fever by residence and province. Rural children with fever (11 percent) were more likely than their urban counterparts (7 percent) to be treated with ACT. The percentages of children treated with ACT were highest in the South (17 percent) and East (15 percent) provinces. Only 1 percent of children in the North province were treated with ACT.

Table 12.6.2 Type and timing of antimalarial drugs taken by children with fever

Among children under age 5 with fever in the two weeks preceding the survey, the percentage who took specific antimalarial drugs and the percentage who took each type of drug the same or next day after developing fever, by background characteristics, Rwanda 2010

Background characteristic	Percentage of children who took drug:				Percentage of children who took drug the same or next day:				Number of children with fever
	Quinine	Coartem[1]	Primo[1]	Other antimalarial	Quinine	Coartem	Primo	Other antimalarial	
Age (in months)									
<12	0.7	2.3	3.3	0.3	0.4	1.4	1.4	0.3	300
12-23	0.3	5.4	6.4	0.0	0.0	3.6	5.4	0.0	353
24-35	0.6	3.3	8.2	0.0	0.3	1.8	5.6	0.0	282
36-47	0.0	2.6	8.9	0.0	0.0	2.1	6.6	0.0	237
48-59	0.0	7.2	6.2	0.5	0.0	4.8	6.2	0.0	184
Sex									
Male	0.1	3.5	6.8	0.3	0.0	2.5	4.7	0.1	722
Female	0.7	4.6	6.2	0.0	0.3	2.8	5.0	0.0	634
Residence									
Urban	0.0	4.2	3.1	0.6	0.0	3.4	3.1	0.6	172
Rural	0.4	4.0	7.0	0.1	0.2	2.5	5.1	0.0	1,183
Province									
City of Kigali	0.0	2.9	3.8	0.0	0.0	2.0	3.0	0.0	144
South	0.8	6.4	10.9	0.0	0.2	4.0	8.1	0.0	367
West	0.0	3.3	4.7	0.2	0.0	2.5	3.4	0.0	378
North	0.0	0.5	0.9	0.4	0.0	0.5	0.9	0.4	229
East	0.9	5.6	9.6	0.0	0.5	3.4	7.3	0.0	237

Continued…

Table 12.6.2—Continued

Background characteristic	Percentage of children who took drug:				Percentage of children who took drug the same or next day:				Number of children with fever
	Quinine	Coartem[1]	Primo[1]	Other antimalarial	Quinine	Coartem	Primo	Other antimalarial	
Mother's education									
No education	0.3	4.2	6.5	0.4	0.3	2.3	5.1	0.4	228
Primary	0.4	3.9	6.9	0.1	0.1	2.8	5.2	0.0	1,008
Secondary and higher	0.0	4.5	2.9	0.0	0.0	2.4	1.9	0.0	119
Wealth quintile									
Lowest	0.2	4.4	7.5	0.3	0.2	2.9	5.4	0.3	355
Second	0.7	3.1	4.8	0.3	0.0	1.4	3.2	0.0	313
Middle	0.4	4.4	7.9	0.0	0.4	3.3	5.6	0.0	264
Fourth	0.0	2.3	6.7	0.0	0.0	1.6	5.5	0.0	190
Highest	0.5	5.6	5.5	0.0	0.0	4.0	5.0	0.0	234
Total	**0.4**	**4.0**	**6.5**	**0.1**	**0.1**	**2.6**	**4.9**	**0.1**	**1,355**

[1] Artemisinin combination therapy (ACT)

In the past five years, Rwanda has made extraordinary progress in the fight against malaria. Data from the National Malaria Control Program show that malaria incidence declined by 70 percent between 2005 and 2010. During this period, malaria cases reported in outpatient visits declined 60 percent, and mortality due to malaria in inpatient admissions declined 54 percent. Between 2001 and 2010, the test positivity rate declined 66 percent (Malaria Program Review, 2011). In Rwanda, due to low malaria transmission, fever cases are not recommended for antimalarial treatments as they are in high-transmission countries. Treatments are given in cases in which malaria infection is confirmed. This could explain the differences in the use of ACT for treatment of fever by residence and province, with a higher percentage of children using ACT in the East and South provinces, where the prevalence of malaria is higher, than in the North province (where only 1 percent of children have received ACT).

12.4 PREVALENCE OF ANEMIA AND MALARIA IN CHILDREN AND WOMEN

One of the objectives of the 2010 RDHS was to assess anemia prevalence in children age 6-59 months. Table 11.7 in the previous chapter presents the percentage of children with anemia according to the cutoffs of 11.0 g/dl for any anemia and 7.0 g/dl for severe anemia. In addition to poor dietary intake of iron, malaria infection can also result in anemia. A hemoglobin concentration of less than 8.0 g/dl is considered an indication that an individual may have malaria, according to the National Guidelines for the management of malaria in Rwanda.

Table 12.7 shows that 1 percent of children age 6-59 months have hemoglobin lower than 8.0 g/dl. Children under 18 months have higher levels of anemia, ranging from 6 percent among children age 6-8 months to 3 percent among children age 9-17 months. Boys are slightly more anaemic than girls (2 percent versus 1 percent). The proportions of children with a hemoglobin level below 8 g/dl are higher in urban areas, the City of Kigali, and the East province (2 percent each) than in rural areas and the other provinces.

Table 12.7 Hemoglobin <8.0 g/dl in children

Percentage of children age 6-59 months with hemoglobin lower than 8.0 g/dl, by background characteristics, Rwanda 2010

Background characteristic	Hemoglobin < 8.0 g/dl	Number of children
Age (in months)		
6-8	5.5	188
9-11	3.0	219
12-17	3.0	391
18-23	0.7	423
24-35	1.2	944
36-47	0.3	943
48-59	0.6	929
Sex		
Male	1.5	2,037
Female	1.0	1,999
Mother's interview status		
Interviewed	1.3	3,731
Not interviewed but in household	(2.5)	31
Not interviewed and not in household[1]	0.7	275
Residence		
Urban	1.9	475
Rural	1.2	3,562
Province		
City of Kigali	2.1	365
South	1.4	986
West	0.4	1,003
North	0.7	656
East	2.0	1,027
Mother's education[2]		
No education	1.0	740
Primary	1.3	2,707
Secondary and higher	2.3	316
Wealth quintile		
Lowest	1.3	901
Second	1.1	881
Middle	0.9	812
Fourth	1.3	788
Highest	1.9	655
Total	**1.3**	**4,037**

Note: Table is based on children who stayed in the household the night before the interview. Prevalence of anemia is based on hemoglobin levels and is adjusted for altitude using CDC formulas (CDC, 1998). Hemoglobin is measured in grams per decilitere (g/dl). Figures in parentheses are based on 25-49 unweighted cases.

[1] Includes children whose mothers are deceased

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

Table 12.8 shows the results of microscopic diagnostic test (blood smear) among children who had a malaria test. Nationally, 1.4 percent of children 6 to 59 months are infected with at least one form of malarial parasites. Children 6-11 months are less likely to be infected with malaria than children 12 months or older. The prevalence in boys and girls is not substantially different. Overall, the proportion of children with malaria is higher in rural areas than urban areas (1.4 percent versus 0.8 percent). In addition, children in the East province (3.4 percent) and the South province (1.4 percent) are more likely to be infected than those in other provinces. Children whose mothers never attended school are more likely to be infected than children whose mothers attended some school. Children in the lowest wealth quintile are twice as likely to be infected as children in the highest wealth quintile. The prevalence of malaria among children who were not with their mothers at the time of interview (mothers were not interviewed and not in household) is more than four times higher than the national average (Table 12.8).

Table 12.8 Malaria among children

Percentage of children age 6-59 months classified as having malaria, by background characteristics, Rwanda 2010

Background characteristic	Malaria	Number of children
Age (in months)		
6-8	0.6	191
9-11	0.5	219
12-17	1.0	391
18-23	1.3	425
24-35	1.4	945
36-47	1.8	944
48-59	1.5	931
Sex		
Male	1.5	2,045
Female	1.2	2,001
Mother's interview status		
Interviewed	1.1	3,739
Not interviewed but in household	(0.0)	32
Not interviewed and not in household[1]	4.7	275
Residence		
Urban	0.8	475
Rural	1.4	3,571
Province		
City of Kigali	0.2	365
South	1.4	986
West	0.5	1,009
North	0.0	656
East	3.4	1,031
Education[2]		
No education	1.6	742
Primary	1.0	2,714
Secondary and higher	1.1	316
Wealth quintile		
Lowest	2.1	902
Second	1.7	884
Middle	0.7	817
Fourth	1.2	788
Highest	1.0	656
Total	**1.4**	**4,046**

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Includes children whose mothers are deceased
[2] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.

Women are less likely to be infected with malaria than children. In the country as a whole, only 0.7 percent of women have malaria (Table 12.9). There is no clear relationship between malaria infection and the age of a woman. Similar to children, rural women are more likely to be infected than urban women, and malaria prevalence among women is higher in the East (1.6 percent) and South (1.0 percent) provinces than in other provinces. Malaria prevalence is negatively associated with a woman's education and wealth quintile.

Table 12.9 Malaria among women

Percentage of women age 15-49 years classified as having malaria, by background characteristics, Rwanda 2010

Background characteristic	Malaria	Number of women
Age		
15-19	1.0	1,540
20-24	0.8	1,372
25-29	0.6	1,270
30-34	0.6	883
35-39	0.9	715
40-44	0.5	614
45-49	0.0	532
Pregnancy status		
Currently pregnant	0.5	486
Not pregnant/not sure	0.7	6,441
Residence		
Urban	0.2	1,048
Rural	0.8	5,880
Province		
City of Kigali	0.1	802
South	1.0	1,599
West	0.2	1,684
North	0.1	1,174
East	1.6	1,668
Education		
No education	1.0	1,062
Primary	0.7	4,746
Secondary and higher	0.5	1,119
Wealth quintile		
Lowest	1.4	1,253
Second	0.8	1,395
Middle	0.5	1,378
Fourth	0.7	1,386
Highest	0.2	1,516
Total	**0.7**	**6,927**

There have been remarkable improvements in malaria prevalence since the 2007-08 RIDHS, with malaria in children under 5 declining from 2.6 to 1.4 percent and malaria in women declining from 1.4 to 0.7 percent.

HIV AND AIDS RELATED KNOWLEDGE, ATTITUDES, AND BEHAVIOR 13

HIV infection is a major public health concern in Rwanda, where it is a primary cause of mortality with negative social and economic consequences that affect everyone in the country. Since the initiation of the 2005-2009 National Multi-sector Strategic Plan (NMSP), Rwanda has made significant progress towards the goal of creating universal access to HIV and AIDS services. To continue this progress, Rwanda decided to develop and implement a 2009-2012 National Strategic Plan (NSP) against HIV and AIDS. The NSP sets out the overarching goals for the country's response to HIV and AIDS and affirms Rwanda's commitment to a multi-sector response. It is based on the most up–to-date understanding of the epidemic and the strengths and weaknesses of the systems and mechanisms that are used to respond.

To assess the impact of Rwanda's anti-AIDS program, the 2010 RDHS has devoted its efforts, in large part, to gathering data on HIV and AIDS and other sexually transmitted infections (STIs). The aim of this chapter is to present knowledge, attitudes, and behaviors at the national and provincial levels and among certain subgroups of the population. The chapter also provides information on male circumcision in Rwanda. Survey data were collected about how HIV infection is prevented and transmitted, the stigmatization of those who have the disease, and risk factors, particularly those relating to sexual behavior. The information gathered is essential for adjusting current programs and setting up new AIDS information, education, and communication campaigns.

In addition, the 2010 Rwanda Demographic and Health Survey (RDHS) tested for HIV to determine the prevalence of HIV infection and factors associated with HIV infection (see Chapter 14).

13.1 KNOWLEDGE OF HIV AND AIDS AND OF TRANSMISSION AND PREVENTION METHODS

13.1.1 Awareness of AIDS

Practically all women and men age 15-49 have heard of AIDS (Table 13.1). Because of the universal awareness of AIDS, the variation by background characteristics, such as marital status, residence, province, education, and wealth, is minimal.

Table 13.1 Knowledge of AIDS

Percentage of women and men age 15-49 who have heard of AIDS, by background characteristics, Rwanda 2010

Background characteristic	Women		Men	
	Has heard of AIDS	Number of respondents	Has heard of AIDS	Number of respondents
Age				
15-24	99.9	5,628	99.9	2,607
…15-19	99.9	2,945	99.9	1,449
…20-24	100.0	2,683	100.0	1,159
25-29	100.0	2,494	100.0	1,038
30-39	100.0	3,269	100.0	1,201
40-49	100.0	2,280	100.0	842
Marital status				
Never married	99.9	5,285	99.9	2,873
Ever had sex	100.0	1,188	100.0	1,140
Never had sex	99.9	4,097	99.9	1,733
Married/Living together	100.0	6,897	100.0	2,699
Divorced/Separated/Widowed	100.0	1,489	100.0	115
Residence				
Urban	100.0	2,057	100.0	939
Rural	100.0	11,614	100.0	4,748

Continued…

Table 13.1—Continued

Background characteristic	Women		Men	
	Has heard of AIDS	Number of respondents	Has heard of AIDS	Number of respondents
Province				
City of Kigali	100.0	1,596	100.0	739
South	100.0	3,212	99.9	1,308
West	100.0	3,305	100.0	1,307
North	100.0	2,278	99.9	899
East	100.0	3,280	100.0	1,435
Education				
No education	100.0	2,119	100.0	583
Primary	100.0	9,337	100.0	3,916
Secondary and higher	100.0	2,216	99.9	1,189
Wealth quintile				
Lowest	99.9	2,622	99.9	854
Second	100.0	2,661	100.0	986
Middle	100.0	2,736	99.9	1,139
Fourth	100.0	2,677	100.0	1,235
Highest	100.0	2,976	100.0	1,474
Total 15-49	**100.0**	**13,671**	**100.0**	**5,687**
50-59	na	na	100.0	642
Total 15-59	**na**	**na**	**100.0**	**6,329**

na = Not applicable

13.1.2 HIV Prevention Methods

The 2010 Rwanda Demographic and Health Survey (RDHS) prompted respondents to answer specific questions about HIV and AIDS prevention methods, which include limiting sexual intercourse to one uninfected, faithful sexual partner and using condoms.

Table 13.2 presents knowledge of these HIV and AIDS prevention methods among women and men age 15-49, by background characteristics. Eighty-five percent of women and 79 percent of men are aware that the risks of contracting the AIDS virus can be reduced by limiting sex to one uninfected partner who has no other partners; women (91 percent) and men (92 percent) are somewhat more likely to know that using condoms also can prevent transmission of the AIDS virus. Approximately 79 percent of women and 74 percent of men have knowledge of both HIV prevention methods.

Knowledge of both HIV prevention methods among women age 15-19 and age 40-49 is lower than among women in the middle age group (20-39). Younger men age 15-19 are somewhat less likely to have knowledge about prevention of HIV and AIDS than older men. Women and men who are not married, particularly those who have never had sex, are slightly less likely to know the two HIV prevention methods than those who are currently married or who have ever had sex. Knowledge about prevention of HIV and AIDS is also low among men who are divorced, separated, or widowed.

Knowledge of HIV prevention methods is higher among women in urban areas than in rural areas, whereas it does not differ among men. There is considerable variability across provinces in knowledge of prevention methods. Among women, knowledge of the two HIV prevention methods is highest in the City of Kigali (89 percent) and lowest in the West province (68 percent). Among men, knowledge of the two methods is highest in the City of Kigali (77 percent) and lowest in the South province (71 percent).

The level of educational attainment positively relates to a respondent's knowledge of HIV prevention methods. Women and men with higher levels of schooling are more likely than those with less schooling to be aware of various preventive methods. The data also show that women and men in higher wealth quintiles are more likely than those in lower quintiles to be aware of ways to prevent the transmission of HIV.

Table 13.2 Knowledge of HIV prevention methods

Percentage of women and men age 15-49 who, in response to prompted questions, say that people can reduce the risk of getting the AIDS virus by using condoms every time they have sexual intercourse, and by having one sex partner who is not infected and has no other partners, by background characteristics, Rwanda 2010

Background characteristic	Women				Men			
	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[2]	Number of women	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[2]	Number of men
Age								
15-24	89.7	82.9	76.3	5,628	90.3	76.9	71.2	2,607
…15-19	87.8	81.1	73.4	2,945	88.2	74.1	67.7	1,449
…20-24	91.7	84.9	79.4	2,683	92.8	80.4	75.6	1,159
25-29	92.4	88.6	82.8	2,494	93.9	81.0	77.1	1,038
30-39	92.0	86.5	80.8	3,269	94.1	79.7	75.9	1,201
40-49	89.6	84.8	77.5	2,280	93.8	81.9	77.3	842
Marital status								
Never married	89.4	82.1	75.3	5,285	90.4	76.0	70.4	2,873
Ever had sex	92.6	85.2	79.7	1,188	93.2	81.0	76.5	1,140
Never had sex	88.5	81.1	74.1	4,097	88.5	72.7	66.4	1,733
Married/Living together	91.8	87.5	81.3	6,897	94.3	82.4	78.4	2,699
Divorced/Separated/Widowed	90.3	85.1	79.0	1,489	91.8	71.7	68.5	115
Residence								
Urban	93.7	89.9	84.9	2,057	95.4	78.1	75.6	939
Rural	90.2	84.3	77.6	11,614	91.6	79.1	73.9	4,748
Province								
City of Kigali	94.7	92.8	88.8	1,596	95.5	79.4	76.6	739
South	89.9	90.1	82.5	3,212	93.3	74.6	70.5	1,308
West	87.7	76.2	67.6	3,305	89.2	83.0	76.0	1,307
North	92.8	87.5	82.2	2,278	90.3	81.5	75.5	899
East	91.1	83.9	78.9	3,280	93.6	77.4	73.7	1,435
Education								
No education	87.6	81.4	73.3	2,119	90.7	76.4	70.1	583
Primary	90.5	85.9	79.2	9,337	91.4	79.1	73.9	3,916
Secondary and higher	94.5	85.6	81.8	2,216	95.7	79.8	77.2	1,189
Wealth quintile								
Lowest	88.1	84.2	75.7	2,622	89.0	78.7	71.4	854
Second	88.9	84.2	76.9	2,661	90.7	76.8	71.3	986
Middle	90.6	85.5	79.0	2,736	91.7	79.0	73.8	1,139
Fourth	91.8	84.0	78.8	2,677	93.8	79.9	76.4	1,235
Highest	93.7	87.4	82.7	2,976	94.3	79.8	76.1	1,474
Total 15-49	**90.7**	**85.1**	**78.7**	**13,671**	**92.3**	**79.0**	**74.2**	**5,687**
50-59	na	na	na	na	91.2	80.0	73.5	642
Total 15-59	**na**	**na**	**na**	**na**	**92.1**	**79.1**	**74.1**	**6,329**

na = Not applicable
[1] Using condoms every time they have sexual intercourse
[2] Partner who has no other partners

13.1.3 Knowledge about Transmission

The 2010 RDHS included questions on common misconceptions about AIDS and HIV transmission. Respondents were asked whether they think it is possible for a healthy-looking person to have the AIDS virus and whether a person can contract the AIDS virus from mosquito bites, by supernatural means, or by sharing food with a person who has AIDS.

The results in Tables 13.3.1 and 13.3.2 indicate that some Rwandan adults lack accurate knowledge about the ways in which HIV can and cannot be transmitted. In fact, 12 percent of women and 10 percent of men don't know that a healthy-looking person can have (and thus transmit) the virus that causes AIDS. Large percentages of women and men also erroneously believe that the AIDS virus can be transmitted by mosquito bites (21 percent and 22 percent, respectively). Larger proportions of women and men are aware that the AIDS virus cannot be

transmitted by supernatural means (92 percent and 93 percent, respectively) or by sharing food with a person who has AIDS (90 percent each, for women and for men). Overall, two-thirds of women and men (68 percent, each) are able to reject two of the more common misconceptions about AIDS—that the AIDS virus can be transmitted by mosquito bites and that a person can become infected with the AIDS virus by sharing food with someone who is infected—and they also know that a healthy-looking person can have the AIDS virus.

Table 13.3.1 Comprehensive knowledge about AIDS: Women

Percentage of women age 15-49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly reject local misconceptions about AIDS transmission or prevention, and the percentage with a comprehensive knowledge about AIDS, by background characteristics, Rwanda 2010

Background characteristic	Percentage of respondents who say that: A healthy-looking person can have the AIDS virus	AIDS cannot be transmitted by mosquito bites	AIDS cannot be transmitted by supernatural means	A person cannot become infected by sharing food with a person who has AIDS	Percentage who say that a healthy looking person can have the AIDS virus and who reject the two most common local misconceptions[1]	Percentage with a comprehensive knowledge about AIDS[2]	Number of women
Age							
15-24	82.8	81.4	92.1	90.0	65.8	52.6	5,628
…15-19	78.0	82.7	91.7	89.3	63.0	49.3	2,945
…20-24	88.2	80.1	92.6	90.9	68.9	56.3	2,683
25-29	91.9	76.7	92.1	89.4	69.4	58.9	2,494
30-39	91.5	77.7	92.4	90.5	69.7	57.8	3,269
40-49	90.1	77.1	91.3	88.3	68.2	55.4	2,280
Marital status							
Never married	82.9	82.1	92.5	90.4	66.7	53.0	5,285
Ever had sex	87.1	77.3	91.3	89.6	66.5	55.2	1,188
Never had sex	81.7	83.5	92.9	90.6	66.8	52.3	4,097
Married/Living together	91.0	77.3	92.1	89.8	69.1	57.8	6,897
Divorced/Separated/Widowed	90.0	75.8	90.0	87.1	65.9	53.5	1,489
Residence							
Urban	92.9	86.2	95.3	92.9	78.5	67.8	2,057
Rural	86.8	77.7	91.5	89.2	65.9	53.3	11,614
Province							
City of Kigali	94.6	87.6	96.1	94.4	80.9	72.7	1,596
South	90.0	81.9	95.8	91.1	72.7	61.7	3,212
West	82.1	76.6	89.5	85.9	62.5	45.4	3,305
North	85.9	72.4	86.3	87.3	58.4	48.3	2,278
East	89.2	78.9	93.0	91.8	68.6	56.1	3,280
Education							
No education	84.7	67.6	84.8	80.8	54.8	43.3	2,119
Primary	87.3	78.3	92.2	89.9	66.6	54.7	9,337
Secondary and higher	92.9	92.6	98.3	97.7	85.3	70.5	2,216
Wealth quintile							
Lowest	84.0	72.2	88.9	84.7	58.9	46.8	2,622
Second	85.4	74.7	89.8	86.4	62.4	50.5	2,661
Middle	87.2	76.6	90.7	88.8	64.7	53.2	2,736
Fourth	88.5	82.4	93.8	93.1	71.0	57.7	2,677
Highest	93.0	87.8	96.6	95.0	80.4	67.7	2,976
Total 15-49	**87.8**	**79.0**	**92.1**	**89.8**	**67.8**	**55.5**	**13,671**

[1] Two most common local misconceptions: HIV transmission by mosquito bites and sharing food

[2] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention.

Table 13.3.2 Comprehensive knowledge about AIDS: Men

Percentage of men age 15-49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly reject local misconceptions about AIDS transmission or prevention, and the percentage with a comprehensive knowledge about AIDS, by background characteristics, Rwanda 2010

Background characteristic	Percentage of respondents who say that: A healthy-looking person can have the AIDS virus	AIDS cannot be transmitted by mosquito bites	AIDS cannot be transmitted by supernatural means	A person cannot become infected by sharing food with a person who has AIDS	Percentage who say that a healthy looking person can have the AIDS virus and who reject the two most common local misconceptions[1]	Percentage with a comprehensive knowledge about AIDS[2]	Number of men
Age							
15-24	83.3	79.4	91.6	89.6	64.1	47.4	2,607
…15-19	77.6	80.7	90.2	88.8	60.8	43.5	1,449
…20-24	90.4	77.7	93.2	90.7	68.3	52.4	1,159
25-29	94.0	75.4	93.1	90.7	69.5	54.6	1,038
30-39	96.0	77.3	94.7	92.0	73.1	55.0	1,201
40-49	93.9	76.4	92.8	90.2	70.0	56.1	842
Marital status							
Never married	84.3	79.7	92.4	90.4	65.4	47.9	2,873
Ever had sex	89.1	77.8	93.1	90.8	67.6	52.3	1,140
Never had sex	81.1	80.9	92.0	90.1	64.0	45.0	1,733
Married/Living together	94.9	76.0	92.9	90.6	70.7	55.8	2,699
Divorced/Separated/Widowed	93.8	69.4	93.6	87.6	62.9	46.9	115
Residence							
Urban	93.4	86.3	96.6	94.0	79.7	59.7	939
Rural	88.7	76.1	91.9	89.7	65.6	50.0	4,748
Province							
City of Kigali	94.7	87.2	97.0	94.1	81.5	63.0	739
South	90.3	77.3	94.6	90.9	68.3	48.8	1,308
West	85.7	70.2	85.5	85.7	56.7	44.7	1,307
North	87.5	77.4	93.5	90.9	66.7	52.0	899
East	90.9	80.5	94.9	92.1	71.4	54.3	1,435
Education							
No education	90.0	63.4	84.6	83.2	54.6	40.1	583
Primary	88.5	75.2	92.2	89.4	64.6	48.7	3,916
Secondary and higher	92.5	93.3	98.4	97.5	85.3	66.6	1,189
Wealth quintile							
Lowest	87.0	68.9	87.6	83.5	58.4	42.2	854
Second	86.8	72.0	89.8	86.5	58.9	42.9	986
Middle	88.9	77.8	92.5	91.4	66.7	51.2	1,139
Fourth	89.9	79.2	94.1	92.6	70.2	54.7	1,235
Highest	92.9	85.4	96.6	94.4	78.4	60.6	1,474
Total 15-49	**89.5**	**77.7**	**92.7**	**90.4**	**67.9**	**51.6**	**5,687**
50-59	90.7	66.6	88.3	85.8	58.3	43.0	642
Total 15-59	**89.6**	**76.6**	**92.2**	**89.9**	**66.9**	**50.7**	**6,329**

[1] Two most common local misconceptions: mosquito bites and sharing food
[2] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention.

Tables 13.3.1 and 13.3.2 also provide an assessment of the level of comprehensive knowledge of HIV and AIDS prevention and transmission. People are considered to have comprehensive knowledge about AIDS when they know that both condom use and limiting sex partners to one uninfected person are HIV and AIDS prevention methods, they are aware that a healthy-looking person can have HIV, and they reject the two most common local misconceptions, HIV transmission by mosquito bite and by sharing food. In Rwanda, 56 percent of women and 52 percent of men age 15-49 have comprehensive knowledge of HIV and AIDS prevention and transmission.

These tables also show that there is considerable variation in HIV and AIDS knowledge by background characteristics. Married man and sexually active never-married men tend to be more knowledgeable than men in other marital status categories. For all indicators, the proportion of women and men with correct knowledge about HIV and AIDS prevention and transmission is higher in urban than in rural areas and among women and men with

higher levels of schooling. Similarly, men and women in higher wealth quintiles are more likely than those in lower quintiles to have comprehensive knowledge about HIV and AIDS. Variations in knowledge levels by province are marked among both women and men, with the highest levels of comprehensive knowledge about AIDS observed among residents of the City of Kigali (73 percent for women and 63 percent for men) and the lowest levels observed among residents of the West province (45 percent for each group). Comprehensive knowledge about AIDS has varied little since the 2005 RDHS.

13.1.4 Knowledge of Prevention of Mother-to-Child Transmission of HIV

Educating people about the ways in which HIV can be transmitted from mother to child during pregnancy, delivery, and breastfeeding is critical to reducing mother-to-child transmission (MTCT) of HIV. To obtain information on these issues, respondents were asked whether the virus that causes AIDS can be transmitted from a mother to a child during pregnancy, delivery, or breastfeeding and whether a mother who is infected with HIV can reduce the risk of transmission of the virus to the baby by taking certain drugs (antiretrovirals) during pregnancy.

Table 13.4 shows that, overall, 94 percent of women and 91 percent of men know that HIV can be transmitted by breastfeeding. Proportions of women who know that HIV can be transmitted during pregnancy and delivery are 64 percent and 95 percent respectively. In men these proportions are 62 percent and 92 percent respectively (data not shown). Ninety-four percent of women and 91 percent of men know that the risk of MTCT can be reduced through the use of certain drugs during pregnancy. Eighty-nine percent of women and 84 percent of men know that HIV can be transmitted by breastfeeding and the risk of MTCT can be reduced through the use of certain drugs during pregnancy.

There are no marked differences in MTCT knowledge among women and men by background characteristics in Rwanda.

Table 13.4 Knowledge of prevention of mother to child transmission of HIV

Percentage of women and men age 15-49 who know that HIV can be transmitted from mother to child 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, Rwanda 2010

	Women				Men			
Background characteristic	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of women	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of men
Age								
15-24	93.1	91.1	87.1	5,628	90.2	87.4	81.1	2,607
…15-19	92.2	88.5	84.6	2,945	89.1	85.7	79.1	1,449
…20-24	94.1	93.9	90.0	2,683	91.5	89.4	83.6	1,159
25-29	94.7	95.1	91.0	2,494	92.4	92.5	86.7	1,038
30-39	94.8	96.3	92.1	3,269	89.9	93.9	85.8	1,201
40-49	94.0	93.7	89.2	2,280	89.8	93.1	85.0	842
Marital status								
Never married	92.5	90.0	85.9	5,285	89.6	87.9	81.0	2,873
Ever had sex	94.1	93.9	89.8	1,188	91.1	91.7	85.4	1,140
Never had sex	92.1	88.9	84.8	4,097	88.6	85.3	78.2	1,733
Married/Living together	94.9	96.1	92.0	6,897	91.5	93.3	86.5	2,699
Divorced/Separated/Widowed	94.7	93.9	89.4	1,489	87.9	92.9	84.1	115
Pregnant								
Currently pregnant	95.8	96.7	93.4	956	na	na	na	na
Not pregnant or not sure	93.8	93.3	89.1	12,715	na	na	na	na
Residence								
Urban	95.9	95.6	92.4	2,057	90.9	92.8	85.6	939
Rural	93.6	93.1	88.8	11,614	90.4	90.1	83.3	4,748

Continued…

Table 13.4—Continued

Background characteristic	Women				Men			
	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of women	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of men
Province								
City of Kigali	96.2	96.2	93.3	1,596	90.3	94.2	86.3	739
South	94.2	92.2	88.4	3,212	92.5	90.5	85.0	1,308
West	91.1	93.2	87.4	3,305	90.2	90.9	83.9	1,307
North	95.4	93.0	90.1	2,278	90.3	89.9	83.0	899
East	94.6	94.0	89.8	3,280	89.0	88.7	81.4	1,435
Education								
No education	92.6	92.3	86.9	2,119	87.8	86.7	78.1	583
Primary	93.8	93.1	89.1	9,337	90.7	90.3	83.8	3,916
Secondary and higher	96.0	96.3	92.9	2,216	91.1	93.2	86.1	1,189
Wealth quintile								
Lowest	93.0	91.7	87.1	2,622	90.3	87.9	82.1	854
Second	93.1	92.3	87.8	2,661	89.3	88.4	80.8	986
Middle	93.0	92.8	88.2	2,736	89.2	91.8	83.8	1,139
Fourth	94.6	94.8	90.9	2,677	92.1	90.0	84.7	1,235
Highest	95.9	95.5	92.3	2,976	91.0	92.9	85.7	1,474
Total 15-49	**93.9**	**93.5**	**89.4**	**13,671**	**90.5**	**90.5**	**83.7**	**5,687**
50-59	na	na	na	na	87.2	92.4	83.3	642
Total 15-59	**na**	**na**	**na**	**na**	**90.1**	**90.7**	**83.7**	**6,329**

na = Not applicable

13.2 STIGMA ASSOCIATED WITH AIDS AND ATTITUDES RELATED TO HIV AND AIDS

Knowledge and beliefs about HIV infection affect how people treat those they know to be living with HIV or AIDS. In the 2010 RDHS, a number of questions were posed to respondents to measure their attitudes towards HIV-infected people. These questions concerned their willingness to buy vegetables from an infected vegetable seller, to let others know the HIV status of family members, and to take care of relatives who have the AIDS virus in their own household. They were also asked whether an HIV-positive female teacher who is not sick should be allowed to continue teaching. Tables 13.5.1 and 13.5.2 show the percentages of women and men who have heard of HIV and AIDS and who express positive attitudes towards people with HIV, by background characteristics.

Table 13.5.1 Accepting attitudes toward those living with HIV&AIDS: Women

Among women age 15-49 who have heard of AIDS, percentage expressing specific accepting attitudes toward people with AIDS, by background characteristics, Rwanda 2010

Background characteristic	Percentage of respondents who: Are willing to care for a family member with the AIDS virus in the respondent's home	Would buy fresh vegetables from shopkeeper who has the AIDS virus	Say that a female teacher with the AIDS virus and is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus	Percentage expressing acceptance attitudes on all four indicators	Number of respondents who have heard of AIDS
Age						
15-24	95.1	80.6	84.4	63.1	47.6	5,625
…15-19	93.5	76.4	80.9	59.8	41.3	2,942
…20-24	96.9	85.2	88.3	66.8	54.5	2,683
25-29	97.0	86.7	89.9	68.6	56.8	2,494
30-39	97.4	86.8	91.1	70.2	58.8	3,269
40-49	97.5	82.3	86.8	68.1	53.6	2,280
Marital status						
Never married	95.4	80.9	84.8	64.0	48.7	5,281
Ever had sex	96.4	81.5	87.1	64.5	50.9	1,188
Never had sex	95.1	80.8	84.2	63.9	48.0	4,094
Married/Living together	97.1	85.4	89.6	68.7	56.4	6,897
Divorced/Separated/Widowed	97.3	84.0	86.6	66.4	52.0	1,489
Residence						
Urban	98.0	90.4	93.0	65.0	57.0	2,056
Rural	96.2	82.3	86.5	66.9	52.2	11,611
Province						
City of Kigali	98.7	92.6	94.8	63.1	56.6	1,596
South	97.8	85.8	89.6	77.3	62.8	3,212
West	93.4	76.8	83.0	58.1	42.6	3,304
North	96.7	80.1	86.5	59.8	44.2	2,278
East	96.9	85.9	86.9	71.3	58.0	3,279
Education						
No education	93.4	72.9	79.6	62.7	43.1	2,119
Primary	96.5	83.2	87.2	66.9	52.3	9,333
Secondary and higher	98.9	94.8	96.1	69.4	65.1	2,215
Wealth quintile						
Lowest	94.7	76.6	82.3	66.8	47.9	2,620
Second	95.0	78.6	84.4	64.8	46.9	2,661
Middle	96.8	83.1	86.0	66.1	52.1	2,736
Fourth	97.2	86.6	90.4	69.7	58.4	2,675
Highest	98.3	91.5	93.3	65.8	58.7	2,975
Total 15-49	**96.4**	**83.5**	**87.4**	**66.6**	**53.0**	**13,667**

Almost the same proportion of women and men reported that they would be willing to take care of a family member with HIV at home (96 and 97 percent, respectively). However, men are slightly more likely than women to say that they would buy fresh vegetables from a shopkeeper who has HIV (90 percent versus 84 percent) and to think that a female teacher with HIV should be allowed to continue teaching (89 percent versus 87 percent). Men are also more likely than women not to want to keep secret a family member's infection with HIV (78 percent versus 67 percent). Overall, men are more likely to express accepting attitudes regarding all four situations when compared with women (64 percent compared with 53 percent, respectively).

In general, better educated respondents, those in the higher wealth quintiles, and those living in urban areas have more accepting attitudes towards nonrelatives who are HIV positive and who are more willing to care for family members with AIDS in their own home. There is no marked difference among women and men who said that they would not want to keep secret the knowledge that a family member is HIV positive by wealth and by area of residence.

Accepting attitudes on all four indicators are generally more common among respondents in urban areas than among those in rural areas, and they increase with the level of education. Residents of the City of Kigali, and of

the South and East provinces, are more likely to express accepting attitudes towards people living with HIV or AIDS (57 percent or more for women and 71 percent or more for men) than residents of the North and West provinces (44 percent and 43 percent, respectively, for women and 55 percent and 54 percent, respectively, for men). Stigmatization against HIV and AIDS in Rwanda remains high, especially in the West province.

Table 13.5.2 Accepting attitudes toward those living with HIV&AIDS: Men

Among men age 15-49 who have heard of HIV&AIDS, percentage expressing specific accepting attitudes toward people with HIV&AIDS, by background characteristics, Rwanda 2010

Background characteristic	Percentage of respondents who: Are willing to care for a family member with the AIDS virus in the respondent's home	Would buy fresh vegetables from shopkeeper who has the AIDS virus	Say that a female teacher with the AIDS virus and is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus	Percentage expressing acceptance attitudes on all four indicators	Number of respondents who have heard of AIDS
Age						
15-24	95.6	85.8	84.3	74.1	56.9	2,605
…15-19	93.7	82.2	79.8	72.1	50.7	1,447
…20-24	98.0	90.3	89.9	76.5	64.8	1,159
25-29	97.9	93.4	90.4	82.3	70.2	1,038
30-39	98.9	93.8	93.8	80.8	72.1	1,201
40-49	99.0	92.7	91.5	79.3	69.5	842
Marital status						
Never married	95.9	86.8	85.4	75.6	59.4	2,872
Ever had sex	97.8	89.3	88.4	77.5	63.7	1,140
Never had sex	94.6	85.1	83.5	74.4	56.6	1,731
Married/Living together	98.6	93.3	91.9	80.0	70.0	2,699
Divorced/Separated/Widowed	99.1	87.7	82.9	79.5	59.6	115
Residence						
Urban	98.3	94.0	93.2	79.1	70.6	939
Rural	97.0	89.1	87.5	77.5	63.2	4,746
Province						
City of Kigali	99.0	94.3	93.8	78.1	70.9	739
South	97.4	90.9	90.8	83.8	71.6	1,307
West	95.0	84.6	81.7	73.0	53.9	1,307
North	97.4	89.5	90.4	66.3	54.8	898
East	98.0	91.7	88.5	83.6	70.1	1,435
Education						
No education	95.2	84.9	82.4	80.0	59.4	583
Primary	97.0	88.4	87.1	77.1	62.1	3,915
Secondary and higher	99.0	97.4	96.0	78.8	74.6	1,188
Wealth quintile						
Lowest	94.9	84.1	82.4	81.4	60.3	853
Second	97.1	86.9	87.4	73.7	58.0	986
Middle	97.6	90.2	88.9	76.4	63.3	1,138
Fourth	97.7	92.0	88.2	78.0	66.2	1,235
Highest	97.9	93.2	92.6	79.3	70.5	1,474
Total 15-49	**97.2**	**89.9**	**88.5**	**77.8**	**64.4**	**5,686**
50-59	96.4	86.3	86.5	82.4	64.8	642
Total 15-59	**97.1**	**89.5**	**88.3**	**78.2**	**64.5**	**6,327**

13.3 ATTITUDES TOWARDS NEGOTIATING SAFER SEX

Knowledge about HIV transmission and ways to prevent it is not useful if people are not able to negotiate safer sex practices with their partners. To gauge attitudes towards safer sex, respondents in the 2010 RDHS were asked whether they think a woman is justified in refusing to have sex with her husband if she knows he has sex with other women. They were also asked whether they think that a woman in the same circumstances is justified in asking her husband to use a condom if she knows that her husband has a sexually transmitted infection (STI). The results from these questions are shown in Table 13.6.

Table 13.6 Attitudes toward negotiating safer sexual relations with husband

Percentage of women and men age 15-49 who believe that a woman is justified in refusing to have sexual intercourse with her husband if she knows that he has sexual intercourse with other women, and percentage who believe that a woman is justified in asking that they use a condom if she knows that her husband has a sexually transmitted infection (STI), by background characteristics, Rwanda 2010

Background characteristic	Women			Men		
	Refusing to have sexual intercourse with husband if she knows he has sex with other women	Asking that they use a condom if she knows that her husband has an STI	Number of women	Refusing to have sexual intercourse with husband if she knows he has sex with other women	Asking that they use a condom if she knows that her husband has an STI	Number of men
Age						
15-24	78.4	95.6	5,628	81.0	95.9	2,607
…15-19	76.2	94.4	2,945	77.4	94.7	1,449
…20-24	80.7	96.8	2,683	85.5	97.5	1,159
25-29	82.7	96.9	2,494	89.6	97.4	1,038
30-39	83.2	95.7	3,269	89.2	96.2	1,201
40-49	82.8	95.0	2,280	91.7	96.5	842
Marital status						
Never married	78.3	94.8	5,285	81.8	95.9	2,873
Ever had sex	79.5	96.8	1,188	86.5	97.2	1,140
Never had sex	78.0	94.2	4,097	78.7	95.1	1,733
Married/Living together	82.9	96.7	6,897	90.5	96.9	2,699
Divorced/Separated/Widowed	82.3	94.4	1,489	79.4	94.4	115
Residence						
Urban	83.0	97.2	2,057	87.9	98.0	939
Rural	80.7	95.5	11,614	85.5	96.0	4,748
Province						
City of Kigali	85.8	97.6	1,596	89.2	97.9	739
South	82.7	95.4	3,212	85.7	97.4	1,308
West	76.1	95.1	3,305	82.5	95.3	1,307
North	84.5	95.7	2,278	86.9	97.8	899
East	79.7	95.8	3,280	86.7	94.6	1,435
Education						
No education	80.9	93.9	2,119	86.0	94.1	583
Primary	80.2	95.7	9,337	85.4	96.0	3,916
Secondary and higher	84.7	97.8	2,216	87.3	98.4	1,189
Wealth quintile						
Lowest	80.0	94.2	2,622	83.8	95.3	854
Second	80.1	95.7	2,661	85.5	95.8	986
Middle	80.2	94.7	2,736	84.1	95.9	1,139
Fourth	80.6	96.4	2,677	86.3	96.8	1,235
Highest	84.0	97.4	2,976	88.3	97.2	1,474
Total 15-49	**81.0**	**95.7**	**13,671**	**85.9**	**96.3**	**5,687**
50-59	na	na	0	88.6	93.8	642
Total 15-59	**na**	**na**	**0**	**86.2**	**96.1**	**6,329**

na = Not applicable

Eighty-one percent of women and 86 percent of men believe that a woman is justified in refusing to have sex with her husband if she knows he has sex with other women, and 96 percent of women and men believe that a woman is justified in asking her husband to use a condom if he has an STI.

The majority of respondents in all groups support a woman's right to refuse to have sex with her husband if she knows he has sex with other women or to propose using a condom if she knows that her husband has an STI. However, there are small differences by background characteristics in the percentages of respondents holding this opinion. For example, the higher a respondent's educational attainment and wealth quintile, the more likely he or she is to say that a woman can refuse to have sex with her husband or propose using a condom. The percentage that agrees with a woman's right to refuse to have sex with her husband ranges from a low of 76 percent (women) and 83 percent (men) in the West province to a high of 86 percent (women) and 89 percent (men) in the City of Kigali.

13.4 ATTITUDES TOWARDS CONDOM EDUCATION FOR YOUTH

Condom use is one of the most effective strategies for combating the spread of HIV. However, educating youth about condoms is sometimes controversial because some people believe it promotes early sexual initiation. To evaluate attitudes toward condom education for youth, the 2010 RDHS asked respondents if they thought that young people age 12-14 should be taught about using a condom to avoid AIDS. Because the table focuses on adult opinions, results are tabulated for respondents age 18-49.

Table 13.7 shows that about 9 in 10 respondents (89 percent of women and 91 percent of men) agree that young people age 12-14 should be taught about using condoms for AIDS prevention. Among women, support for condom education for youth is lowest in the 40-49 age group, while among men there is no substantial variation in agreement with condom education by age group. Respondents who have higher education, have never been married, live in urban areas, and are in higher wealth quintiles are most likely to agree with condom education for youth.

Table 13.7 Adult support of youth education about condom use to prevent AIDS

Percentage of women and men age 18-49 who agree that adolescents age 12-14 years should be taught about using a condom to avoid AIDS, by background characteristics, Rwanda 2010

Background characteristic	Women		Men	
	Percentage who agree	Number	Percentage who agree	Number
Age				
18-24	90.7	3,766	92.2	1,678
…18-19	89.2	1,083	92.2	519
…20-24	91.3	2,683	92.1	1,159
25-29	90.7	2,494	90.1	1,038
30-39	88.6	3,269	92.1	1,201
40-49	85.5	2,280	89.7	842
Marital status				
Never married	90.3	3,428	92.0	1,944
Married or living together	89.0	6,893	90.8	2,699
Divorced/separated/widowed	87.0	1,488	88.5	115
Residence				
Urban	91.8	1,793	92.8	833
Rural	88.6	10,015	90.9	3,926
Province				
City of Kigali	93.4	1,420	93.5	664
South	88.7	2,784	89.1	1,098
West	85.5	2,823	91.5	1,049
North	90.6	1,947	90.2	741
East	89.9	2,836	92.5	1,207
Education				
No education	82.4	2,079	86.0	563
Primary	89.8	7,884	91.4	3,184
Secondary and higher	93.8	1,845	93.8	1,011
Wealth quintile				
Lowest	86.9	2,313	89.5	714
Second	87.3	2,290	89.0	799
Middle	88.2	2,361	91.5	968
Fourth	90.0	2,289	92.2	1,030
Highest	92.7	2,555	92.7	1,248
Total 18-49	**89.1**	**11,809**	**91.3**	**4,758**
50-59	na	na	84.8	642
Total 18-59	**na**	**na**	**90.5**	**5,400**

na = Not applicable

13.5 MULTIPLE AND CONCURRENT PARTNERSHIPS, AND PAYING FOR SEX

13.5.1 Multiple Sexual Partnerships

Given that most HIV infections are contracted through heterosexual contact, information on sexual behavior is important when designing and monitoring intervention programs to control the spread of the epidemic. In the context of HIV and AIDS prevention, limiting the number of sexual partners and encouraging protected sex are crucial to combating the epidemic. The 2010 RDHS included questions on respondents' lifetime sexual partners as well as partners in the 12 months preceding the survey. Male respondents were also asked whether they had paid for sex in the 12 months preceding the interview. Information on use of condoms during the last sexual encounter with each of these types of partners was collected from both women and men. Given that questions about sexual activity are sensitive, it is important to remember when interpreting the results in this section that respondents' answers are likely subject to at least some reporting bias.

Tables 13.8.1 and 13.8.2 show the percentages of women and men age 15-49 years who had engaged in sexual intercourse with more than one partner in the past 12 months. They also show the women's and men's mean number of lifetime sexual partners and their condom use during their most recent intercourse. Because the number of respondents reporting more than one partner in the past 12 months is very small, condom use by background characteristics is not noteworthy.

The data show that less than 1 percent of women and 4 percent of men reportedly had two or more sexual partners during the 12 months preceding the survey. There is little variation by background characteristics in the percentage of women with two or more sexual partners in the past 12 months. The percentage of women with multiple partners is highest among women with no education, women living in the City of Kigali and urban areas, and women who are divorced, widowed, or separated. The results of the question on condom use show that 29 percent of the women who had two or more sexual partners in the past 12 months used a condom during their last sex.

Compared with other male respondents, men age 25 and older, those who are currently married and formerly married (divorced, separated, or widowed), those in polygynous unions, those living in urban areas, and those in the City of Kigali and in the West province are more likely than other respondents to have had multiple partners over the past year.

Among men with two or more partners in the past 12 months, 28 percent report having used a condom during their last encounter. Condom use is more pronounced among urban than rural men (52 and 20 percent, respectively). Because the total number of men who have had multiple sexual partners in the past 12 months is small, the variation in condom use by background characteristics is not noteworthy.

On average, men age 15-49 report having 2.7 lifetime sexual partners, about twice the average reported by women (1.4 partners). Among women, variation according to background characteristics is minimal. Women who live in urban areas and in the City of Kigali have slightly more lifetime partners than other women. The mean number of lifetime sexual partners reported by men age 40-49 (3.4) and those who are divorced, separated, or widowed (3.5) is higher than the number reported by all men (2.7). The number of lifetime sexual partners is also higher among urban men than among rural men (3.9 versus 2.4). More educated and well-off men are more likely to report a higher number of sexual partners. Men with no schooling report an average of 2.5 partners, compared with 3.6 partners among men with a secondary education or higher. The average number of partners ranges from 2.4 or less in the lowest two wealth quintiles to 3.6 in the highest quintile.

Table 13.8.1 Multiple sexual partners: Women

Among all women age 15-49, the percentage who had sexual intercourse with more than one sexual partner in the past 12 months; among those having more than one partner in the past 12 months, the percentage reporting that a condom was used at last intercourse; and the mean number of sexual partners during their lifetime for women who ever had sexual intercourse, by background characteristics, Rwanda 2010

	All women		Among women who had 2+ partners in the past 12 months:		Among women who ever had sexual intercourse[1]:	
Background characteristic	Percentage who had 2+ partners in the past 12 months	Number of women	Percentage who reported using a condom during last sexual intercourse	Number of women	Mean number of sexual partners in lifetime	Number of women
Age						
15-24	0.6	5,628	(29.1)	33	1.4	1,981
…15-19	0.3	2,945	*	9	1.3	432
…20-24	0.9	2,683	*	24	1.4	1,549
25-29	0.7	2,494	*	17	1.3	2,178
30-39	0.5	3,269	*	16	1.5	3,153
40-49	0.7	2,280	*	16	1.6	2,248
Marital status						
Never married	0.5	5,285	(38.7)	26	1.7	1,184
Married or living together	0.4	6,897	*	25	1.3	6,892
Divorced/separated/widowed	2.0	1,489	(38.1)	30	1.9	1,483
Residence						
Urban	1.0	2,057	*	20	1.8	1,411
Rural	0.5	11,614	21.9	62	1.4	8,148
Province						
City of Kigali	1.1	1,596	*	17	1.8	1,099
South	0.4	3,212	*	11	1.4	2,262
West	0.6	3,305	*	19	1.3	2,237
North	0.4	2,278	*	10	1.4	1,553
East	0.8	3,280	*	25	1.4	2,408
Education						
No education	0.9	2,119	*	19	1.5	1,951
Primary	0.6	9,337	30.4	60	1.4	6,499
Secondary and higher	0.1	2,216	*	3	1.5	1,109
Wealth quintile						
Lowest	0.6	2,622	*	16	1.5	2,008
Second	0.8	2,661	*	22	1.4	1,916
Middle	0.5	2,736	*	14	1.4	1,881
Fourth	0.3	2,677	*	7	1.3	1,821
Highest	0.7	2,976	(40.3)	22	1.6	1,932
Total 15-49	**0.6**	**13,671**	**28.9**	**82**	**1.4**	**9,559**

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.
[1] Means are calculated excluding respondents who gave non-numeric responses.

Table 13.8.2 Multiple sexual partners: Men

Among all men age 15-49, the percentage who had sexual intercourse with more than one sexual partner in the past 12 months; among those having more than one partner in the past 12 months, the percentage reporting that a condom was used at last intercourse; and the mean number of sexual partners during their lifetime for men who ever had sexual intercourse, by background characteristics, Rwanda 2010

	All men		Among men who had 2+ partners in the past 12 months:		Among men who ever had sexual intercourse[1]:	
Background characteristic	Percentage who had 2+ partners in the past 12 months	Number of men	Percentage who reported using a condom during last sexual intercourse	Number of men	Mean number of sexual partners in lifetime	Number of men
Age						
15-24	1.7	2,607	(58.0)	43	2.1	1,008
…15-19	0.4	1,449	*	7	1.7	311
…20-24	3.2	1,159	(53.0)	37	2.2	697
25-29	5.6	1,038	32.5	58	2.5	914
30-39	6.3	1,201	17.2	75	2.8	1,182
40-49	5.5	842	(9.5)	46	3.4	829
Marital status						
Never married	2.0	2,873	77.8	58	2.7	1,128
Married or living together	5.7	2,699	7.4	153	2.6	2,691
Divorced/separated/widowed	10.6	115	*	12	3.5	115
Type of union						
In polygynous union	85.3	56	(11.2)	48	3.2	56
Not in polygynous union	4.0	2,643	5.6	105	2.6	2,635
Not currently in union	2.4	2,988	71.2	70	2.7	1,242
Residence						
Urban	5.6	939	51.5	52	3.9	677
Rural	3.6	4,748	20.1	171	2.4	3,257
Province						
City of Kigali	5.8	739	(50.1)	43	4.1	545
South	2.4	1,308	(21.6)	32	2.1	855
West	5.2	1,307	20.6	68	2.6	866
North	2.7	899	(27.6)	25	2.1	634
East	3.9	1,435	21.8	56	2.8	1,033
Education						
No education	3.8	583	*	22	2.5	509
Primary	4.0	3,916	27.1	156	2.5	2,711
Secondary and higher	3.7	1,189	35.2	44	3.6	713
Wealth quintile						
Lowest	3.6	854	(28.2)	31	2.4	615
Second	3.2	986	(3.2)	32	2.2	670
Middle	5.1	1,139	22.3	58	2.4	796
Fourth	3.2	1,235	(25.8)	39	2.5	823
Highest	4.3	1,474	45.1	63	3.6	1,030
Total 15-49	**3.9**	**5,687**	**27.5**	**223**	**2.7**	**3,933**
50-59	6.0	642	(14.3)	39	4.0	636
Total 15-59	**4.1**	**6,329**	**25.5**	**262**	**2.9**	**4,569**

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.
[1] Means are calculated excluding respondents who gave non-numeric responses.

13.5.2 Concurrent Sexual Partners

Concurrent sexual partnerships are defined as "overlapping sexual partnerships where intercourse with one partner occurs between two acts of intercourse with another partner" (UNAIDS, 2009). If an individual has multiple sexual partners in the same year, it is important to know whether those partnerships are serial or concurrent. Concurrent sexual partnerships are theoretically more risky than serial sexual partnerships because concurrent partnerships can create large interconnected sexual networks whose members are at heightened risk of infection.

The 2010 RDHS collected information on the time since the first and most recent sexual intercourse with each sexual partner in the past 12 months. This information was used to determine if sexual intercourse with one partner occurred between two acts of intercourse with another partner, i.e., whether two partnerships were concurrent. There are two indicators to measure concurrent sexual partnerships. *Point prevalence of concurrent sexual partnerships* is defined as the proportion of women and men age 15-49 with more than one ongoing sexual partnership at the point in time six months before the survey. *Cumulative prevalence of concurrent sexual partnerships* is defined as the proportion of women and men age 15-49 who have had any overlapping sexual partnerships in the past 12 months (UNAIDS, 2009). A partnership that consists of a single sexual encounter is considered overlapping if it occurs during another ongoing partnership. The point prevalence is generally lower than the cumulative prevalence because the point prevalence only includes relationships ongoing on a particular day rather than over an entire year. For men, overlapping polygynous unions are considered concurrent partnerships in both the point prevalence and cumulative prevalence concurrency indicators.

Table 13.9.1 shows that less than 1 percent of women age 15-49 had concurrent sexual partnerships by either the point prevalence or cumulative prevalence definition. Among women who had two or more sexual partnerships in the past 12 months, 63 percent had sexual partnerships that were concurrent.

Table 13.9.1 Point prevalence and cumulative prevalence of concurrent sexual partners

Percentage of all women and men age 15-49 who had concurrent sexual partners six months before the survey (point prevalence[1]), and percentage of all women and all men age 15-49 who had concurrent sexual partners during the 12 months before the survey (cumulative prevalence[2]), and among women and men age 15-49 who had multiple sexual partners during the 12 months before the survey, percentage who had concurrent sexual partners, Rwanda 2010

Background characteristic	Among all respondents			Among all respondents who had multiple partners during the 12 months before the survey	
	Point of prevalence of concurrent sexual partners[1]	Cumulative prevalence of concurrent sexual partners[2]	Number of respondents	Percentage who had concurrent sexual partners[2]	Number of respondents
WOMEN					
Age					
15-24	0.1	0.3	5,628	(46.4)	33
…15-19	0.1	0.2	2,945	*	9
…20-24	0.0	0.4	2,683	*	24
25-29	0.2	0.5	2,494	*	17
30-39	0.2	0.4	3,269	*	16
40-49	0.2	0.5	2,280	*	16
Marital status					
Never married	0.1	0.3	5,285	(61.2)	26
Married or living together	0.1	0.3	6,897	*	25
Divorced/separated/widowed	0.2	1.2	1,489	(59.2)	30
Residence					
Urban	0.2	0.4	2,057	*	20
Rural	0.1	0.4	11,614	69.5	62
Total 15-49	**0.1**	**0.4**	**13,671**	**62.9**	**82**
MEN					
Age					
15-24	0.2	0.7	2,607	(43.8)	43
…15-19	0.1	0.2	1,449	*	7
…20-24	0.3	1.4	1,159	(45.1)	37
25-29	1.5	4.2	1,038	75.6	58
30-39	2.9	5.7	1,201	91.0	75
40-49	3.6	5.2	842	(94.3)	46

Continued…

Table 13.9.1—Continued

Background characteristic	Among all respondents			Among all respondents who had multiple partners during the 12 months before the survey	
	Point of prevalence of concurrent sexual partners[1]	Cumulative prevalence of concurrent sexual partners[2]	Number of respondents	Percentage who had concurrent sexual partners[2]	Number of respondents
Marital status					
Never married	0.2	0.8	2,873	40.0	58
Married or living together	2.8	5.4	2,699	94.7	153
Divorced/separated/widowed	4.0	6.3	115	*	12
Residence					
Urban	1.0	3.3	939	58.9	52
Rural	1.6	3.0	4,748	84.5	171
Total 15-49	**1.5**	**3.1**	**5,687**	**78.5**	**223**
50-59	4.5	5.7	642	(95.2)	39
Total 15-59	**1.8**	**3.3**	**6,329**	**81.0**	**262**

Note: Two sexual partners are considered to be concurrent if the date of the most recent sexual intercourse with the earlier partner is after the date of the first sexual intercourse with the later partner. 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. Total includes 8 men with information missing on type of union.
[1] The percentage of respondents who had two (or more) sexual partners that were concurrent at the point in time six months before the survey
[2] The percentage of respondents who had two (or more) sexual partners that were concurrent anytime during the 12 months preceding the survey

Table 13.9.1 also shows that 2 percent of men had concurrent sexual partnerships, according to the point prevalence indicator, while 3 percent of men had concurrent sexual partnerships, according to the cumulative prevalence indicator. The percentage of men with concurrent sexual partnerships, according to the cumulative prevalence indicator, increases with age from less than 1 percent of men age 15-19 to 5 percent of men age 40-49. Differences in the cumulative prevalence of concurrent sexual partnerships by urban or rural residence are small.

Men who are currently married (3 percent) or who are divorced, widowed, or separated (4 percent) are more likely than men who have never been married (less than 1 percent) to report concurrent sexual partnerships in the past 6 months. Among men with two or more partners in the past 12 months, 79 percent had concurrent partners.

13.5.3 Payment for Sex

Male respondents in the 2010 RDHS who had had sex in the past 12 months were asked whether they had paid anyone in exchange for sex in the past 12 months or ever in their lifetime and whether any of their last three partners in the past 12 months was a commercial sex worker.

The results in Table 13.9.2 show that only 3 percent of men age 15-49 have ever paid for sexual intercourse and that less than 1 percent had done so in the 12 months before the survey. Men age 30 and older (6 percent); men who are divorced, separated, or widowed (6 percent); men living in urban areas (7 percent) and in City of Kigali (8 percent); and those in the highest wealth quintile (6 percent) are most likely to have ever paid for sexual intercourse.

Table 13.9.2 Payment for sexual intercourse and condom use at last paid sexual intercourse

Percentage of men age 15-49 who ever paid for sexual intercourse and percentage reporting payment for sexual intercourse in the past 12 months, and among them, the percentage reporting that a condom was used the last time they paid for sexual intercourse, by background characteristics, Rwanda 2010

Background characteristic	Among all men		
	Percentage who ever paid for sexual intercourse	Percentage who paid for sexual intercourse in the past 12 months	Number of men
Age			
15-24	1.2	0.3	2,607
…15-19	0.3	0.2	1,449
…20-24	2.2	0.5	1,159
25-29	3.7	0.6	1,038
30-39	5.8	0.4	1,201
40-49	5.9	0.2	842
Marital status			
Never married	1.7	0.5	2,873
Married or living together	4.9	0.1	2,699
Divorced/separated/widowed	6.2	2.6	115
Residence			
Urban	6.8	0.8	939
Rural	2.6	0.3	4,748
Province			
City of Kigali	7.9	0.7	739
South	2.2	0.2	1,308
West	2.4	0.3	1,307
North	2.9	0.6	899
East	3.0	0.3	1,435
Education			
No education	3.0	0.3	583
Primary	3.2	0.4	3,916
Secondary and higher	3.7	0.4	1,189
Wealth quintile			
Lowest	2.4	0.2	854
Second	1.8	0.0	986
Middle	2.3	0.7	1,139
Fourth	3.1	0.4	1,235
Highest	5.8	0.4	1,474
Total 15-49	**3.3**	**0.4**	**5,687**
50-59	9.0	0.1	642
Total 15-59	**3.9**	**0.3**	**6,329**

13.6 TESTING FOR HIV

Knowledge of HIV status helps HIV-negative individuals make specific decisions to reduce risk and increase safer sex practices so they can remain disease free. For those who are HIV infected, knowledge of their status allows them to take action to protect their sexual partners, to access treatment, and to plan for the future. Testing of pregnant women is especially important so that action can be taken to prevent mother-to-child transmission.

To obtain information on the prevalence of HIV testing, all respondents were asked whether they had ever been tested for HIV. If they said that they had been tested, they were asked whether they had received the results of their last test. Women giving birth in the two-year period before the survey were asked additional questions regarding testing that may have occurred as part of any antenatal care they received prior to the birth.

Tables 13.10.1 and 13.10.2 show that, among the adult population age 15-49, 77 percent of women and 73 percent of men have been tested for HIV at some time. The majority of women and men who were tested indicated that they had received the results of their test. Thirty-nine percent of women and 38 percent of men said that they had received results from an HIV test taken during the 12 months prior to the survey. However, many women and

men who were tested did not receive the results, which should have been made available to all tested individuals. The proportions of both women and men ever tested were higher among those age 20 and older than among those younger than age 20. Testing rates were highest among currently married respondents (93 percent of women and 92 percent of men) and among widowed, divorced, and separated persons (82 percent for women and 83 percent for men). Women who had never married and were sexually active had a higher testing rate than their male counterparts (82 percent versus 68 percent). Urban residents, residents of the City of Kigali, those with a secondary education or higher, and those in the highest wealth quintile had slightly higher testing rates than other respondents.

Table 13.10.1 Coverage of prior HIV testing: Women

Percentage of women age 15-49 who know where to get an HIV test, percent distribution of women age 15-49 by testing status and by whether they received the results of the last test, the percentage of women ever tested, and the percentage of women age 15-49 who received their test results the last time they were tested for HIV in the past 12 months, according to background characteristics, Rwanda 2010

Background characteristic	Percentage who know where to get an HIV test	Percent distribution of women by testing status and by whether they received the results of the last test: Ever tested and received results	Ever tested, did not receive results	Never tested[1]	Total	Percentage ever tested	Percentage who have been tested and received results from last HIV test taken in the past 12 months	Number of women
Age								
15-24	97.7	59.4	2.8	37.8	100.0	62.2	36.8	5,628
…15-19	96.0	43.5	4.3	52.2	100.0	47.8	27.3	2,945
…20-24	99.5	76.9	1.0	22.0	100.0	78.0	47.2	2,683
25-29	99.7	90.3	0.8	8.9	100.0	91.1	47.0	2,494
30-39	99.6	91.2	0.8	8.1	100.0	91.9	41.2	3,269
40-49	99.3	76.8	1.2	22.0	100.0	78.0	30.3	2,280
Marital status								
Never married	97.3	52.2	3.2	44.6	100.0	55.4	31.1	5,285
…Ever had sex	98.6	79.1	2.4	18.5	100.0	81.5	46.6	1,188
…Never had sex	96.9	44.4	3.4	52.1	100.0	47.9	26.6	4,097
Married/Living together	99.8	92.4	0.6	7.1	100.0	92.9	44.9	6,897
Divorced/Separated/Widowed	99.3	80.2	1.4	18.3	100.0	81.7	36.3	1,489
Residence								
Urban	99.0	79.4	1.5	19.2	100.0	80.8	38.1	2,057
Rural	98.7	74.9	1.7	23.4	100.0	76.6	38.7	11,614
Province								
City of Kigali	99.0	81.4	1.3	17.3	100.0	82.7	37.8	1,596
South	99.2	73.3	2.0	24.7	100.0	75.3	35.1	3,212
West	97.6	72.8	1.8	25.4	100.0	74.6	39.0	3,305
North	99.2	75.8	2.0	22.1	100.0	77.9	42.9	2,278
East	99.1	77.4	1.1	21.5	100.0	78.5	39.1	3,280
Education								
No education	98.5	78.4	1.1	20.4	100.0	79.6	35.6	2,119
Primary	98.6	74.2	1.7	24.1	100.0	75.9	38.0	9,337
Secondary and higher	99.8	78.5	2.1	19.4	100.0	80.6	44.3	2,216
Wealth quintile								
Lowest	98.1	74.8	1.9	23.3	100.0	76.7	37.2	2,622
Second	98.4	73.8	1.7	24.5	100.0	75.5	37.2	2,661
Middle	98.9	73.3	2.3	24.4	100.0	75.6	38.3	2,736
Fourth	99.3	76.5	1.2	22.3	100.0	77.7	39.9	2,677
Highest	99.1	78.9	1.3	19.8	100.0	80.2	40.2	2,976
Total 15-49	**98.8**	**75.5**	**1.7**	**22.8**	**100.0**	**77.2**	**38.6**	**13,671**

[1] Includes "don't know/missing"

Table 13.10.2 Coverage of prior HIV testing: Men

Percentage of men age 15-49 who know where to get an HIV test, percent distribution of men age 15-49 by testing status and by whether they received the results of the last test, the percentage of men ever tested, and the percentage of men age 15-49 who received their test results the last time they were tested for HIV in the past 12 months, according to background characteristics, Rwanda 2010

Background characteristic	Percentage who know where to get an HIV test	Percent distribution of men by testing status and by whether they received the results of the last test			Total	Percentage ever tested	Percentage who received results from last HIV test taken in the past 12 months	Number of men
		Ever tested and received results	Ever tested, did not receive results	Never tested[1]				
Age								
15-24	95.5	49.3	4.9	45.8	100.0	54.2	31.8	2,607
…15-19	93.1	37.1	5.7	57.2	100.0	42.8	23.9	1,449
…20-24	98.6	64.5	4.0	31.5	100.0	68.5	41.7	1,159
25-29	99.6	86.4	1.8	11.7	100.0	88.3	47.4	1,038
30-39	99.5	88.4	2.8	8.8	100.0	91.2	42.5	1,201
40-49	99.5	82.9	2.3	14.9	100.0	85.1	36.9	842
Marital status								
Never married	95.8	49.2	4.8	46.0	100.0	54.0	30.4	2,873
…Ever had sex	98.1	63.2	4.5	32.4	100.0	67.6	38.6	1,140
…Never had sex	94.2	40.0	5.0	55.0	100.0	45.0	25.0	1,733
Married/Living together	99.7	90.1	2.3	7.6	100.0	92.4	45.1	2,699
Divorced/Separated/Widowed	98.5	81.1	1.7	17.2	100.0	82.8	46.2	115
Residence								
Urban	98.4	73.1	2.3	24.6	100.0	75.4	37.4	939
Rural	97.5	68.5	3.8	27.7	100.0	72.3	37.7	4,748
Province								
City of Kigali	99.0	76.2	2.2	21.7	100.0	78.3	36.5	739
South	97.0	64.0	4.5	31.6	100.0	68.4	32.4	1,308
West	97.2	68.8	4.3	26.9	100.0	73.1	39.6	1,307
North	97.7	70.4	3.4	26.1	100.0	73.9	40.6	899
East	98.1	70.3	2.7	27.0	100.0	73.0	39.5	1,435
Education								
No education	96.8	74.2	3.4	22.4	100.0	77.6	38.1	583
Primary	97.3	67.1	3.3	29.6	100.0	70.4	36.5	3,916
Secondary and higher	99.5	74.1	4.3	21.5	100.0	78.5	41.2	1,189
Wealth quintile								
Lowest	96.4	65.2	4.8	30.0	100.0	70.0	35.7	854
Second	97.1	66.6	5.2	28.2	100.0	71.8	36.2	986
Middle	98.2	69.5	4.1	26.4	100.0	73.6	39.0	1,139
Fourth	97.6	69.5	2.5	27.9	100.0	72.1	38.5	1,235
Highest	98.5	73.1	2.1	24.8	100.0	75.2	38.1	1,474
Total 15-49	**97.7**	**69.3**	**3.5**	**27.2**	**100.0**	**72.8**	**37.7**	**5,687**
50-59	98.3	62.8	3.1	34.1	100.0	65.9	27.2	642
Total 15-59	**97.8**	**68.6**	**3.5**	**27.9**	**100.0**	**72.1**	**36.6**	**6,329**

[1] Includes "don't know/missing"

Nearly all of the women (99 percent) and men (98 percent) in Rwanda know where to get an HIV test.

Table 13.11.1 presents data on HIV and AIDS information and counseling during antenatal care. Among women who had given birth in the past two years, 91 percent received information and counseling about HIV and AIDS during antenatal care for their most recent birth. Ninety-five percent of the women reported that they were tested for HIV during antenatal care; most of them also received the test results and posttest counseling (87 percent). Taking these occurrences into account, the 2010 RDHS results indicate that 88 percent of women giving birth during the two-year period prior to the survey were counseled about HIV, were tested for HIV, and received the test results. Women living in urban areas were more likely than those living in rural areas to have received comprehensive HIV and AIDS counseling and testing services during antenatal care. According to province, pregnant women living in the City of Kigali (92 percent) were slightly more likely to have received HIV and AIDS counseling and testing services. Women with a secondary education or higher were more likely than those with no education to receive full counseling and testing services during pregnancy. Eighty-five percent of women in the lowest wealth quintile received HIV and AIDS counseling and testing services during pregnancy, whereas 93 percent of women in the fourth wealth quintile and 92 percent of those in the highest wealth quintile did.

Table 13.11.1 Pregnant women counseled and tested for HIV

Among all women age 15-49 who gave birth in the two years preceding the survey, the percentage who received HIV pretest counseling, the percentage who received an HIV test during antenatal care for their most recent birth by whether they received their results and post-test counseling, and percentage who received an HIV test at the time of delivery for their most recent birth by whether they received their test results, according to background characteristics, Rwanda 2010

Background characteristic	Percentage who received HIV counseling during antenatal care[1]	Percentage who were tested for HIV during antenatal care and who:			Percentage who received pretest counseling, had an HIV test, and who received results	Percentage who had an HIV test during labor and who:		Number of women who gave birth in the past two years[2]
		Received results and received post-test counseling	Received results and did not receive post-test counseling	Did not receive results		Received results	Did not receive results	
Age								
15-24	90.5	88.3	7.1	0.4	88.9	0.5	0.0	882
…15-19	82.7	79.1	10.3	0.9	80.8	2.6	0.0	116
…20-24	91.7	89.7	6.6	0.3	90.1	0.1	0.0	766
25-29	91.8	87.0	7.2	0.8	89.1	0.0	0.1	1,005
30-39	90.8	87.8	6.3	0.9	88.3	0.0	0.1	1,080
40-49	85.4	84.3	6.7	1.2	83.4	0.5	0.0	241
Marital status								
Never married	86.5	83.4	6.4	1.1	83.5	0.7	0.0	271
…Ever had sex	86.5	83.4	6.4	1.1	83.5	0.7	0.0	271
Married/Living together	91.3	88.5	6.6	0.6	89.1	0.1	0.1	2,682
Divorced/Separated/Widowed	87.6	80.2	9.5	1.8	85.1	0.5	0.0	255
Residence								
Urban	94.0	91.9	4.3	0.8	92.7	0.0	0.2	381
Rural	90.2	86.8	7.2	0.7	87.8	0.2	0.0	2,827
Province								
City of Kigali	93.5	90.9	6.1	0.4	92.3	0.0	0.2	297
South	89.3	86.1	6.7	1.6	85.6	0.6	0.1	759
West	91.7	88.7	5.5	0.3	89.6	0.1	0.0	874
North	89.0	86.0	7.6	0.4	85.9	0.0	0.0	478
East	90.6	86.9	8.3	0.8	89.5	0.0	0.0	800
Education								
No education	87.9	83.4	6.8	1.6	84.0	0.2	0.1	550
Primary	90.9	88.0	6.8	0.6	88.8	0.1	0.0	2,364
Secondary and higher	93.6	90.3	7.1	0.6	92.3	0.4	0.3	294
Wealth quintile								
Lowest	88.4	83.9	7.0	1.2	84.6	0.5	0.0	776
Second	88.2	86.3	7.5	1.3	85.9	0.2	0.0	736
Middle	90.8	85.6	8.5	0.2	88.3	0.0	0.2	595
Fourth	94.5	92.1	5.5	0.3	93.2	0.0	0.0	578
Highest	92.8	91.3	5.2	0.5	92.0	0.0	0.1	523
Total 15-49	**90.6**	**87.4**	**6.8**	**0.7**	**88.3**	**0.2**	**0.1**	**3,208**

[1] In this context, "counseled" means that someone talked with the respondent about all three of the following topics: 1) babies getting the AIDS virus from their mother, 2) preventing the virus, and 3) getting tested for the virus.
[2] Denominator for percentages includes women who did not receive antenatal care for their last birth in the past two years.

Table 13.11.2 shows that, among the adult population age 15-49, 27 percent of women and 28 percent of men have been tested for HIV for prenuptial purposes. The percentages of women and men who were tested vary significantly by age and marital status. As one would expect, testing rates were highest among currently-married respondents (42 percent of women and 52 percent of men). Respondents age 25-29 have the highest proportion of testing for HIV for prenuptial purposes (54 percent each, for women and for men). The proportion of respondents that is tested for prenuptial purposes is lowest in North province (22 percent for women and 25 percent for men). This proportion is highest for women in East province (32 percent) and for men in the City of Kigali (31 percent). Variation of testing for prenuptial purposes by area of residence is small, and that by wealth quintile is not linear.

Table 13.11.2 also indicates that the large majority of ever-married women and men age 15-49 have been tested as a couple sometime in the past (72 percent for women and 84 percent for men). Older women and men (40-49) are the least likely to have ever been tested as a couple sometime in the past (45 percent for women and 76 percent for men). Respondents who are formerly married and those who have no education are less likely to be

tested as a couple than those who are currently in union and those who have at least primary education. Variations of testing as a couple by other background characteristics are small.

Table 13.11.2 HIV testing for prenuptial purposes and as a couple

Percentage of women and men age 15-49 who were ever tested for the HIV virus for prenuptial purposes and percentage of ever married women and men age 15-49 who were ever tested for the HIV virus as a couple, by background characteristics, Rwanda 2010

Background characteristic	Percentage of all women and men age 15-49 who were ever tested for prenuptial purposes				Percentage of ever married women and men age 15-49 who were ever tested for the HIV virus as a couple			
	Percentage of women	Number of women	Percentage of men	Number of men	Percentage of women	Number of women	Percentage of men	Number of men
Age								
15-24	20.9	5,628	10.2	2,607	88.6	1,212	87.3	236
..15-19	7.0	2,945	1.5	1,449	79.1	106	*	3
..20-24	36.2	2,683	21.1	1,159	89.5	1,106	87.6	233
25-29	54.1	2,494	54.2	1,038	88.3	1,943	90.0	672
30-39	28.5	3,269	50.5	1,201	73.7	3,034	84.2	1,092
40-49	9.0	2,280	19.6	842	45.3	2,197	76.3	814
Marital status								
Never married	8.6	5,285	5.0	2,873	na	na	na	na
…Ever had sex	11.5	1,188	7.8	1,140	na	na	na	na
…Never had sex	7.7	4,097	3.1	1,733	na	na	na	na
Married/Living together	42.3	6,897	52.2	2,699	79.3	6,897	84.3	2,699
Divorced/Separated/Widowed	19.4	1,489	41.7	115	37.1	1,489	65.9	115
Residence								
Urban	28.9	2,057	29.1	939	74.1	1,145	83.8	411
Rural	26.4	11,614	27.9	4,748	71.4	7,241	83.5	2,403
Province								
City of Kigali	30.3	1,596	30.5	739	77.8	877	82.6	323
South	27.8	3,212	29.7	1,308	67.5	1,990	83.3	647
West	22.6	3,305	25.8	1,307	69.6	1,996	83.8	637
North	21.5	2,278	25.2	899	74.3	1,380	85.9	444
East	32.0	3,280	29.6	1,435	73.8	2,142	82.7	762
Education								
No education	19.0	2,119	30.1	583	58.8	1,825	76.9	460
Primary	29.4	9,337	30.0	3,916	75.3	5,710	84.7	1,979
Secondary and higher	23.1	2,216	21.1	1,189	76.5	851	85.9	375
Wealth quintile								
Lowest	26.4	2,622	31.9	854	67.3	1,808	82.8	491
Second	24.7	2,661	29.5	986	69.7	1,733	83.5	537
Middle	26.7	2,736	29.0	1,139	72.6	1,664	83.1	584
Fourth	27.7	2,677	25.3	1,235	73.9	1,625	85.0	600
Highest	28.3	2,976	26.8	1,474	76.2	1,556	83.3	602
Total 15-49	**26.8**	**13,671**	**28.1**	**5,687**	**71.8**	**8,386**	**83.6**	**2,814**
50-59	na	na	9.4	642	na	na	51.1	635
Total 15-59	**na**	**na**	**26.2**	**6,329**	**na**	**na**	**77.6**	**3,450**

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

13.7 REPORTS OF RECENT SEXUALLY TRANSMITTED INFECTIONS

Information about the incidence of sexually transmitted infections is useful not only as a marker of unprotected sexual intercourse but also as a cofactor for HIV transmission. The 2010 RDHS asked respondents who had ever had sex whether they had had an STI in the past 12 months. They were also asked whether, in the past year, they had experienced a genital sore or ulcer and whether they had any genital discharge. These symptoms have been shown to be useful in identifying STIs in men. They are less easily interpreted in women because women are likely to experience more non-STI conditions of the reproductive tract that produce a discharge.

Table 13.12 shows the self-reported prevalence of STIs and STI symptoms among women and men age 15-49 who have ever had sexual intercourse. Three percent of women and 2 percent of men who have ever had sex reported having had an STI in the 12 months before the survey. Six percent of women and 5 percent of men reported having had an abnormal genital discharge. Furthermore, 4 percent each of women and men reported having had a

genital sore or ulcer in the past 12 months. Overall, 8 percent each of women and men had either an STI or symptoms of an STI in the 12 months preceding the survey.

Table 13.12 Self-reported prevalence of sexually-transmitted infections (STIs) and STIs symptoms

Among women and men age 15-49 who ever had sexual intercourse, the percentage reporting having an STI and/or symptoms of an STI in the past 12 months, by background characteristics, Rwanda 2010

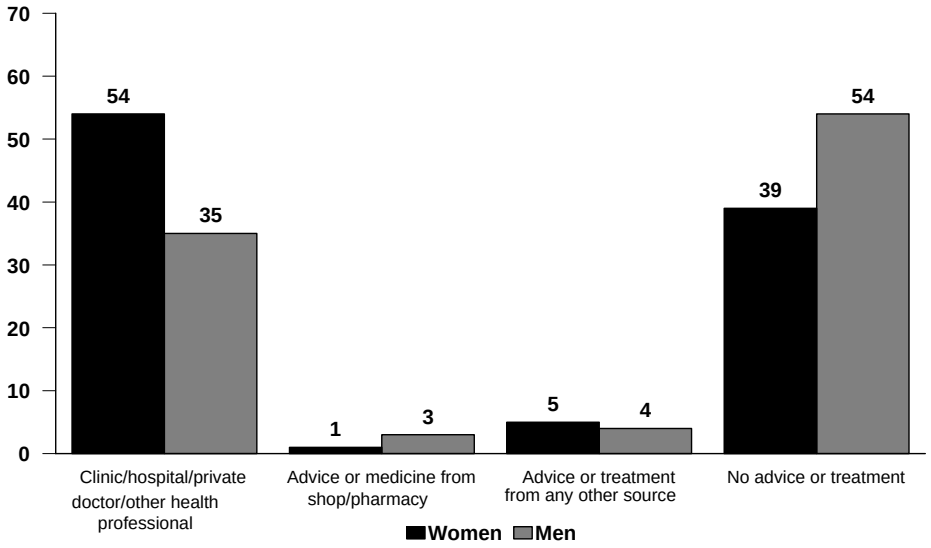
Background characteristic	Women					Men				
	STI	Bad smelling/ abnormal genital discharge	Genital sore/ ulcer	STI/ genital discharge/ sore or ulcer	Number of respondents who ever had sexual intercourse	STI	Bad smelling/ abnormal genital discharge	Genital sore/ ulcer	STI/ genital discharge/ sore or ulcer	Number of respondents who ever had sexual intercourse
Age										
15-24	3.1	6.1	3.8	7.9	1,979	2.1	7.9	3.8	10.7	1,011
…15-19	2.5	5.5	3.0	6.9	429	1.4	9.2	3.6	11.5	310
…20-24	3.2	6.3	4.1	8.1	1,550	2.4	7.3	4.0	10.3	701
25-29	3.1	5.6	4.0	7.9	2,181	3.1	5.7	4.3	9.1	921
30-39	3.4	6.5	4.5	9.0	3,154	2.3	2.7	4.2	7.1	1,185
40-49	3.2	6.6	4.7	8.5	2,254	2.0	1.7	3.4	6.3	833
Marital status										
Never married	3.0	6.5	4.4	8.4	1,184	2.1	8.0	3.6	10.7	1,137
Married/Living together	3.1	5.9	4.2	8.0	6,895	2.4	3.1	4.0	7.2	2,698
Divorced/Separated/Widowed	3.8	7.6	5.0	10.4	1,489	4.4	3.2	7.0	12.1	115
Male circumcision										
Circumcised	na	na	na	na	0	2.8	2.4	2.4	5.9	609
Not circumcised	na	na	na	na	0	2.3	4.9	4.2	8.8	3,339
DK/Missing	na	na	na	na	0	*	*	*	*	2
Residence										
Urban	4.2	7.3	4.3	10.0	1,418	3.8	5.8	5.3	10.6	679
Rural	3.0	6.1	4.3	8.1	8,150	2.1	4.3	3.7	7.9	3,272
Province										
City of Kigali	3.6	6.3	4.2	9.1	1,103	3.5	4.3	4.4	9.4	547
South	2.6	7.4	5.0	10.0	2,265	1.6	5.6	4.4	9.4	865
West	3.5	6.8	4.4	7.9	2,239	2.7	4.9	5.1	9.5	867
North	1.7	4.5	2.0	6.1	1,555	1.7	4.6	2.5	6.5	635
East	4.3	5.8	5.1	8.5	2,407	2.6	3.4	3.4	6.9	1,036
Education										
No education	3.4	5.9	4.0	7.5	1,951	1.4	2.4	3.8	6.4	511
Primary	3.2	6.6	4.5	8.9	6,503	2.6	5.3	4.1	9.1	2,722
Secondary and higher	2.8	5.1	3.6	7.0	1,114	2.4	2.9	3.6	6.8	716
Wealth quintile										
Lowest	3.4	6.2	4.6	8.7	2,010	2.4	5.4	5.5	9.5	619
Second	3.3	7.0	4.6	9.0	1,916	2.0	3.7	3.7	7.6	674
Middle	2.2	5.0	3.8	7.2	1,880	2.1	5.5	4.3	9.4	798
Fourth	3.4	6.3	4.1	8.0	1,823	2.5	4.6	3.8	8.2	824
Highest	3.8	6.8	4.4	9.1	1,938	2.7	3.8	3.1	7.3	1,036
Total 15-49	**3.2**	**6.3**	**4.3**	**8.4**	**9,568**	**2.4**	**4.5**	**4.0**	**8.3**	**3,950**
50-59	na	na	na	na	0	2.2	2.5	2.6	5.8	640
Total 15-59	**na**	**na**	**na**	**na**	**0**	**2.3**	**4.2**	**3.8**	**8.0**	**4,591**

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

The results presented in Table 13.12 indicate that the proportion of respondents who reported having had an STI or an STI symptom varied slightly across provinces. Among women, self-reported prevalence of STIs and STI symptoms ranged from a low of 6 percent in the North province to a high of 10 percent in the South province. Among men, 10 percent reported STIs or symptoms of STIs in the West province, as compared with 7 percent in the North and East provinces.

Figure 13.1 shows that, among those reporting a sexually transmitted infection or symptom thereof in the past year, women were more likely to seek treatment from various sources than men (60 percent versus 42 percent). Moreover, among those who sought treatment, women were more likely than men to seek treatment from a health professional (54 percent versus 35 percent).

Figure 13.1 Women and Men Seeking Treatment for STIs



RDHS 2010

13.8 NEEDLE AND SYRINGE INJECTION

Injection overuse in a health care setting can contribute to the transmission of blood-borne pathogens because it amplifies the effects of unsafe practices such as reuse of injection equipment. As a consequence, the proportion of injections given with reused injection equipment is an important prevention indicator in initiatives designed to control the spread of HIV and AIDS.

Table 13.13 presents data on the prevalence of injections among respondents. Respondents were asked whether they had had any injections given by a health worker in the 12 months preceding the survey and, if so, the number of injections they had received and whether their last injection was given with a syringe from a new, unopened package.

Women were more likely than men to report having received at least one injection from a health provider in the past 12 months (56 percent and 45 percent, respectively). On average, women had received 1.5 injections, and men had received 0.8 injections.

The variations in injection prevalence were observed across provinces. Among both women and men, the percentage reporting that they had received at least one injection from a health worker during the 12 months prior to the survey is lowest in the South province (48 percent in women and 39 percent in men). The prevalence of medical injection among women is highest in the City of Kigali and in the North province (62 percent and 63 percent respectively). Among men, the South province has the lowest proportion of men who received a medical injections in the past 12 months, while the likelihood of having received an injection in four other provinces is about the same (46-48 percent). The urban versus rural difference for receiving at least one injection from a health provider is small. Receiving at least one injection increases as the levels of education and wealth increase. Women and men who are currently married, formerly married, or never married but sexually active are more likely to have received at least one injection from a health provider than those who have never married and have never had sex.

Table 13.13 Prevalence of medical injections

Percentage of women and men age 15-49 who received at least one medical injection in the last 12 months, the average number of medical injections per person in the last 12 months, and among those who received a medical injection, the percentage of last medical injections for which the syringe and needle were taken from a new, unopened package, by background characteristics, Rwanda 2010

	Women					Men				
Background characteristic	Percentage who received a medical injection in the last 12 months	Average number of medical injections per person in the last 12 months	Number of respondents	For last injection, syringe and needle taken from a new, unopened package	Number of respondents receiving medical injections in the last 12 months	Percentage who received a medical injection in the last 12 months	Average number of medical injections per person in the last 12 months	Number of respondents	For last injection, syringe and needle taken from a new, unopened package	Number of respondents receiving medical injections in the last 12 months
Age										
15-24	49.2	1.2	5,628	98.7	2,769	39.9	0.7	2,607	99.3	1,039
…15-19	37.4	0.7	2,945	98.4	1,101	33.8	0.6	1,449	99.1	490
…20-24	62.2	1.7	2,683	98.9	1,668	47.4	0.9	1,159	99.4	549
25-29	70.0	2.1	2,494	98.8	1,745	53.6	0.9	1,038	99.4	556
30-39	63.1	1.9	3,269	98.8	2,063	48.1	1.0	1,201	99.2	578
40-49	45.9	1.3	2,280	98.9	1,047	44.4	0.9	842	98.9	373
Marital status										
Never married	41.6	0.8	5,285	98.3	2,197	38.9	0.7	2,873	99.2	1,117
Ever had sex	59.8	1.4	1,188	98.8	710	47.6	0.9	1,140	99.2	543
Never had sex	36.3	0.7	4,097	98.1	1,487	33.1	0.6	1,733	99.3	575
Married/Living together	68.0	2.1	6,897	99.0	4,693	51.0	0.9	2,699	99.2	1,377
Divorced/Separated/Widowed	49.3	1.3	1,489	98.7	734	46.3	1.4	115	100.0	53
Residence										
Urban	58.2	1.8	2,057	98.4	1,197	46.6	1.0	939	99.8	438
Rural	55.3	1.5	11,614	98.8	6,426	44.4	0.8	4,748	99.1	2,109
Province										
City of Kigali	61.5	1.9	1,596	98.7	981	46.3	0.9	739	99.4	342
South	47.7	1.4	3,212	98.8	1,532	39.2	0.9	1,308	99.7	512
West	52.4	1.3	3,305	98.3	1,732	45.9	0.9	1,307	99.0	600
North	62.6	1.6	2,278	98.5	1,425	45.5	0.9	899	98.1	409
East	59.6	1.6	3,280	99.4	1,953	47.7	0.7	1,435	99.7	684
Education										
No education	51.2	1.4	2,119	98.9	1,084	41.9	0.7	583	98.8	244
Primary	55.8	1.6	9,337	98.7	5,207	43.8	0.8	3,916	99.2	1,713
Secondary and higher	60.1	1.6	2,216	98.9	1,332	49.6	0.9	1,189	99.4	590
Wealth quintile										
Lowest	51.9	1.4	2,622	98.7	1,361	42.3	1.1	854	99.8	361
Second	54.0	1.4	2,661	98.8	1,437	45.0	0.7	986	99.1	444
Middle	56.2	1.6	2,736	98.6	1,538	43.7	0.7	1,139	99.2	497
Fourth	58.0	1.6	2,677	99.1	1,552	45.0	0.8	1,235	98.5	555
Highest	58.3	1.7	2,976	98.7	1,736	46.8	0.9	1,474	99.6	690
Total 15-49	**55.8**	**1.5**	**13,671**	**98.8**	**7,623**	**44.8**	**0.8**	**5,687**	**99.2**	**2,547**
50-59	na	na	na	na	na	34.3	0.8	642	98.5	220
Total 15-59	**na**	**na**	**na**	**na**	**na**	**43.7**	**0.8**	**6,329**	**99.2**	**2,767**

Note : Medical injections are those given by a doctor, nurse, pharmacist, dentist, or other health worker
na = Not applicable

Practically all injections (99 percent among both women and men) were administered with a needle and syringe taken from a newly opened package.

13.9 HIV AND AIDS RELATED KNOWLEDGE AND BEHAVIOR AMONG YOUTH

Knowledge of HIV and AIDS issues and related sexual behavior among youth age 15-24 is of particular interest because the period between sexual initiation and marriage is, for many young people, a time of sexual experimentation that may involve high-risk behaviors. This section considers a number of issues that relate to both transmission and prevention of HIV and AIDS among youth, including the extent to which youth have comprehensive knowledge of HIV and AIDS transmission and prevention modes and knowledge of a source where they can obtain condoms. Issues such as abstinence, age at sexual debut, and condom use are also covered in this section.

13.9.1 Knowledge about HIV and AIDS and Source for Condoms

Knowledge of how HIV is transmitted is crucial to help young people avoid AIDS. Young people are often at greater risk because they may have shorter relationships with more partners or engage in other risky behaviors. As discussed earlier, comprehensive knowledge is defined as knowing that people can reduce their risk of getting the AIDS virus by having sex with only one uninfected faithful partner and by using condoms consistently, that a healthy-looking person can have the AIDS virus, and that HIV cannot be transmitted by mosquito bites or by sharing food with a person who has AIDS.

Table 13.14 shows that about half of women and men age 15-24 (53 percent of women, 47 percent of men) know all of these facts about HIV and AIDS. The level of comprehensive knowledge about HIV and AIDS slightly increases with age in the youth population, but is not associated with marital status.

Table 13.14 Comprehensive knowledge about AIDS and of a source of condoms among youth

Percentage of young women and young men age 15-24 with comprehensive knowledge about AIDS and percentage with knowledge of a source of condoms, by background characteristics, Rwanda 2010

	Women			Men		
Background characteristic	Percentage with comprehensive knowledge of AIDS[1]	Percentage who know a condom source[2]	Number of respondents	Percentage with comprehensive knowledge of AIDS[1]	Percentage who know a condom source[2]	Number of respondents
Age						
15-19	49.3	81.4	2,945	43.5	87.0	1,449
…15-17	46.2	77.5	1,862	41.2	83.7	929
…18-19	54.5	88.2	1,083	47.6	93.0	519
20-24	56.3	90.2	2,683	52.4	95.4	1,159
20-22	54.9	89.5	1,616	50.4	95.6	704
23-24	58.4	91.3	1,067	55.5	95.0	454
Marital status						
Never married	52.1	83.9	4,416	46.7	90.1	2,371
Ever had sex	52.4	90.7	769	51.1	96.6	778
Never had sex	52.0	82.4	3,647	44.6	86.9	1,593
Ever married	54.5	92.0	1,212	54.5	97.3	236
Residence						
Urban	66.0	91.5	909	53.4	95.4	388
Rural	50.1	84.5	4,720	46.4	89.9	2,219
Education						
No education	39.9	82.5	341	39.1	84.4	98
Primary	48.5	82.5	3,976	42.4	88.9	1,840
Secondary and higher	68.5	96.0	1,312	62.4	96.8	669
Total	**52.6**	**85.6**	**5,628**	**47.4**	**90.7**	**2,607**

[1] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention. The components of comprehensive knowledge are presented in Tables 13.2, 13.3.1, and 13.3.2
[2] For this table, the following responses are not considered sources for condoms: friends, family members and home

As expected, comprehensive HIV and AIDS knowledge is much more common among urban than rural youth. Young adults age 15-24 with a secondary education or higher are far more likely to have comprehensive knowledge of HIV and AIDS than those with no schooling.

Because condoms play an important role in combating the transmission of HIV, young women were asked whether they knew where condoms could be obtained. Only "formal" sources of condoms were counted; friends and family and other similar sources were not included.

As shown in Table 13.14, 86 percent of young women and 91 percent of young men know where to obtain a condom. Knowledge of a condom source among young women tends to increase with age. Ever-married young women and those who ever had sex are more likely to know about a source for condoms than those who have never been married or never had sex. Women in urban areas are more likely than those in rural areas to know of a condom

source. Consistent with the patterns observed for other indicators, young women who are better educated are more likely than their counterparts to know a source of condoms. A similar association between knowledge of a condom source and age, marital status, residence, and level of education was also observed among young men 15-24.

13.9.2 Age at First Sex and Condom Use at First Sexual Intercourse

Information from the 2010 RDHS can be used to look at several important issues related to the initiation of sexual activity among youth, such as age at first sex and condom use at first sexual intercourse.

Table 13.15 shows the proportion of women and men in the age 15-24 cohort who had sex before age 15 and before age 18. Approximately 4 percent of young women and 11 percent of young men had sex before age 15, whereas 17 percent of young women and 27 percent of young men had sex by age 18.

Given that the median age at first marriage among Rwandan women is 21.4 years (see Chapter 5), few women report that they have had sex before the age of 15. Young adults age 15-19 are more likely to have sexual intercourse before age 15 than those age 20-24.

Level of education showed a negative association with early initiation of sexual activity among women: as level of education increased, the proportion of women reporting sex before age 15 or 18 decreased. This association is not observed among men. Married women age 15-24 are more likely to have their first sex before age 18 than those who had never married (29 percent versus 11 percent). However, in an opposite trend, married men age 15-24 are less likely to have their first sex before the age of 15 or 18 than those who had never married. Young women and men who know a source of condoms are more likely to have sexual intercourse before age 18 than other women.

Table 13.15 Age at first sexual intercourse among youth

Percentage of young women and of young men age 15-24 who had sexual intercourse before age 15 and percentage of young women and of young men age 18-24 who had sexual intercourse before age 18, by background characteristics, Rwanda 2010

	Women				Men			
Background characteristic	Percentage who had sexual intercourse before age 15	Number of respondents (15-24)	Percentage who had sexual intercourse before age 18	Number of respondents (18-24)	Percentage who had sexual intercourse before age 15	Number of respondents (15-24)	Percentage who had sexual intercourse before age 18	Number of respondents (18-24)
Age								
15-19	4.8	2,945	na	na	13.3	1,449	na	na
…15-17	4.5	1,862	na	na	12.0	929	na	na
…18-19	5.1	1,083	18.7	1,083	15.7	519	27.7	519
20-24	2.8	2,683	16.0	2,683	8.8	1,159	26.4	1,159
20-22	2.9	1,616	16.2	1,616	9.6	704	28.6	704
23-24	2.7	1,067	15.7	1,067	7.7	454	22.8	454
Marital status								
Never married	3.8	4,416	11.2	2,559	12.1	2,371	27.6	1,442
Ever married	4.1	1,212	28.7	1,207	3.4	236	21.8	236
Knows condom source[1]								
Yes	3.7	4,819	17.5	3,376	11.7	2,366	27.4	1,588
No	4.3	809	10.5	390	7.6	241	15.5	90
Residence								
Urban	4.2	909	20.6	645	8.4	388	27.4	281
Rural	3.8	4,720	16.0	3,121	11.8	2,219	26.7	1,397
Education								
No education	7.2	341	31.4	301	10.4	98	26.9	78
Primary	4.1	3,976	17.4	2,524	11.4	1,840	27.6	1,108
Secondary and higher	2.2	1,312	10.5	941	11.1	669	24.9	491
Total	**3.8**	**5,628**	**16.8**	**3,766**	**11.3**	**2,607**	**26.8**	**1,678**

na = Not available
[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home

13.9.3 Recent Sexual Activity

The period between age at first sex and age at marriage is often a time of sexual experimentation. Unfortunately, for those who may be exposed to HIV and AIDS, it can also be a risky time. Table 13.16 presents

data on the percentage of never-married young women and men age 15-24 who have never had sexual intercourse, the percentage who had sex in the 12 months preceding the survey, and, among youth who have had sexual intercourse in the past 12 months, the percentage who used condoms during their most recent sexual intercourse.

Table 13.16 Premarital sexual intercourse and condom use during premarital sexual intercourse among youth

Among never-married women and men age 15-24, the percentage who have never had sexual intercourse, the percentage who had sexual intercourse in the past 12 months, and, among those who had premarital sexual intercourse in the past 12 months, the percentage who used a condom at the last sexual intercourse, by background characteristics, Rwanda 2010

	Women					Men				
Background characteristic	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the past 12 months	Number of never married respondents	Percentage who used a condom at last sexual intercourse	Number of respondents who had sexual intercourse in the past 12 months	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the past 12 months	Number of never married respondents	Percentage who used a condom at last sexual intercourse	Number of respondents who had sexual intercourse in the past 12 months
Age										
15-19	88.5	4.6	2,840	41.9	132	78.6	5.2	1,446	57.5	75
…15-17	92.2	2.8	1,857	40.5	51	83.9	2.8	929	(37.9)	26
…18-19	81.6	8.2	982	42.7	80	69.1	9.4	516	(68.1)	49
20-24	71.9	11.0	1,577	42.1	173	49.4	19.7	925	69.8	182
20-22	74.5	10.5	1,109	39.9	116	52.4	18.2	619	66.7	112
23-24	65.8	12.2	468	46.7	57	43.2	22.8	306	74.8	70
Knows condom source[1]										
Yes	81.2	7.7	3,704	44.4	286	64.8	11.9	2,136	66.7	254
No	90.0	2.6	712	*	19	88.8	1.5	235	*	4
Residence										
Urban	77.0	11.2	727	52.6	82	61.1	18.8	370	76.3	70
Rural	83.7	6.0	3,689	38.1	223	68.3	9.4	2,001	62.5	188
Education										
No education	68.2	12.9	173	*	22	61.7	16.3	75	*	12
Primary	82.7	7.0	3,052	35.1	214	67.8	11.0	1,643	62.3	180
Secondary and higher	84.4	5.7	1,191	65.8	68	66.3	9.9	653	76.3	65
Total	**82.6**	**6.9**	**4,416**	**42.0**	**305**	**67.2**	**10.8**	**2,371**	**66.2**	**257**

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.
[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home

Eighty-three percent of never-married young women and 67 percent of never-married men reported that they had never had sex, and as a result the proportions reporting recent sexual activity (i.e., within the 12-month period before the survey) are low (7 percent among young women and 11 percent among young men). Among never-married, sexually active young women, condom use at last sexual intercourse was 42 percent. Condom use is higher in the urban areas and among those with secondary education and higher than in the rural areas and among those with a lower level of education.

Among never-married, sexually active young men, condom use at last sexual intercourse was 66 percent. Similar to women, condom use is higher in the urban areas than in the rural areas and increases with level of education. For example, 76 percent of sexually active, never-married young men who have more than a secondary education used a condom the last time they had sexual intercourse, compared with 62 percent of those with a primary education.

13.9.4 Multiple Sexual Partnerships

The most common mode of HIV transmission in Rwanda is through unprotected sex with an infected person. To prevent HIV and AIDS transmission, it is important for young people to be faithful to one uninfected partner. Table 13.17 shows the percentage of all young women and men age 15-24 who had had sexual intercourse with more than one partner in the past 12 months, by background characteristics.

Table 13.17 Multiple sexual partners in the past 12 months among young people

Percentage of young adults age 15-24 who had sexual intercourse with more than one sexual partner in the past 12 months by background characteristics, Rwanda 2010

Background characteristic	Among all women age 15-24		Among all men age 15-24	
	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	0.3	2,945	0.4	1,449
…15-17	0.1	1,862	0.1	929
…18-19	0.7	1,083	1.1	519
20-24	0.9	2,683	3.2	1,159
20-22	1.2	1,616	2.7	704
23-24	0.4	1,067	3.9	454
Marital status				
Never married	0.4	4,416	1.3	2,371
Ever married	1.2	1,212	5.7	236
Knows condom source[1]				
Yes	0.6	4,819	1.8	2,366
No	0.2	809	0.0	241
Residence				
Urban	1.1	909	2.6	388
Rural	0.5	4,720	1.5	2,219
Education				
No education	1.6	341	2.1	98
Primary	0.6	3,976	1.7	1,840
Secondary or higher	0.2	1,312	1.4	669
Total 15-24	**0.6**	**5,628**	**1.7**	**2,607**

[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home

Overall, only less than 1 percent of young women and less than 2 percent of young men who had sexual intercourse reported having had two or more sexual partners in the past 12 months. Women age 20-22, those who had ever been married, and those who live in urban areas reported having had two or more sexual partners in the past 12 months—more than other women. Young women with no education are more likely than other women to have had two or more sexual partners in the past 12 months. Overall, 29 percent of young women who had high-risk sexual intercourse used a condom the last time they had high-risk sexual intercourse (data not shown). Among men, those age 23-24 (4 percent), those who had ever been married (6 percent), and those who live in urban areas (3 percent) are more likely than other men to have had two or more sexual partners in the past 12 months. Young men who had high-risk sexual intercourse are twice as likely as young women to use a condom the last time they had high-risk sexual intercourse (58 percent versus 29 percent, data not shown).

13.9.5 HIV Testing

Young people may believe there are barriers to accessing and using many health services and facilities, and this is particularly true for sensitive concerns relating to sexual health, such as HIV and AIDS and other STIs. Table 13.18 presents data on the percentage of sexually active youth who had been tested and received their results within the past year. More than half of young women and young men who had had sexual intercourse in the past 12 months had been tested for HIV and received their test results (59 percent and 55 percent, respectively).

Table 13.18 Recent HIV tests among youth

Among young women and young men age 15-24 who have had sexual intercourse in the past 12 months, the percentage who have had an HIV test in the past 12 months and received the results of the test, by background characteristics, Rwanda 2010

Background characteristic	Among women age 15-24 who have had sexual intercourse in the past 12 months:		Among men age 15-24 who have had sexual intercourse in the past 12 months:	
	Percentage who have been tested for HIV and received results in the past 12 months	Number of women	Percentage who have been tested for HIV and received results in the past 12 months	Number of men
Age				
15-19	59.4	229	37.4	78
…15-17	46.5	56	(26.2)	26
…18-19	63.6	173	43.1	52
20-24	59.4	1,233	57.8	414
20-22	63.3	604	58.9	197
23-24	55.5	628	56.8	217
Marital status				
Never married	57.8	305	47.1	257
Ever married	59.8	1,157	62.7	235
Knows condom source[1]				
Yes	59.8	1,355	54.6	482
No	53.3	106	*	10
Residence				
Urban	61.4	252	54.2	88
Rural	58.9	1,209	54.7	404
Education				
No education	60.2	181	(68.3)	34
Primary	58.2	1,101	54.2	377
Secondary and higher	65.6	180	50.5	80
Total	**59.4**	**1,461**	**54.6**	**492**

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.
[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home

13.10 MALE CIRCUMCISION

According to current medical opinion, circumcision may provide protection against HIV infection. Male circumcision is recommended by WHO as one of the HIV prevention methods. Since 2008, the Rwandan Health Ministry (MINISANTÉ) had adopted this program and it is now part of 2009-2012 National Strategic Plan against HIV and AIDS.

The 2010 RDHS collected data on the prevalence of circumcision among male respondents, including age at circumcision and type of practitioner who performed the procedure. Circumcised men were also asked the main reason for their circumcision.

In Rwanda, only 13 percent of men age 15-59 have been circumcised (Table 13.19). The rate varies according to their background characteristics. Results by age group show that the prevalence of circumcision among men age 15-19 is 10 percent. The prevalence increases sharply from the age of 20 and reaches the highest point (18 percent) among men age 30-34. It drops gradually from age 35-39 (13 percent) and is only 6 percent among men age 55-59. There are also large geographic differentials, with the practice occurring more frequently in urban areas (32 percent) than in rural areas (10 percent). By province, the proportion of men who are circumcised is highest in the City of Kigali (34 percent) and the West province (20 percent), while it does not exceed 10 percent in the other provinces. There are also socioeconomic differences in the prevalence of circumcision, with the highest proportions among men who have secondary or higher education (30 percent) and those in the highest (richest) wealth quintile

(29 percent). Finally, differentials by religion show that a large proportion of Muslim men are circumcised (73 percent) compared with men of other religious categories (15 percent or less).

Men who were circumcised were asked who had performed the procedure. About eight in ten men (78 percent) said they were circumcised by a health professional. This proportion remains high irrespective of background characteristics. In urban areas (83 percent), in the City of Kigali (83 percent), in the South and North provinces (86 percent, each), among the most educated men (84 percent), and among men in the highest wealth quintile (83 percent), at least four of five circumcisions were performed by a health professional. The lowest rate is seen among men in the lowest wealth quintile (60 percent), who were almost as likely to be circumcised by a traditional practitioner (29 percent). Seven of 10 circumcisions were carried at a health facility, whereas about 1 in 10 was carried out at ritual site (Table 13.20). About 5 percent of circumcisions were carried out at the home of the health care providers and 6 percent were at the home of the respondents.

Table 13.19 Practice of circumcision

Percentage of men age 15-59 who are circumcised, and percent distribution of circumcised men by type of practitioner who performed the circumcision, according to background characteristics, Rwanda 2010

Background characteristic	Percentage circumcised	Number of men	Who performed the circumcision: Traditional practitioner/ family friend	Health worker/ professional	Other	Don't know	Missing	Total	Number of circumcised men
Age									
15-19	10.0	1,448	11.3	76.2	7.8	3.8	1.0	100.0	146
20-24	16.1	1,157	11.0	72.7	9.3	5.9	1.1	100.0	187
25-29	17.2	1,037	8.2	78.0	5.2	8.0	0.6	100.0	178
30-34	17.7	710	11.4	81.2	2.4	3.4	1.6	100.0	126
35-39	12.8	494	8.8	75.5	11.1	4.6	0.0	100.0	63
40-44	12.4	429	12.9	80.6	6.5	0.0	0.0	100.0	53
45-49	10.0	412	(6.1)	(93.9)	(0.0)	(0.0)	(0.0)	100.0	41
50-54	8.9	383	(12.9)	(76.7)	(10.4)	(0.0)	(0.0)	100.0	34
55-59	6.0	258	*	*	*	*	*	100.0	16
Residence									
Urban	31.6	1,005	5.8	82.8	6.9	4.0	0.5	100.0	317
Rural	9.9	5,324	12.7	75.1	6.5	4.8	0.9	100.0	526
Province									
City of Kigali	33.9	789	6.4	82.7	7.8	2.9	0.2	100.0	268
South	4.5	1,444	6.6	85.7	4.5	0.0	3.2	100.0	65
West	20.4	1,488	17.3	70.9	5.1	5.7	0.9	100.0	303
North	5.2	1,014	(3.9)	(85.9)	(2.0)	(6.3)	(1.9)	100.0	53
East	9.7	1,594	6.1	77.7	10.2	6.1	0.0	100.0	154
Education									
No education	7.4	757	13.1	79.0	5.3	2.6	0.0	100.0	56
Primary	9.4	4,323	14.2	72.6	9.0	3.0	1.2	100.0	407
Secondary and higher	30.4	1,249	5.3	83.5	4.4	6.4	0.4	100.0	380
Religion									
Catholic	9.7	3,068	11.7	77.7	4.7	5.2	0.8	100.0	298
Protestant	14.9	2,227	10.6	78.3	6.8	3.7	0.6	100.0	332
Adventist	13.7	747	6.6	84.0	2.8	5.6	1.0	100.0	102
Muslim	72.6	120	6.3	70.5	17.0	4.9	1.3	100.0	87
Traditional/Other/No religion	14.4	166	12.2	79.4	8.4	0.0	0.0	100.0	24
Wealth quintile									
Lowest	6.3	937	28.8	60.0	11.2	0.0	0.0	100.0	59
Second	6.8	1,108	12.3	72.4	9.3	4.7	1.3	100.0	75
Middle	8.1	1,306	14.8	71.0	9.4	2.2	2.7	100.0	106
Fourth	10.2	1,391	8.1	78.3	6.4	6.4	0.7	100.0	142
Highest	29.0	1,586	6.9	82.7	5.1	5.0	0.4	100.0	460
Total	**13.3**	**6,329**	**10.1**	**78.0**	**6.7**	**4.5**	**0.8**	**100.0**	**843**

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.

Table 13.20 Place of circumcision

Percent distribution of circumcised men age 15-59 by place of circumcision, according to background characteristics, Rwanda 2010

Background characteristic	Place of circumcision							Number of circumcised men
	Health facility	Home of a health worker/ professional	Circumcision done at home	Ritual site	Other home/ place	Don't know/ missing	Total	
Age								
15-19	66.8	5.0	10.4	9.6	3.5	4.7	100.0	146
20-24	66.6	5.7	4.1	12.1	5.0	6.5	100.0	187
25-29	69.3	5.1	3.4	9.7	6.1	6.3	100.0	178
30-34	72.2	6.0	5.3	5.8	5.8	4.9	100.0	126
35-39	68.0	5.5	4.8	11.9	7.4	2.3	100.0	63
40-44	80.5	3.0	3.9	10.0	2.6	0.0	100.0	53
45-49	(77.1)	(3.0)	(10.2)	(9.6)	(0.0)	(0.0)	100.0	41
50-54	(73.7)	(2.8)	(3.4)	(6.7)	(13.5)	(0.0)	100.0	34
55-59	*	*	*	*	*	*	100.0	16
Residence								
Urban	78.3	2.3	7.3	3.6	4.6	3.9	100.0	317
Rural	65.5	6.6	4.3	13.3	5.5	4.8	100.0	526
Province								
City of Kigali	79.3	1.7	7.1	3.2	5.5	3.3	100.0	268
South	79.3	3.1	3.8	6.1	6.3	1.5	100.0	65
West	60.2	9.3	4.8	16.3	3.8	5.5	100.0	303
North	(79.2)	(4.0)	(2.5)	(3.9)	(4.2)	(6.3)	100.0	53
East	67.8	3.3	5.6	11.4	6.8	5.2	100.0	154
Education								
No education	59.9	13.8	7.1	9.7	9.5	0.0	100.0	56
Primary	62.5	5.6	5.3	14.5	8.0	4.2	100.0	407
Secondary and higher	80.2	3.0	5.4	4.5	1.4	5.5	100.0	380
Religion								
Catholic	70.5	4.1	5.0	9.3	5.1	6.0	100.0	298
Protestant	72.3	6.2	3.8	10.8	3.5	3.4	100.0	332
Adventist	75.8	3.7	4.4	5.8	5.9	4.4	100.0	102
Muslim	55.6	5.4	13.7	10.0	10.4	4.9	100.0	87
Traditional/Other/No religion	71.4	2.5	8.4	13.4	4.3	0.0	100.0	24
Wealth quintile								
Lowest	50.2	7.6	4.1	28.6	9.5	0.0	100.0	59
Second	59.1	8.7	2.2	17.7	8.1	4.1	100.0	75
Middle	62.7	6.1	3.4	15.8	7.2	4.8	100.0	106
Fourth	66.8	8.7	4.9	10.1	3.1	6.4	100.0	142
Highest	77.5	2.6	6.8	4.4	4.2	4.4	100.0	460
Total	**70.3**	**5.0**	**5.5**	**9.7**	**5.1**	**4.5**	**100.0**	**843**

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.

Men who said they had been circumcised were asked how old they were at the time of circumcision. The results are presented in Table 13.21. About one-third of circumcisions (34 percent) took place before the age of 13, and over one-third of cases (35 percent) were performed between the ages of 13 and 19. Twenty-nine percent of circumcised men did that relatively late, at age 20 or later. Only 2 percent of the men were not certain when they were circumcised, perhaps because they were circumcised at a very young age and do not remember the event. No specific trends in age at circumcision can be seen with respect to the different age groups. However, a large proportion of subgroups of men with a high prevalence of circumcision, such as men living in urban areas (47 percent), men in the City of Kigali (50 percent), men who have secondary or higher education (43 percent), and men in the wealthiest households (44 percent), circumcision was performed before the age of 13 (43 percent or higher). However, only 38 percent of Muslim men were circumcised before age 13.

Table 13.21 Age at circumcision

Percent distribution of circumcised men age 15-59 by age at circumcision, according to background characteristics, Rwanda 2010

Background characteristic	Age at circumcision					Number of circumcised men
	< 13	13-19	≥ 20	Don't know/ missing	Total	
Age						
15-19	45.0	53.6	0.0	1.4	100.0	146
20-24	35.2	43.3	18.9	2.6	100.0	187
25-29	29.6	22.7	46.7	1.0	100.0	178
30-34	27.9	28.3	41.5	2.3	100.0	126
35-39	44.8	26.9	28.3	0.0	100.0	63
40-44	34.3	22.2	43.6	0.0	100.0	53
45-49	(31.8)	(32.9)	(35.3)	(0.0)	100.0	41
50-54	(17.7)	(36.1)	(40.5)	(5.7)	100.0	34
55-59	*	*	*	*	100.0	16
Residence						
Urban	47.2	22.1	30.2	0.5	100.0	317
Rural	26.4	42.7	28.5	2.4	100.0	526
Province						
City of Kigali	50.0	21.0	28.4	0.6	100.0	268
South	25.6	25.6	47.3	1.5	100.0	65
West	25.1	48.9	24.2	1.9	100.0	303
North	(31.0)	(33.4)	(31.9)	(3.7)	100.0	53
East	29.4	36.4	31.5	2.8	100.0	154
Education						
No education	26.8	32.8	35.4	4.9	100.0	56
Primary	26.6	42.2	29.5	1.7	100.0	407
Secondary and higher	43.4	27.6	27.8	1.3	100.0	380
Religion						
Catholic	30.1	36.9	31.0	2.0	100.0	298
Protestant	35.7	33.0	29.8	1.4	100.0	332
Adventist	35.5	39.5	23.1	1.9	100.0	102
Muslim	38.0	36.7	23.3	2.1	100.0	87
Traditional/Other/No religion	44.3	13.0	42.7	0.0	100.0	24
Wealth quintile						
Lowest	25.3	54.8	19.9	0.0	100.0	59
Second	19.9	44.6	33.1	2.4	100.0	75
Middle	26.8	43.5	24.2	5.5	100.0	106
Fourth	20.2	45.7	31.1	2.9	100.0	142
Highest	43.7	25.6	30.1	0.6	100.0	460
Total	**34.2**	**35.0**	**29.1**	**1.7**	**100.0**	**843**

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.

HIV PREVALENCE 14

In Rwanda, much of the information on the national HIV prevalence estimates is derived from sentinel surveillance. Although surveillance data do not provide estimates of HIV prevalence for the general population, they do provide results specific to women attending antenatal clinics.

The inclusion of HIV testing in the 2005 and 2010 RDHS offers the opportunity to better understand the magnitude and patterns of infection in the general population of reproductive age, including men age 15-59 who are not tested as part of antenatal (ANC) sentinel surveillance. The 2010 RDHS is the second RDHS survey to anonymously link HIV testing results with key behavioral and sociodemographic characteristics of both male and female respondents. The first survey to include HIV testing was the 2005 RDHS. These surveys provide national, population-based trend data for HIV prevalence estimates among women and men.

This chapter presents information on the HIV testing coverage rates among eligible survey respondents, the prevalence of HIV infection among those tested, and the factors associated with HIV infection in the population. HIV specimen collection and testing methodologies used in the 2010 RDHS are described in Chapter 1.

14.1 COVERAGE RATES FOR HIV TESTING

Table 14.1 shows the distribution of women age 15-49 and men age 15-59 eligible for HIV testing by testing status. Ninety-nine percent of all RDHS respondents who were eligible for testing were interviewed and consented to HIV testing. The percentages of respondents who refused to be tested for HIV or were absent at the time of blood collection for the test and therefore did not provide a blood sample is very small. Coverage rates were slightly higher for women than for men (99 and 98 percent, respectively). The proportion of respondents who consented to the HIV test was slightly higher in rural areas than in urban areas for both women and men. Ninety-nine percent of women in rural areas consented to HIV testing, compared with 98 percent in urban areas. Among men, 98 percent consented to testing in rural areas, compared with 96 percent in urban areas.

Table 14.1 Coverage of HIV testing by residence and province

Percent distribution of women age 15-49 and men age 15-59 eligible for HIV testing by testing status, according to residence and province (unweighted), Rwanda 2010

	Testing status									
	DBS Tested[1]		Refused to provide blood		Absent at the time of blood collection		Other/missing[2]			
Background characteristic	Interviewed	Not interviewed	Interviewed	Not interviewed	Interviewed	Not interviewed	Interviewed	Not interviewed	Total	Number
					WOMEN					
Residence										
Urban	97.8	0.0	0.6	0.2	0.1	0.1	0.8	0.5	100.0	1,243
Rural	99.1	0.1	0.1	0.1	0.0	0.1	0.1	0.5	100.0	5,789
Province										
City of Kigali	97.9	0.0	0.5	0.2	0.0	0.1	0.9	0.4	100.0	982
South	99.1	0.2	0.1	0.0	0.0	0.0	0.1	0.5	100.0	1,677
West	98.5	0.0	0.2	0.2	0.1	0.2	0.1	0.7	100.0	1,632
North	99.5	0.0	0.1	0.1	0.0	0.0	0.1	0.3	100.0	1,144
East	99.1	0.2	0.1	0.0	0.0	0.1	0.1	0.4	100.0	1,597
Total	**98.9**	**0.1**	**0.2**	**0.1**	**0.0**	**0.1**	**0.2**	**0.5**	**100.0**	**7,032**
					MEN					
Residence										
Urban	96.2	0.1	1.0	0.3	0.1	0.4	0.8	1.0	100.0	1,178
Rural	98.6	0.0	0.1	0.1	0.0	0.2	0.1	0.9	100.0	5,236

Continued…

Table 14.1—*Continued*

Background characteristic	Testing status: DBS Tested[1] Interviewed	DBS Tested[1] Not interviewed	Refused to provide blood Interviewed	Refused to provide blood Not interviewed	Absent at the time of blood collection Interviewed	Absent at the time of blood collection Not interviewed	Other/missing[2] Interviewed	Other/missing[2] Not interviewed	Total	Number
MEN										
Province										
City of Kigali	96.0	0.0	1.3	0.3	0.1	0.5	0.9	0.8	100.0	948
South	99.0	0.1	0.1	0.0	0.0	0.1	0.1	0.7	100.0	1,529
West	97.8	0.1	0.3	0.3	0.0	0.2	0.2	1.0	100.0	1,437
North	98.4	0.1	0.0	0.0	0.0	0.2	0.0	1.3	100.0	987
East	98.8	0.0	0.1	0.1	0.0	0.1	0.0	0.9	100.0	1,513
Total	98.2	0.0	0.3	0.2	0.0	0.2	0.2	0.9	**100.0**	**6,414**
TOTAL										
Residence										
Urban	97.0	0.0	0.8	0.2	0.1	0.2	0.8	0.7	100.0	2,421
Rural	98.9	0.1	0.1	0.1	0.0	0.1	0.1	0.7	100.0	11,025
Province										
Kigali City	96.9	0.0	0.9	0.3	0.1	0.3	0.9	0.6	100.0	1,930
South	99.1	0.1	0.1	0.0	0.0	0.0	0.1	0.6	100.0	3,206
West	98.2	0.0	0.3	0.3	0.0	0.2	0.2	0.8	100.0	3,069
North	99.0	0.0	0.0	0.0	0.0	0.1	0.0	0.8	100.0	2,131
East	99.0	0.1	0.1	0.1	0.0	0.1	0.1	0.6	100.0	3,110
Total	**98.5**	0.1	0.2	0.1	0.0	0.1	0.2	0.7	**100.0**	**13,446**

[1] Includes all Dried Blood Samples (DBS) tested at the lab and for which there is a result, i.e. positive, negative, or indeterminate. Indeterminate means that the sample went through the entire algorithm, but the final result was inconclusive.
[2] Includes: 1) other results of blood collection (e.g. technical problem in the field), 2) lost specimens, 3) non corresponding bar codes, and 4) other lab results such as blood not tested for technical reason, not enough blood to complete the algorithm, etc.

Table 14.2 shows HIV testing coverage rates for women age 15-49 and men age 15-59 by age, level of education, and wealth quintile. Because HIV testing coverage rates are nearly 100 percent, for women and men, variation by background characteristics is negligible. Additional tables describing the relationship between participation in the HIV testing and characteristics related to HIV risks are presented in Appendix A.

Table 14.2 Coverage of HIV testing by selected background characteristics

Percent distribution of women age 15-49 and men age 15-59 eligible for HIV testing by testing status, according to selected background characteristics (unweighted), Rwanda 2010

Background characteristic	Testing status: DBS Tested[1] Interviewed	DBS Tested[1] Not interviewed	Refused to provide blood Interviewed	Refused to provide blood Not interviewed	Absent at the time of blood collection Interviewed	Absent at the time of blood collection Not interviewed	Other/ missing[2] Interviewed	Other/ missing[2] Not interviewed	Total	Number
WOMEN										
15-19	98.9	0.1	0.0	0.1	0.0	0.1	0.3	0.5	100.0	1,572
20-24	98.7	0.1	0.2	0.0	0.0	0.1	0.4	0.5	100.0	1,408
25-29	98.6	0.2	0.2	0.2	0.1	0.1	0.1	0.6	100.0	1,286
30-34	99.2	0.1	0.1	0.1	0.0	0.0	0.2	0.2	100.0	898
25-39	98.6	0.0	0.6	0.1	0.0	0.1	0.1	0.4	100.0	723
40-44	99.2	0.0	0.2	0.0	0.0	0.0	0.0	0.7	100.0	609
45-49	99.3	0.0	0.4	0.0	0.0	0.0	0.2	0.2	100.0	536
Education										
No education	97.9	0.6	0.1	0.0	0.0	0.0	0.1	1.3	100.0	1,049
Primary	99.2	0.0	0.1	0.1	0.0	0.0	0.1	0.3	100.0	4,779
Secondary and higher	98.6	0.0	0.4	0.0	0.0	0.2	0.5	0.4	100.0	1,083
Wealth quintile										
Lowest	99.4	0.1	0.1	0.0	0.0	0.1	0.0	0.3	100.0	1,242
Second	99.1	0.1	0.1	0.0	0.0	0.0	0.1	0.6	100.0	1,380
Middle	99.2	0.1	0.1	0.1	0.0	0.1	0.1	0.3	100.0	1,350
Fourth	98.9	0.1	0.3	0.1	0.1	0.0	0.0	0.6	100.0	1,380
Highest	97.9	0.1	0.4	0.2	0.0	0.2	0.7	0.5	100.0	1,680
Total	**98.9**	**0.1**	**0.2**	**0.1**	**0.0**	**0.1**	**0.2**	**0.5**	**100.0**	**7,032**

Continued...

Table 14.2—*Continued*

Background characteristic	Testing status: DBS Tested[1] Interviewed	DBS Tested[1] Not interviewed	Refused to provide blood Interviewed	Refused to provide blood Not interviewed	Absent at the time of blood collection Interviewed	Absent at the time of blood collection Not interviewed	Other/missing[2] Interviewed	Other/missing[2] Not interviewed	Total	Number
					MEN					
15-19	98.9	0.0	0.3	0.1	0.0	0.2	0.1	0.3	100.0	1,446
20-24	97.4	0.0	0.3	0.4	0.0	0.0	0.2	1.7	100.0	1,184
25-29	98.0	0.2	0.1	0.2	0.1	0.1	0.6	0.8	100.0	1,059
30-34	97.6	0.0	0.5	0.0	0.0	0.4	0.3	1.2	100.0	738
25-39	98.8	0.0	0.0	0.0	0.0	0.2	0.0	1.0	100.0	494
40-44	98.4	0.0	0.5	0.0	0.0	0.7	0.0	0.5	100.0	439
45-49	98.5	0.2	0.2	0.0	0.0	0.0	0.0	1.0	100.0	411
50-54	97.7	0.0	0.5	0.0	0.0	0.5	0.3	1.0	100.0	385
55-59	98.4	0.0	0.0	0.4	0.0	0.0	0.4	0.8	100.0	258
Education										
No education	96.6	0.1	0.0	0.4	0.0	0.3	0.3	2.3	100.0	775
Primary	98.9	0.0	0.1	0.1	0.0	0.1	0.1	0.6	100.0	4,320
Secondary and higher	97.6	0.2	0.8	0.1	0.0	0.2	0.4	0.8	100.0	1,154
Missing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	3
Wealth quintile										
Lowest	98.7	0.0	0.1	0.0	0.0	0.1	0.0	1.1	100.0	941
Second	97.7	0.2	0.1	0.2	0.0	0.1	0.1	1.6	100.0	1,111
Middle	99.1	0.0	0.1	0.1	0.0	0.2	0.1	0.5	100.0	1,273
Fourth	98.9	0.0	0.1	0.1	0.0	0.0	0.1	0.9	100.0	1,370
Highest	96.8	0.1	0.8	0.3	0.1	0.5	0.6	0.8	100.0	1,719
Total	**98.2**	**0.0**	**0.3**	**0.2**	**0.0**	**0.2**	**0.2**	**0.9**	**100.0**	**6,414**

[1] Includes all Dried Blood Samples (DBS) tested at the lab and for which there is a result, i.e. positive, negative, or indeterminate. Indeterminate means that the sample went through the entire algorithm, but the final result was inconclusive.
[2] Includes: 1) other results of blood collection (e.g. technical problem in the field), 2) lost specimens, 3) noncorresponding bar codes, and 4) other lab results such as blood not tested for technical reason, not enough blood to complete the algorithm, etc.

14.2 HIV PREVALENCE

14.2.1 HIV Prevalence by Age and Sex

Table 14.3 shows that 3 percent of adults age 15-49 in Rwanda are infected with HIV. Among women age 15-49, the HIV prevalence rate is 4 percent, while among men age 15-49 the HIV prevalence rate is 2 percent. HIV prevalence increases with age for both women and men up to age 35-39 for women and age 40-44 for men. For women, HIV prevalence among women age 35-39 is 8 percent, which is much higher than the rate among women age 15-19 (1 percent). For men, the prevalence increases sharply from less than 1 percent among men age 15-19 to 8 percent among those age 40-44, and drops to 6 percent among those age 45-49, and to 4 percent among those age 50-59. Figure 14.1 illustrates the age pattern of HIV prevalence for women and men.

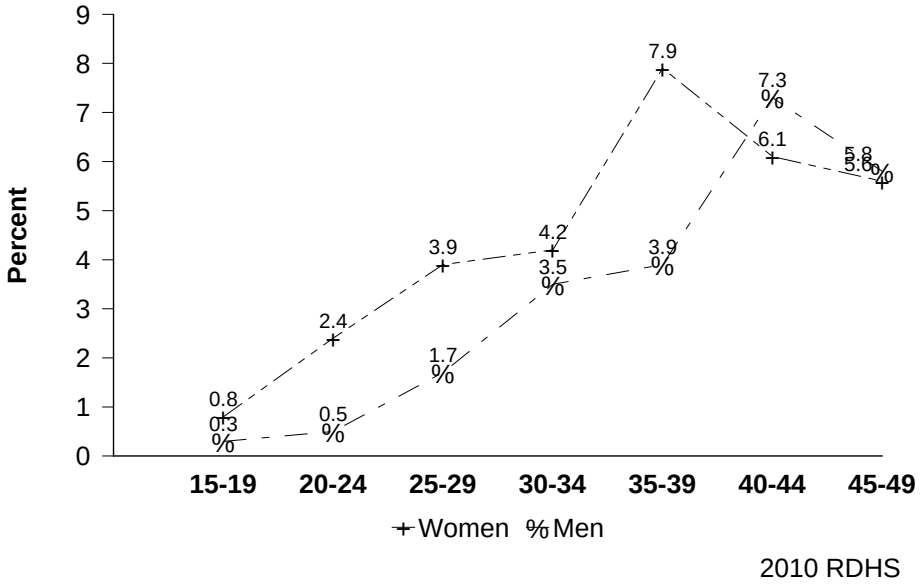
Table 14.3 HIV prevalence by age

Among the de facto women age 15-49 and men age 15-59 who were interviewed and tested, the percentage HIV-1 positive, by age, Rwanda 2010

Age	Women: Percentage HIV positive	Women: Number	Men: Percentage HIV positive	Men: Number	Total: Percentage HIV positive	Total: Number
15-19	0.8	1,532	0.3	1,450	0.5	2,982
20-24	2.4	1,372	0.5	1,158	1.5	2,531
25-29	3.9	1,270	1.7	1,037	2.9	2,307
30-34	4.2	880	3.5	710	3.9	1,590
35-39	7.9	715	3.8	493	6.3	1,208
40-44	6.1	612	7.5	430	6.7	1,042
45-49	5.8	534	5.6	413	5.7	947
Total 15-49	**3.7**	**6,917**	**2.2**	**5,690**	**3.0**	**12,607**
50-59	na	na	4.0	641	na	na
Total 15-59	**na**	**na**	**2.4**	**6,331**	**na**	**na**

na=Not applicable

Figure 14.1 HIV Prevalence by Sex and Age



14.2.2 Trends in HIV Prevalence: 2005 RDHS and 2010 RDHS

Table 14.4 shows trends in HIV prevalence over time, by age. In Rwanda, adult HIV prevalence is unchanged between the 2005 RDHS and the 2010 RDHS: 3 percent for each survey. HIV prevalence among women and men remained at 4 percent and 2 percent, respectively, over the five-year period.

Table 14.4 Trends in HIV prevalence by age

Among de facto women age 15-49 and men age 15-54 who were interviewed and tested, the percentage HIV positive, by age, Rwanda 2005 and 2010

	Women				Men				Total			
	RDHS 2005		RDHS 2010		RDHS 2005		RDHS 2010		RDHS 2005		RDHS 2010	
Age	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
15-19	0.6	1,316	0.8	1,532	0.4	1,087	0.3	1,450	0.5	2,403	0.5	2,982
20-24	2.5	1,142	2.4	1,372	0.5	939	0.5	1,158	1.6	2,080	1.5	2,531
25-29	3.4	833	3.9	1,270	2.1	628	1.7	1,037	2.9	1,461	2.9	2,307
30-34	5.9	806	4.2	880	4.2	497	3.5	710	5.2	1,303	3.9	1,590
35-39	6.9	540	7.9	715	2.3	432	3.9	493	4.8	972	6.3	1,208
40-44	6.3	554	6.1	612	7.1	401	7.3	430	6.6	955	6.6	1,042
45-49	4.1	464	5.8	534	5.3	378	5.6	413	4.6	842	5.7	947
Total 15-49	**3.6**	**5,656**	**3.7**	**6,917**	**2.3**	**4,361**	**2.2**	**5,690**	**3.0**	**10,016**	**3.0**	**12,607**
Total men15-59	**na**	**na**	**na**	**na**	**2.2**	**4,763**	**2.4**	**6,331**	**na**	**na**	**na**	**na**

na = Not applicable

14.2.3 HIV Prevalence by Socioeconomic Characteristics

Table 14.5 shows the variation in HIV prevalence by various socioeconomic characteristics, including residence, province, religion, education, employment, and wealth quintile. HIV prevalence in urban areas is more than three times that in rural areas: 7 percent of women and men age 15-49 in urban areas are infected with HIV compared with 2 percent in rural areas. The City of Kigali has the highest HIV prevalence at 7 percent, which is more than twice as high as that of the other provinces (2 percent to 3 percent).

Table 14.5 HIV prevalence by socioeconomic characteristics

Percentage HIV positive among women and men age 15-49 who were tested, by socioeconomic characteristics, Rwanda 2010

Background characteristic	Women		Men		Total	
	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Religion						
Catholic	3.5	2,947	2.1	2,713	2.8	5,660
Protestant	3.5	2,825	2.4	2,040	3.0	4,865
Adventist	3.7	943	1.9	683	3.0	1,626
Muslim	11.9	77	4.2	107	7.4	184
Traditional/Other/No religion	7.4	111	3.2	147	5.0	258
Missing	*	13	na	na	*	13
Employment (last 12 months)						
Not employed	3.3	1,154	0.7	455	2.5	1,610
Employed	3.8	5,762	2.4	5,235	3.1	10,997
Residence						
Urban	8.7	1,049	5.4	938	7.1	1,987
Rural	2.8	5,867	1.6	4,752	2.3	10,619
Province						
City of Kigali	9.4	808	5.1	741	7.3	1,548
South	3.0	1,593	1.8	1,308	2.4	2,901
West	3.2	1,688	2.0	1,307	2.7	2,995
North	3.1	1,168	1.8	899	2.5	2,067
East	2.5	1,660	1.6	1,435	2.1	3,095
Education						
No education	4.2	1,055	2.9	583	3.7	1,638
Primary	3.4	4,742	2.1	3,922	2.8	8,664
Secondary and higher	4.5	1,023	2.3	1,062	3.4	2,085
Wealth quintile						
Lowest	3.3	1,252	1.9	855	2.7	2,107
Second	3.1	1,392	1.9	986	2.6	2,378
Middle	2.6	1,374	1.5	1,140	2.1	2,514
Fourth	2.5	1,384	2.2	1,236	2.3	2,621
Highest	6.8	1,515	3.3	1,472	5.1	2,987
Total 15-49	**3.7**	**6,917**	**2.2**	**5,690**	**3.0**	**12,607**
50-59	na	na	4.0	641	na	na
Total 15-59	**na**	**na**	**2.4**	**6,331**	**na**	**na**

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

HIV prevalence varies from 7 percent among Muslims to 3 percent among Christians (Catholic, Protestant, or Adventist). Variation in HIV prevalence by religion is greater among women than among men. Among women, HIV prevalence ranges from 4 percent among Catholics, Protestants and Adventists to 12 percent among Muslims. Among men, HIV prevalence ranges from 2 percent among Catholics, Protestants, and Adventists to 4 percent among Muslims.

By education, HIV prevalence in Rwanda is higher among respondents with no education (4 percent) than among those with primary education or higher (3 percent). The same pattern is seen among men; 3 percent of men with no education are infected with HIV compared with 2 percent of men with primary education or higher. However, among women, the pattern differs. Women with some secondary education or higher have the highest

HIV prevalence (5 percent), followed by women with no education (4 percent) and those with primary education (3 percent).

HIV prevalence is three times higher among men who are employed (2 percent) than among men who are not employed (less than 1 percent). Among women, the difference by employment status is less pronounced.

HIV prevalence is highest among men and women in the highest wealth quintile (5 percent compared with 3 percent or less in the lower wealth quintiles). However, the relationship between HIV prevalence and wealth is not linear. Among both women and men, those in the middle wealth quintile have slightly lower HIV prevalence than those in the lowest and second wealth quintiles.

14.2.4 HIV Prevalence by Demographic Characteristics

Table 14.6 shows HIV prevalence among women and men by various demographic characteristics. HIV prevalence is closely related to marital status among both women and men. Seventeen percent of widowed and 7 percent of divorced or separated respondents are HIV positive. Four percent of respondents who are currently married are HIV positive. Among respondents who have never been married, the HIV prevalence is 3 percent for those who have had sex and less than1 percent for those who have never had sex. This suggests that some women and men incorrectly reported that they were not sexually active, or that there is some degree of nonsexual HIV transmission occurring (e.g., through blood transfusions, non-sterile injections, or mother-to-child transmission). HIV prevalence is the same for women and men who are currently married/living together (4 percent each), and not very different for women and men who are divorced/separated (7 and 8 percent, respectively). However, the HIV prevalence among unmarried women who have ever had sex is much higher than among their male counterparts (6 percent compared with 1 percent).

HIV prevalence is 6 percent among respondents who reported being in a polygynous union, compared with 3 percent of respondents who are in a nonpolygynous union or who are not currently in union. The pattern is similar when observing the data disaggregated for women and men. Among women, 6 percent of those in polygynous union are HIV positive, compared with 3 percent of women in nonpolygynous union and 4 percent of those who are not currently in union. Among men, HIV prevalence is 9 percent among those in polygynous union, compared with 4 percent among those in nonpolygynous union and 1 percent among those not currently in union.

The 2010 RDHS measured time away from home in two different ways: (1) number of times the respondent slept away from home in the past 12 months, and (2) whether or not the respondent was away for more than 1 month at a time. Looking at times away from home, HIV prevalence is highest among respondents who slept away from home the most often. Four percent of men and women who slept away from home five or more times in the past 12 months are HIV positive (6 percent among women and 4 percent among men). However, for both women and men, those who slept away from home three to four times had a lower HIV prevalence than those who did not sleep away from home at all. With respect to the duration of time away from home over the past year, HIV prevalence is lower among women who spent more than one month away from home (2 percent) than among women who were away from home for less than one month and those who had not traveled away from home (4 percent each). The differences in HIV prevalence by duration of stay away from home among men are small.

Women who were pregnant at the time of the survey are less likely to be HIV positive than women who were not pregnant or who were unsure of their pregnancy status (2 and 4 percent, respectively). Most women who received ANC went to a public sector source. There is little difference in HIV prevalence among women who did not receive ANC and those who received ANC from a public sector facility.

Table 14.6 HIV prevalence by demographic characteristics

Percentage HIV positive among women and men age 15-49 who were tested, by demographic characteristics, Rwanda 2010

Demographic characteristic	Women		Men		Total	
	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive[1]	Number
Marital status						
Never married	1.7	2,735	0.6	2,874	1.2	5,609
…Ever had sexual intercourse	6.0	629	1.0	1,139	2.8	1,768
…Never had sexual intercourse	0.5	2,106	0.3	1,736	0.4	3,842
Married/living together	3.6	3,453	3.6	2,701	3.6	6,154
Divorced or separated	6.8	366	7.5	92	7.0	458
Widowed	16.5	362	*	22	16.6	385
Type of union						
In polygynous union	5.7	275	9.3	56	6.3	332
In nonpolygynous union	3.4	3,164	3.5	2,645	3.4	5,809
Not currently in union	3.8	3,464	0.9	2,989	2.5	6,452
DK/missing	*	14	na	0	*	14
Times slept away from home in past 12 months						
None	3.6	3,698	2.2	3,034	3.0	6,731
1-2	3.8	2,428	1.9	1,610	3.0	4,038
3-4	3.2	545	1.8	533	2.5	1,078
5+	5.5	246	3.7	513	4.3	759
Time away in past 12 months						
Away for more than 1 month	2.3	444	2.4	678	2.4	1,123
Away for less than 1 month	4.1	2,773	2.1	1,974	3.3	4,746
No away	3.6	3,698	2.2	3,034	3.0	6,731
Missing	*	2	*	4	*	7
Pregnant						
Currently pregnant	2.4	484	na	na	na	na
Not pregnant or not sure	3.8	6,433	na	na	na	na
ANC for last birth in the last 3 years						
ANC provided by the public sector	3.3	2,287	na	na	na	na
ANC provided by other than the public sector	(5.2)	28	na	na	na	na
No ANC/No birth in last 3 years	3.9	4,600	na	na	na	na
Missing	*	3	na	na	na	na
Male circumcision						
Circumcised	na	na	2.5	786	na	na
Not circumcised	na	na	2.2	4,897	na	na
DK/Missing	na	na	*	7	na	na
Total 15-49	**3.7**	**6,917**	**2.2**	**5,690**	**3.0**	**12,607**
50-59	na	na	4.0	641	na	na
Total 15-59	**na**	**na**	**2.4**	**6,331**	**na**	**na**

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

14.2.5 HIV Prevalence by Sexual Risk Behavior

Table 14.7 presents HIV prevalence rates among respondents who have ever had sexual intercourse by sexual behavior indicators. In reviewing these results, it is important to note that responses to questions about sexual risk behaviors may be subject to reporting bias. Also, sexual behavior in the 12 months preceding the survey may not adequately reflect lifetime sexual risk, nor is it possible to know the sequence of events, e.g., whether any reported condom use occurred before or after HIV infection. Among respondents age 15-49 who have ever had sex and were tested for HIV, 4 percent are HIV positive: 5 percent of women and 3 percent of men.

Among women whose sexual debut was before the age of 18, 6 percent are HIV positive, a figure that decreases to 5 percent among women whose sexual debut was at age 18 or older. By contrast, HIV prevalence is highest for men whose sexual debut was at age 20 or older (4 percent) and lowest for men whose sexual debut was before age 16 (1 percent).

Table 14.7 HIV prevalence by sexual behavior

Percentage HIV positive among women and men age 15-49 who ever had sex and were tested for HIV, by sexual behavior characteristics, Rwanda 2010

Sexual behavior characteristic	Women		Men		Total	
	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Age at first sexual intercourse						
<16	6.0	471	1.4	657	3.4	1,128
16-17	6.2	795	2.7	419	5.0	1,214
18-19	5.2	1,099	3.0	720	4.3	1,819
20+	4.5	2,343	3.7	2,068	4.1	4,412
Missing	6.9	103	1.0	88	4.2	191
Condom use at last sexual intercourse in past 12 months						
Used condom	20.5	300	10.7	472	14.5	772
Did not use condom	2.8	3,539	2.3	2,712	2.6	6,251
No sexual intercourse in last 12 months	8.8	971	1.0	769	5.3	1,739
DK/Missing	*	1	na	na	*	1
Number of lifetime partners						
1	3.1	3,451	0.6	1,725	2.3	5,176
2	8.3	997	3.4	1,085	5.7	2,082
3-4	14.0	318	4.6	728	7.4	1,046
5-9	31.0	32	8.8	276	11.1	308
10+	*	10	13.4	122	14.3	132
Missing	*	3	*	17	*	19
Paid for sexual intercourse in past 12 motnhs[1]						
Yes	na	na	8.9	77	na	na
Used condom	na	na	9.8	58	na	na
Did not use condom	na	na	*	19	na	na
No (No paid sexual intercourse/no sexual intercourse in last 12 months)	na	na	2.9	3,876	na	na
Total 15-49	**5.1**	**4,811**	**3.1**	**3,953**	**4.2**	**8,764**
50-59	na	na	4.1	640	na	na
Total 15-59	**na**	**na**	**3.2**	**4,593**	**na**	**na**

na = Not applicable
Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Includes men who report having a prostitute for at least one of their last three sexual partners in the past 12 months

Use of a condom at last sexual intercourse in the past 12 months is positively correlated with HIV prevalence among both women and men. HIV prevalence is higher among women who used a condom at last sex (21 percent) than among those who did not (3 percent). Similarly, men who used a condom at last sexual intercourse in the past 12 months have a prevalence rate of 11 percent compared with 2 percent among those who did not use a condom. HIV prevalence among women and men who did not have sexual intercourse in the past 12 months is 9 percent and 1 percent, respectively.

HIV prevalence increases as the number of lifetime sexual partners increases for both women and men. Prevalence among women increases from 3 percent among women with one lifetime partner to 8 percent among women with two lifetime partners, to 14 percent for three to four lifetime partners, and to 31 percent for five to nine lifetime partners. Among men, HIV prevalence ranges from less than 1 percent among men with one lifetime partner to 13 percent among men with ten or more lifetime partners.

Men who paid for sexual intercourse in the past 12 months have a higher prevalence of HIV than men who did not report paying for sex or who did not have sexual intercourse in the past 12 months (9 percent versus 3 percent).

14.3 HIV PREVALENCE AMONG YOUTH

Table 14.8 shows HIV prevalence among women and men age 15-24. Overall, 1 percent of youth age 15-24 tested positive for HIV, and prevalence is higher among young women (2 percent) than among young men (less

than 1 percent). Among young women, HIV prevalence increases steadily with age. For young men, the increase in HIV prevalence is not linear. The low overall prevalence among men makes it very difficult to analyze differentials by age or other background characteristics.

Young respondents who have never been married have a lower HIV prevalence (1 percent) than those who are married or living together (2 percent), and a much lower prevalence than youth who are separated, divorced, or widowed (8 percent). Among youth who have never been married, those who have never had sex have a lower prevalence (less than 1 percent) than those who have had sex (2 percent). Among young women, those who have never married but have ever had sex are more likely to have HIV than those who are currently married, but the reverse is true of young men.

Among young women, HIV prevalence is 3 percent among those who are pregnant and 2 percent among women who are not pregnant or are not sure.

Table 14.8 HIV prevalence among young people, by background characteristics

Percentage HIV-positive among women and men age 15-24 who were tested for HIV, by background characteristics, Rwanda 2010

Background characteristic	Women		Men		Total	
	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Age						
15-19	0.8	1,532	0.3	1,450	0.5	2,982
...15-17	0.6	976	0.4	931	0.5	1,907
...18-19	1.0	556	0.1	519	0.5	1,075
20-24	2.4	1,372	0.5	1,158	1.5	2,531
20-22	1.9	853	0.4	704	1.2	1,557
23-24	3.3	520	0.5	454	2.0	974
Marital status						
Never married	1.1	2,296	0.3	2,372	0.7	4,668
...Ever had sex	3.8	406	0.3	775	1.5	1,181
...Never had sex	0.5	1,890	0.3	1,597	0.4	3,487
Married/Living together	2.6	537	1.1	225	2.1	762
Divorced/Separated/Widowed	8.7	71	*	12	7.5	83
Currently pregnant						
Pregnant	2.5	166	na	na	na	na
Not pregnant or not sure	1.5	2,739	na	na	na	na
Residence						
Urban	3.7	472	1.5	389	2.7	861
Rural	1.1	2,432	0.2	2,219	0.7	4,651
Province						
City of Kigali	3.8	372	1.2	288	2.7	660
South	1.6	623	0.4	570	1.0	1,193
West	1.0	741	0.2	644	0.6	1,385
North	1.1	488	0.3	441	0.7	929
East	1.2	680	0.1	665	0.7	1,345
Education						
No education	2.9	174	0.0	99	1.9	273
Primary	1.3	2,047	0.3	1,842	0.8	3,888
Secondary and higher	1.8	658	0.5	639	1.2	1,298
Wealth quintile						
Lowest	1.7	463	0.4	369	1.1	832
Second	0.9	580	0.0	433	0.5	1,013
Middle	0.6	577	0.2	544	0.4	1,121
Fourth	1.1	577	0.4	581	0.7	1,158
Highest	3.1	707	0.6	681	1.9	1,388
Total	**1.5**	**2,904**	**0.4**	**2,608**	**1.0**	**5,512**

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

As observed for adults age 15-49, HIV prevalence among youth age 15-24 is higher in urban areas than in rural areas, and the same urban-rural pattern is observed for young women and men. Four percent of young women living in urban areas are infected with HIV compared with 1 percent of their rural counterparts. Among young men, prevalence is 2 percent in urban areas and less than 1 percent in rural areas. By province, HIV prevalence is higher

in the City of Kigali (3 percent) than in other provinces. HIV prevalence is highest in the City of Kigali for both young women and young men.

Among youth, the HIV prevalence varies by educational attainment. Young women with no education have an HIV prevalence of 3 percent, compared with 2 percent of women with some secondary education or higher and 1 percent for women with primary education. Among young men, HIV prevalence and level of education share the same pattern.

By wealth, HIV prevalence is highest among both young women and young men in the highest wealth quintile. However, the relationship of HIV prevalence and household wealth quintile is not linear.

14.3.1 HIV Prevalence by Condom Use at Last Sex in Past 12 Months among Youth

The 2010 RDHS collected data on behaviors that correlate with sexually transmitted infection (STI) rates. Information on sexual behavioral characteristics is important in designing, targeting, and monitoring HIV prevention interventions for the young adult population. This section examines data on condom use at last sexual intercourse in the past 12 months and the prevalence of HIV infections among young respondents who have ever had sexual intercourse.

Table 14.9 shows HIV prevalence among youth by condom use at last sexual intercourse in past 12 months. Overall, 2 percent of respondents age 15-24 who have ever had sex and were tested for HIV in the 2010 RDHS are HIV positive: 4 percent of young women and less than 1 percent of young men tested positive.

Table 14.9 HIV prevalence among young people by condom use at last sex

Percentage HIV-positive among women and men age 15-24 who have ever had sex and were tested for HIV, by condom use at last sex in the past 12 months, Rwanda 2010

	Women		Men			
Condom use at last sexual intercourse in past 12 months	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Used condom	13.8	81	1.1	182	5.1	263
Did not use condom	2.6	644	0.8	309	2.0	953
No sexual intercourse in last 12 months	2.6	289	0.0	520	0.9	809
Total	**3.5**	**1,014**	0.4	1,011	2.0	2,025

Youth who used a condom at last sexual intercourse in the past 12 months are more likely to be HIV positive than those who did not use a condom at last sex (5 percent versus 2 percent). The association between HIV infection and condom use at last sexual intercourse is stronger among young women than among young men: 14 percent of young women who used a condom at last sex are HIV positive, compared with 3 percent of those who did not use a condom. The association observed among young men is weak. Three percent of young women who have had sex but not in the past 12 months are infected with HIV. Less than 1 percent of young men who have had sex but not in the past 12 months tested positive for HIV.

14.4 HIV Prevalence by Other Characteristics

14.4.1 HIV Prevalence and STIs

A strong link exists between sexually transmitted infections and the sexual transmission of HIV. Many studies have demonstrated that sexually transmitted infections are a co-factor for HIV transmission. Management and treatment of STIs may play an important role in the reduction of HIV transmission. Respondents in the 2010 RDHS who had ever had sex were asked if they had contracted a disease through sexual contact in the past 12 months or if they had had any symptoms associated with STIs (a bad-smelling, abnormal discharge from the vagina or penis, or a genital sore or ulcer). Table 14.10 shows HIV prevalence among women and men age 15-49 who have

ever had sex by whether respondents reported an STI in the 12 months preceding the survey. The data show that respondents with a history of STIs or STI symptoms have a higher HIV prevalence than those with no history of STIs or STI symptoms (13 percent compared with 3 percent).

Women who had an STI or STI symptoms in the past 12 months are more than three times as likely to be HIV positive (15 percent) as women who did not have an STI or STI symptoms (4 percent). Similarly, men who reported having an STI or STI symptoms in the past 12 months (10 percent) are more than three as likely to be HIV positive as men who did not report an STI or STI symptoms (3 percent).

Table 14.10 HIV prevalence by sexually transmitted infections

Percentage HIV positive among women and men age 15-49 who ever had sex and were tested for HIV, by whether they had an STI in the past 12 months, Rwanda 2010

	Women		Men		Total	
Characteristic	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Sexually transmitted infection in past 12 months						
Had STI or STI symptoms	15.0	428	9.5	329	12.6	756
No STI, no symptoms	4.2	4,367	2.5	3,605	3.4	7,971
DK/missing	*	17	*	20	(0.0)	37
Total 15-49	**5.1**	**4,811**	**3.1**	**3,953**	**4.2**	**8,764**

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

14.4.2 HIV Prevalence by Male Circumcision

In the recent past, several studies in sub-Saharan Africa—including clinical trials conducted in South Africa, Kenya, and Uganda (Auvert et al., 2005; and Gray et al., 2007)—have documented that male circumcision is associated with a lower risk of acquiring HIV. Although the research supporting circumcision's protective effects is compelling, it is important to emphasize that circumcised men can still become infected with HIV and can infect their sexual partners.

To investigate the relationship between male circumcision and HIV status in the 2010 RDHS, men were asked whether they were circumcised. The majority of men reported that they are not circumcised (87 percent).[1] For those men who reported that they are circumcised, 78 percent reported that a health professional performed the circumcision. Sixty-nine percent of circumcised men report that their circumcision occurred before age 20.[2]

Table 14.11 presents data on HIV prevalence by male circumcision status. In Rwanda, the relationship between HIV prevalence and circumcision status is not in the expected direction. Circumcised men age 15-49 have a higher HIV prevalence than men who have not been circumcised, though the difference is small (3 percent compared with 2 percent). However, for men age 15-29, HIV prevalence is higher among uncircumcised men than among circumcised men. In the 30-39 age group, circumcised and uncircumcised men are roughly equally likely to be HIV positive (4 percent). Among men age 44-59, HIV prevalence is higher among circumcised men than among uncircumcised men.

HIV prevalence is higher in urban areas among both circumcised and uncircumcised men. HIV prevalence among circumcised men is 4 percent in urban areas and 1 percent in rural areas. For uncircumcised men, the prevalence is 6 percent in urban areas and 2 percent in rural areas. The pattern of HIV prevalence by province is not the same for circumcised and uncircumcised men. Among both circumcised and uncircumcised men, HIV

[1] See Table 13.19 in Chapter 13.
[2] See Table 13.21 in Chapter 13.

prevalence is highest in the City of Kigali (4 percent among circumcised and 6 percent among uncircumcised). In the other provinces, HIV prevalence among circumcised men is lowest in West province and highest in South province, whereas among uncircumcised men, the prevalence is lowest in East province and highest in West province. Circumcised men in the West province have the lowest HIV rate compared with other provinces (1 percent compared with 3 percent).

Patterns in HIV prevalence by education also differ by circumcision status. Circumcised men who have a primary education (3 percent) are more likely to be HIV positive than those with no education (2 percent) and those with secondary and higher education (2 percent). However, among uncircumcised men, men with primary education are slightly less likely to be HIV positive (2 percent) than those with no education and secondary and higher education (3 percent each).

Association of HIV prevalence with wealth quintiles among both circumcised and uncircumcised men is not linear and does not follow a clear pattern.

Among religious groups, HIV prevalence is highest in Muslims among both circumcised and uncircumcised men.

Table 14.11 HIV prevalence by male circumcision

Among men age 15-49 who were tested for HIV, the percentage HIV positive by whether circumcised, according to background characteristics, Rwanda 2010

Background characteristic	Circumcised		Not circumcised	
	Percentage HIV positive	Number	Percentage HIV positive	Number
Age				
15-19	0.0	143	0.3	1,299
20-24	0.0	187	0.6	972
25-29	0.4	176	2.0	861
30-34	3.7	124	3.5	586
35-39	3.7	64	3.8	429
40-44	10.5	52	7.1	378
45-49	(16.3)	41	4.4	372
Religion				
Catholic	2.1	273	2.1	2,435
Protestant	2.7	315	2.3	1,723
Adventist	0.0	100	2.2	583
Muslim	4.5	75	3.6	32
Traditional/Other/No religion	7.9	24	2.3	123
Residence				
Urban	4.4	296	5.9	640
Rural	1.4	490	1.6	4,256
Province				
City of Kigali	3.6	247	5.8	491
South	3.3	58	1.7	1,248
West	1.2	286	2.2	1,021
North	(2.6)	52	1.8	848
East	2.8	143	1.5	1,289
Education				
No education	(1.8)	46	3.0	537
Primary	3.4	384	2.0	3,532
Secondary and higher	2.1	286	2.5	775
Wealth quintile				
Lowest	0.0	57	2.1	796
Second	3.1	71	1.8	916
Middle	3.1	98	1.3	1,041
Fourth	1.7	130	2.2	1,106
Highest	2.8	431	3.5	1,037
Total 15-49	**2.5**	**786**	**2.2**	**4,897**
50-59	6.8	49	3.8	592
Total 15-59	**2.8**	**836**	**2.4**	**5,488**

Note: Table excludes 7 men with information missing on circumcision status. 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

14.4.3 Prior HIV Testing by Current HIV Status

Knowing one's HIV status through testing helps individuals make decisions to reduce infection risks and increase safer sex practices. Additionally, knowledge of one's HIV status provides an important link to HIV/AIDS treatment and care, and other support services including clinical management of related illness, access to antiretroviral therapy (ART), and psychological support for HIV-positive persons. To assess the coverage of HIV testing services, 2010 RDHS respondents were asked whether they had ever been tested for HIV. Those respondents who had been tested were further asked whether they had received the results of their last HIV test and where they had been tested.

Table 14.12 shows that respondents who are HIV-positive are more likely than those who are HIV-negative to have ever received an HIV test (92 percent compared with 75 percent). Ninety percent of HIV-positive people had been tested previously and received the results of their last test. Only 8 percent of HIV-positive women and 10 percent of HIV-positive men had never been tested for HIV.

Table 14.12 Prior HIV testing by current HIV status

Percent distribution of women and men age 15-49 who tested HIV positive and who tested HIV negative by HIV testing status prior to the survey, Rwanda 2010

	Women		Men		Total	
HIV testing prior to the survey	HIV positive	HIV negative	HIV positive	HIV negative	HIV positive	HIV negative
Previously tested						
Received result of last test	91.3	74.4	87.1	68.9	89.9	71.9
Did not receive result of last test	1.1	1.9	3.3	3.5	1.9	2.7
Not previously tested	7.5	23.5	9.6	27.6	8.2	25.4
Missing	0.0	0.2	0.0	0.0	0.0	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Number	257	6,660	127	5,563	383	12,223

14.5 HIV PREVALENCE AMONG COHABITING COUPLES

In the 2010 RDHS, 2,841 cohabiting couples were interviewed and tested for HIV. Table 14.13 shows that in 95 percent of cohabiting couples, both partners are HIV negative, while in more than 2 percent of cohabiting couples, both partners are HIV positive. Two percent of cohabiting couples are discordant; that is, one partner is infected and the other is not. Among discordant partners, 1 percent represent cases where the male partner is HIV positive and the female partner is HIV negative, while another 1 percent represent cases where the female partner is HIV positive and the male partner is HIV negative.

Table 14.13 HIV prevalence among couples

Percent distribution of couples living in the same household, both of whom were tested for HIV, by HIV status, according to background characteristics, Rwanda 2010

Background characteristic	Both HIV positive	Man HIV positive, woman HIV negative	Woman HIV positive, man HIV negative	Both HIV negative	Total	Number
Woman's Age						
15-19	(0.0)	(0.0)	(0.0)	(100.0)	100.0	44
20-29	2.2	1.1	1.1	95.6	100.0	1,196
30-39	2.7	2.0	0.8	94.5	100.0	1,018
40-49	2.3	0.7	0.8	96.2	100.0	584
Man's Age						
15-19	*	*	*	*	100.0	3
20-29	1.0	0.7	0.7	97.7	100.0	814
30-39	2.1	1.1	1.2	95.6	100.0	1,003
40-49	3.8	2.3	0.5	93.4	100.0	708
50-59	3.6	1.5	1.1	93.8	100.0	313
Age difference between partners						
Woman older	0.7	1.5	1.9	96.0	100.0	405
Same age/man older by 0-4 years	1.9	0.5	0.5	97.1	100.0	1,302
Man older by 5-9 years	2.8	1.4	1.0	94.8	100.0	758
Man older by 10-14 years	3.6	2.7	1.2	92.5	100.0	245
Man older by 15+ years	7.5	6.1	0.9	85.5	100.0	131
Type of union						
Monogamous	2.2	1.3	0.9	95.6	100.0	2,683
Polygynous	3.9	1.6	1.7	92.7	100.0	152
DK/missing	*	*	*	*	100.0	7
Multiple partners in past 12 months[1]						
Both no	2.0	1.2	0.8	95.9	100.0	2,666
Man yes, woman no	8.0	1.8	2.6	87.7	100.0	163
Woman yes, man no	9.3	13.8	0.0	76.9	100.0	10
Both yes	*	*	*	*	100.0	1
Either missing	*	*	*	*	100.0	1
Residence						
Urban	7.8	2.4	2.9	86.9	100.0	368
Rural	1.6	1.2	0.6	96.7	100.0	2,473
Province						
City of Kigali	8.5	1.6	4.5	85.4	100.0	292
South	0.9	1.6	0.0	97.5	100.0	645
West	2.7	1.0	0.6	95.7	100.0	679
North	1.8	1.5	0.0	96.7	100.0	466
East	1.4	1.2	1.1	96.3	100.0	760
Woman's education						
No education	2.2	1.4	0.9	95.5	100.0	549
Primary	2.0	1.3	0.7	96.1	100.0	2,018
Secondary	6.2	1.5	2.6	89.6	100.0	242
More than secondary	(0.0)	(0.0)	(4.1)	(95.9)	100.0	32
Man's education						
No education	2.2	1.7	0.8	95.4	100.0	503
Primary	2.0	1.2	0.8	96.0	100.0	1,980
Secondary	4.6	1.3	1.5	92.6	100.0	314
More than secondary	6.3	2.0	4.0	87.6	100.0	45
Wealth quintile						
Lowest	1.5	1.0	0.4	97.0	100.0	486
Second	1.8	1.9	0.3	95.9	100.0	559
Middle	1.5	1.0	0.7	96.9	100.0	609
Fourth	1.9	1.2	0.5	96.4	100.0	643
Highest	5.3	1.4	2.6	90.6	100.0	545
Total	**2.4**	**1.3**	**0.9**	**95.4**	**100.0**	**2,841**

Note: The table is based on couples for which a valid test result (positive or negative) is available for both partners. 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.

[1] A respondent is considered to have had multiple sexual partners in the past 12 months if he or she had sexual intercourse with two or more people during this time period. (Respondents with multiple partners include polygynous men who had sexual intercourse with two or more wives.)

WOMEN'S STATUS AND DEMOGRAPHIC AND HEALTH OUTCOMES

15

The status of women is an important factor in development, poverty reduction, and improvement in the standard of living. This chapter presents information on factors that affect the status of women in society: employment, type of earnings, control over cash earnings, earnings relative to those of a husband, and participation in decision-making.

This chapter also defines two summary indices of women's empowerment derived from women's responses. The indices are based on the number of household decisions in which the respondent participates and her agreement with reasons for which wife beating is justified. The ranking of women on these indices is then related to select demographic and health outcomes, including contraceptive use and the receipt of health care services during pregnancy, childbirth, and the postpartum period.

15.1 WOMEN'S AND MEN'S EMPLOYMENT

The 2010 Rwanda Demographic and Health Survey (RDHS) collected information related to women's and men's employment. Women's employment includes formal employment as well as work in the home, on family farms, in family businesses, and in other informal sectors. It is important to be cautious while collecting data on women's employment because some activities are not perceived by women themselves as employment and hence may not be reported as such. To avoid underestimating women's employment, the 2010 RDHS asked female respondents several questions to ascertain their employment status. First, they were asked whether they had done any work in the past seven days aside from their own housework. Women who answered 'no' to this question were asked, 'As you know, some women take up jobs for which they are paid in cash or in kind. Others sell things, have a small business, or work on the family farm or in the family business. In the last seven days, have you done any of these things or any other work?'

15.1.1 Employment Status

Table 15.1 shows the percent distribution of currently married women and men age 15-49, by employment and cash earnings. Overall, 90 percent of currently married women and over 99 percent of currently married men were employed in the 12 months preceding the survey.

The proportion of employed women increases with age, from 81 percent among women age 15-19 to 91 to 92 percent among women age 25-49. Comparing married women and men age 15-49, 19 percent of women and 38 percent of men receive payment in cash only. About the same proportion of married women as married men are not paid for their work (12 percent versus 14 percent). Married women are four times as likely as men to receive in-kind-only payment for their employment (17 percent and 4 percent, respectively).

Table 15.1 Employment and cash earnings of currently married women and men

Percentage of currently married women and men age 15-49 who were employed at any time in the past 12 months and the percent distribution of currently married women and men employed in the past 12 months by type of earnings, according to age, Rwanda 2010

Age	Among currently married respondents: Percentage employed	Among currently married respondents: Number of respondents	Percent distribution of currently married respondents employed in the past 12 months, by type of earnings: Cash only	Cash and in-kind	In-kind only	Not paid	Missing/ don't know	Total	Number of women
				WOMEN					
Age									
15-19	80.5	89	21.7	41.9	19.3	17.0	0.0	100.0	71
20-24	86.8	998	21.7	49.4	17.3	11.7	0.0	100.0	866
25-29	90.6	1,773	18.9	54.4	15.0	11.6	0.0	100.0	1,605
30-34	90.8	1,458	19.1	51.5	16.8	12.6	0.0	100.0	1,324
35-39	91.4	1,112	21.3	50.5	17.0	11.2	0.0	100.0	1,017
40-44	91.9	780	14.4	53.4	19.0	13.2	0.0	100.0	716
45-49	91.8	688	14.8	54.1	19.1	11.8	0.2	100.0	631
Total 15-49	**90.3**	**6,897**	**18.8**	**52.2**	**16.9**	**12.0**	**0.0**	**100.0**	**6,231**
				MEN					
Age									
15-19	*	3	*	*	*	*	*	100.0	3
20-24	99.5	222	36.6	42.5	5.8	15.1	0.0	100.0	221
25-29	100.0	646	37.7	42.3	3.5	16.3	0.2	100.0	646
30-34	99.5	613	42.1	41.4	3.6	13.0	0.0	100.0	610
35-39	100.0	439	35.8	43.7	4.3	16.2	0.0	100.0	439
40-44	99.5	397	37.0	45.1	4.2	13.7	0.0	100.0	395
45-49	99.6	380	34.9	48.8	4.5	11.5	0.3	100.0	379
Total 15-49	**99.7**	**2,699**	**37.8**	**43.6**	**4.1**	**14.4**	**0.1**	**100.0**	**2,692**
50-59	97.2	588	28.7	50.0	5.1	16.2	0.0	100.0	572
Total 15-59	**99.3**	**3,287**	**36.2**	**44.8**	**4.3**	**14.7**	**0.1**	**100.0**	**3,264**

Note: An asterisk indicates that a figure is based on less than 25 unweighted cases and has been suppressed.

15.2 WOMEN'S CONTROL OVER THEIR OWN EARNINGS AND RELATIVE MAGNITUDE OF WOMEN'S EARNINGS

To assess women's autonomy, currently married women who earned cash for their work in the 12 months preceding the survey were asked who usually decides how their earnings are spent. Women who earned cash for their work were also asked the relative magnitude of their earnings compared with those of their husband. This information assesses women's control over their own earnings, as it is expected that employment and earnings are more likely to empower women if women themselves control their own earnings and perceive them as significant relative to those of their husband.

Table 15.2.1 shows the percent distribution of currently married women age 15-49 who received cash earnings for employment in the 12 months preceding the survey, by the person who decides how the cash earnings are to be used and by the relative magnitude of their earnings compared with those of their husbands, according to background characteristics.

Only 18 percent of women decide for themselves how their earnings are used, and 66 percent of women make joint decisions with their husbands. Fifteen percent of the married women responded that decisions regarding how their earnings are spent are made mainly by their husbands. The percentage of women who decide how their earnings are spent generally increases with age, from 6 percent among women age 15-19 to 28 percent among women age 45-49. Women in urban areas are more likely to make decisions on how their earnings are used than their counterparts in rural areas (29 percent versus 17 percent). Sixteen percent of currently married women in rural areas report that their husbands mainly decide how to spend their earnings, as compared with 8 percent of currently married women residing in urban areas. Decision-making on earnings also varies by province. Thirty percent of currently married women in the City of Kigali decide how to spend their earnings, as compared with 14 percent in the East province and 15 percent in the West province. The West province has the highest proportion of women (70

percent) who report joint decision-making with their husbands regarding their earnings. Women in the East province are more likely than women in the other regions to report that their husbands mainly decide how to spend their earnings (22 percent).

Table 15.2.1 Control over women's cash earnings and relative magnitude of women's cash earnings

Percent distribution of currently married women age 15-49 who received cash earnings for employment in the 12 months preceding the survey by person who decides how wife's cash earnings are used and by whether she earned more or less than her husband, according to background characteristics, Rwanda 2010

Background characteristic	Person who decides how the wife's cash earnings are used:					Wife's cash earnings compared with husband's cash earnings:						
	Mainly wife	Wife and husband jointly	Mainly husband	Missing	Total	More	Less	About the same	Husband has no earnings	Don't know/ missing	Total	Number of women
Age												
15-19	6.4	74.1	19.5	0.0	100.0	4.5	83.2	12.2	0.0	0.0	100.0	45
20-24	14.5	67.2	17.3	0.9	100.0	5.9	75.8	15.5	0.9	1.9	100.0	616
25-29	11.8	71.1	16.2	0.9	100.0	7.3	70.7	19.1	1.6	1.4	100.0	1,178
30-34	18.4	67.7	13.2	0.6	100.0	7.3	69.8	19.9	1.9	1.2	100.0	935
35-39	22.9	62.1	14.1	0.8	100.0	13.5	60.6	18.7	5.2	2.0	100.0	730
40-44	24.1	58.4	16.3	1.2	100.0	13.9	57.1	22.5	4.7	1.9	100.0	486
45-49	28.0	61.3	9.0	1.6	100.0	15.2	55.1	19.8	5.9	4.0	100.0	435
Number of living children												
0	11.1	72.0	14.9	2.0	100.0	7.6	70.4	18.7	1.2	2.0	100.0	246
1-2	14.7	69.9	14.6	0.9	100.0	7.5	72.1	17.0	1.9	1.5	100.0	1,615
3-4	20.1	63.6	15.7	0.6	100.0	10.2	63.9	20.6	3.8	1.5	100.0	1,407
5+	22.7	62.4	13.7	1.1	100.0	12.3	61.6	20.2	3.5	2.4	100.0	1,157
Residence												
Urban	28.5	62.4	8.4	0.6	100.0	13.9	64.2	18.2	2.4	1.3	100.0	628
Rural	16.6	66.6	15.8	1.0	100.0	8.9	67.0	19.2	3.0	1.9	100.0	3,796
Region												
City of Kigali	29.8	60.5	9.2	0.5	100.0	15.3	70.5	11.8	1.6	0.8	100.0	529
South	21.4	67.4	9.9	1.3	100.0	9.1	50.5	34.0	4.6	1.8	100.0	900
West	15.2	70.2	13.7	0.9	100.0	10.2	69.3	14.9	3.5	2.1	100.0	1,042
North	18.0	67.0	13.7	1.2	100.0	9.4	69.2	15.3	2.8	3.3	100.0	765
East	13.7	63.3	22.4	0.6	100.0	7.0	73.2	17.0	1.7	1.0	100.0	1,188
Education												
No education	21.7	60.1	16.6	1.5	100.0	10.3	66.5	17.6	3.2	2.4	100.0	850
Primary	16.9	67.1	15.3	0.7	100.0	8.5	66.7	20.3	2.9	1.6	100.0	3,065
Secondary and higher	21.0	69.9	8.2	1.0	100.0	15.0	66.7	14.0	2.7	1.6	100.0	509
Wealth quintile												
Lowest	24.1	57.9	16.4	1.6	100.0	9.2	58.8	23.2	5.9	2.9	100.0	815
Second	17.3	65.0	16.7	1.1	100.0	7.6	67.3	20.2	3.2	1.6	100.0	888
Middle	15.5	69.2	14.2	1.0	100.0	8.0	70.8	17.3	2.3	1.6	100.0	889
Fourth	13.0	69.3	17.2	0.5	100.0	9.8	67.1	19.5	1.8	1.8	100.0	918
Highest	22.1	68.0	9.4	0.5	100.0	13.2	68.5	15.5	1.7	1.2	100.0	914
Total	**18.3**	**66.0**	**14.7**	**0.9**	**100.0**	**9.6**	**66.6**	**19.1**	**2.9**	**1.8**	**100.0**	**4,424**

There is wide variation in decision-making about spending women's earnings by level of education. Women with no education are the least likely to decide jointly with their husbands how to spend their earnings (60 percent), and the proportion increases with each level of education to 70 percent of women with a secondary education or higher. There is a negative association between decision-making by mainly the husband and women's education. Seventeen percent of women with no education report that their husband mainly decides how their earnings are spent, as compared with 8 percent of women with a secondary education or higher. There is no linear relationship between level of education and the proportion of women who are the main decision-makers about spending their earnings.

In addition, there is no clear pattern of association between wealth and decision-making on how women's cash earnings are used. However, women in the highest wealth quintile are least likely to report that their husband is the main decision-maker. Only 9 percent of women in the highest wealth quintile report that their husband mainly decides how their cash earnings are used, as compared with 14 to 17 percent of women in the other wealth quintiles. Fifty-eight percent of women in the lowest quintile report that they make decisions jointly with their husband about how to spend their earnings, as compared with 68 percent of women in the highest quintile.

Table 15.2.1 also shows women's earnings relative to their husbands' earnings during the 12 months preceding the survey. Two thirds of women report that they earn less than their husband, 10 percent report that they earn more than their husband, and 19 percent earn about the same as their husband. The proportion of women who earn more than their husband increases with age, from 5 percent among women age 15-19 to 15 percent of women age 45-49. Fourteen percent of women in urban areas earn more than their husband, as compared with 9 percent of women in rural areas. Similar proportions of women in urban and rural areas earn the same as their husband (18 percent and 19 percent, respectively). The South province has the highest proportion of women (34 percent) reporting that they earn the same as their husband. Regarding education, women with a secondary education or higher are more likely than other women to report that they earn more than their husband (15 percent versus 10 percent or less).

Table 15.2.2 shows the percent distributions of currently married men age 15-49 who receive cash earnings, and of currently married women age 15-49 whose husbands receive cash earnings, by the person who decides how men's cash earnings are used, according to background characteristics.

Table 15.2.2 Control over men's cash earnings

Percent distributions of currently married men age 15-49 who receive cash earnings and of currently married women 15-49 whose husbands receive cash earnings, by person who decides how husband's cash earnings are used, according to background characteristics, Rwanda 2010

Background characteristic	Men						Women						
	Mainly wife	Husband and wife jointly	Mainly husband	Missing	Total	Number	Mainly wife	Husband and wife jointly	Mainly husband	Other	Missing	Total	Number
Age													
15-19	*	*	*	*	100.0	3	1.8	70.0	28.2	0.0	0.0	100.0	89
20-24	2.9	71.8	25.2	0.0	100.0	174	2.6	66.4	30.6	0.0	0.4	100.0	993
25-29	2.7	72.0	25.2	0.0	100.0	516	3.1	67.9	28.6	0.0	0.4	100.0	1,754
30-34	2.3	73.0	24.8	0.0	100.0	509	4.2	67.6	27.6	0.0	0.6	100.0	1,440
35-39	3.0	75.2	21.8	0.0	100.0	349	5.1	64.3	29.4	0.1	1.1	100.0	1,074
40-44	2.3	75.6	22.1	0.0	100.0	324	6.2	58.9	33.7	0.5	0.6	100.0	757
45-49	2.5	74.2	22.7	0.6	100.0	317	6.4	58.7	32.2	0.6	2.0	100.0	662
Number of living children													
0	3.7	70.6	25.7	0.0	100.0	148	2.9	71.5	24.7	0.0	0.9	100.0	425
1-2	2.7	74.0	23.3	0.0	100.0	842	3.7	67.6	27.9	0.1	0.7	100.0	2,446
3-4	2.4	76.5	21.1	0.0	100.0	660	4.5	63.2	31.5	0.1	0.6	100.0	2,079
5+	2.3	70.4	26.9	0.3	100.0	544	4.9	62.7	31.3	0.2	0.9	100.0	1,818
Residence													
Urban	2.3	70.8	26.9	0.0	100.0	361	6.1	68.6	24.4	0.1	0.7	100.0	911
Rural	2.6	74.2	23.1	0.1	100.0	1,833	3.9	64.6	30.5	0.1	0.8	100.0	5,857
Region													
City of Kigali	1.7	71.2	27.2	0.0	100.0	304	7.9	66.9	24.6	0.0	0.7	100.0	717
South	4.2	75.8	20.0	0.0	100.0	473	6.4	61.8	30.3	0.4	1.0	100.0	1,573
West	2.0	79.2	18.8	0.0	100.0	566	3.0	66.9	29.1	0.1	0.9	100.0	1,638
North	1.5	80.0	18.4	0.0	100.0	337	2.3	70.2	26.8	0.0	0.8	100.0	1,130
East	2.9	62.7	34.0	0.4	100.0	514	3.1	62.5	33.8	0.1	0.4	100.0	1,710
Education													
No education	2.2	73.5	24.3	0.0	100.0	336	5.1	58.2	35.0	0.2	1.5	100.0	1,327
Primary	2.8	72.6	24.5	0.1	100.0	1,531	3.9	65.8	29.7	0.1	0.6	100.0	4,728
Secondary and higher	1.8	78.7	19.4	0.0	100.0	327	5.1	73.8	20.1	0.3	0.7	100.0	713
Wealth quintile													
Lowest	4.6	74.0	21.3	0.0	100.0	342	6.7	56.8	34.8	0.3	1.4	100.0	1,304
Second	2.5	74.9	22.5	0.0	100.0	403	4.0	62.5	32.5	0.2	0.8	100.0	1,359
Middle	2.0	74.4	23.2	0.4	100.0	443	2.4	65.1	31.4	0.1	0.9	100.0	1,374
Fourth	3.2	72.8	24.0	0.0	100.0	479	3.1	68.5	28.0	0.1	0.4	100.0	1,398
Highest	1.2	72.4	26.3	0.0	100.0	527	5.0	72.7	22.0	0.0	0.3	100.0	1,333
Total 15-49	**2.6**	**73.6**	**23.7**	**0.1**	**100.0**	**2,194**	**4.2**	**65.2**	**29.7**	**0.1**	**0.8**	**100.0**	**6,769**
50-59	3.6	77.3	19.1	0.0	100.0	450	na	na	na	na	na	na	na
Total 15-59	**2.7**	**74.2**	**22.9**	**0.1**	**100.0**	**2,644**	**na**	**na**	**na**	**na**	**na**	**na**	**na**

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

Twenty-four percent of men age 15-49 report that they mainly decide how their cash earnings are used. Seventy-four percent state that they make these decisions jointly with their wife, and 3 percent state that these decisions are made mainly by their wives. There is little variation by age and number of living children in the percentage of men who are the main decision-makers regarding how to spend their cash earnings. Men who are

living in urban areas are more likely than men who are living in rural areas to be the main decision-makers regarding how to use their cash earnings (27 percent versus 23 percent). The East province (34 percent) and the City of Kigali (27 percent) have a higher proportion of men who are the main decision-makers regarding their own earnings than other provinces. Men with a secondary education or higher are less likely than other men to be the main decision-maker regarding how to spend their earnings (19 percent versus 24 percent or more) and more likely to make the decision jointly with their wives.

Women's reports on who makes decisions about how their husband's earnings are spent somewhat comparable to men's reports. Thirty percent of women whose husbands have cash earnings report that their husband mainly decides how his cash earnings are used. This is only slightly higher than the 24 percent reported by men themselves. Sixty-five percent of women report that the decisions are made jointly, as compared with 74 percent of men, and 4 percent of women report that they mainly decide how to use their husband's earnings. The proportion of women reporting that they mainly decide how to spend their husband's earnings increases by age of the woman and number of living children. The proportion of women who are the main decision-makers on how to use their husband's earnings is higher in urban areas and in the City of Kigali. Joint decision-making is more commonly reported by women with a secondary education or higher and those in the higher wealth quintiles. In contrast, women are more likely to report that their husband is the main decision-maker if they have no education or are in the lower wealth quintiles.

Table 15.3 shows who controls the wife's and husband's earnings by the amount of the wife's earnings relative to her husband's. Currently married women who earn more than their husbands are more likely to decide mainly by themselves (37 percent) or jointly with their husbands (54 percent) on how their earnings are spent. Likewise, 15 percent of the same group of women mainly decide how their husbands' earnings are spent, and an additional 54 percent make these decisions jointly with their husbands. Women who earn less than their husbands are more likely to make decisions on their own earnings (16 percent) than women who earn the same as their husbands (8 percent). However, women who earn the same as their husbands are more likely than other women to decide how to use their earnings jointly with their husbands (80 percent).

Table 15.3 Women's control over their own earnings and over those of their husband

Percent distributions of currently married women age 15-49 with cash earnings in the last 12 months by person who decides how the wife's cash earnings are used and of currently married women age 15-49 whose husbands have cash earnings by person who decides how the husband's cash earnings are used, according to the relation between wife's and husband's cash earnings, Rwanda 2010

	Person who decides how the wife's cash earnings are used:						Person who decides how husband's cash earnings are used:						
Women's earnings relative to husband's earnings	Mainly wife	Wife and husband jointly	Mainly husband	Missing	Total	Number of women	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	Number of women
More than husband	37.1	54.4	8.5	0.0	100.0	425	15.4	54.4	29.4	0.5	0.3	100.0	425
Less than husband	16.2	66.6	17.1	0.0	100.0	2,948	2.6	65.2	32.1	0.0	0.1	100.0	2,948
Same as husband	8.4	80.0	11.7	0.0	100.0	843	2.2	78.7	18.6	0.0	0.5	100.0	843
Husband has no cash earnings or did not work	65.0	29.3	5.7	0.0	100.0	129	na	na	na	na	na	na	0
Woman worked but has no cash earnings	na	na	na	na	na	0	5.2	64.9	28.8	0.3	0.8	100.0	1,807
Woman did not work	na	na	na	na	na	0	4.0	59.6	35.8	0.0	0.5	100.0	666
Don't know/missing	24.3	18.3	6.8	50.6	100.0	79	6.6	31.6	28.3	2.6	30.9	100.0	79
Total	**18.3**	**66.0**	**14.7**	**0.9**	**100.0**	**4,424**	**4.2**	**65.2**	**29.7**	**0.1**	**0.8**	**100.0**	**6,769**

na = Not applicable

15.3 WOMEN'S PARTICIPATION IN DECISION-MAKING

The ability of women to make decisions that affect their personal circumstances is essential for their empowerment and serves as an important factor in national development. To assess women's decision-making autonomy, the 2010 RDHS collected information on women's participation in three types of decisions: the respondent's own health care, making major household purchases, and visits to family or relatives. Women are

considered to participate in decision-making if they make decisions alone or jointly with their husband or someone else. Table 15.4 shows the percent distribution of currently married women by the person who usually makes decisions, as reported by women. Twenty-five percent of currently married women report that their husbands mainly make the decisions regarding their health care, and 28 percent report that their husbands decide on major household purchases. With respect to visits to their own family or relatives, 18 percent of women report that their husbands make the decision.

Table 15.4 Participation in decision-making

Percent distribution of currently married women age 15-49 by person who usually makes decisions about various issues, Rwanda 2010

Decision	Mainly wife	Wife and husband jointly	Mainly husband	Someone else	Other	Missing	Total	Number of women
			WOMEN					
Own health care	19.1	54.6	25.4	0.1	0.1	0.6	100.0	6,897
Major household purchases	7.1	64.1	28.2	0.0	0.0	0.6	100.0	6,897
Visits to her family or relatives	14.8	66.5	18.1	0.0	0.0	0.6	100.0	6,897

Table 15.5 shows how women's participation in decision-making varies by background characteristics such as age and residence. The table presents results on three specific topics in which a married woman makes decisions either by herself or jointly with her husband: her own health care, making major household purchases, and visits to her own family or relatives. In addition, the table includes two summary indicators: the proportion of women involved in all three decisions and the proportion of women not involved in making any of the decisions.

Table 15.5 Women's participation in decision-making by background characteristics

Percentage of currently married women age 15-49 who usually make specific decisions either by themselves or jointly with their husband, by background characteristics, Rwanda 2010

Background Characteristic	Specific decisions			Percentage who participate in all three decisions	Percentage who participate in none of the three decisions	Number of women
	Woman's own health care	Making major household purchases	Visits to her family or relatives			
Age						
15-19	69.8	68.5	73.1	54.8	15.7	89
20-24	68.8	68.2	79.3	54.3	11.9	998
25-29	71.3	69.3	79.3	54.9	11.5	1,773
30-34	76.6	72.2	81.7	61.1	10.5	1,458
35-39	73.3	72.1	84.0	59.4	9.8	1,112
40-44	78.2	75.3	81.6	65.6	10.3	780
45-49	77.2	72.5	84.2	61.9	9.4	688
Employment (last 12 months)						
Not employed	63.7	62.9	70.6	53.4	22.5	666
Employed for cash	75.4	73.4	82.5	60.7	9.6	4,424
Employed not for cash	73.5	68.9	82.0	56.1	9.2	1,806
Missing	0.0	0.0	100.0	0.0	0.0	1
Number of living children						
0	70.4	76.1	83.7	59.1	7.9	429
1-2	72.2	71.3	81.0	57.5	10.6	2,478
3-4	74.1	69.6	80.0	57.6	11.3	2,133
5+	76.2	71.8	82.4	61.7	11.1	1,858
Residence						
Urban	80.8	79.1	88.2	67.8	5.8	926
Rural	72.7	70.0	80.2	57.3	11.5	5,971
Region						
City of Kigali	78.9	78.6	87.8	66.6	6.7	726
South	71.5	73.2	82.1	56.5	8.0	1,614
West	75.9	68.7	80.2	60.4	13.3	1,675
North	70.5	69.3	81.6	54.5	10.1	1,151
East	73.7	69.8	78.4	58.8	13.1	1,731
Education						
No education	69.2	67.9	78.3	55.4	14.5	1,355
Primary	73.6	70.8	80.8	58.0	10.6	4,816
Secondary and higher	83.3	80.0	89.3	69.6	4.9	727
Wealth quintile						
Lowest	68.3	67.4	75.9	52.7	14.5	1,352
Second	71.8	68.2	79.9	56.5	11.8	1,388
Middle	71.3	69.9	80.7	56.0	11.7	1,394
Fourth	76.0	71.8	82.5	60.7	9.8	1,415
Highest	81.4	78.9	87.1	67.9	6.0	1,348
Total	**73.7**	**71.2**	**81.2**	**58.7**	**10.8**	**6,897**

Table 15.5 shows that 59 percent of women report taking part in all three decisions, while 11 percent have no say in any of the three decisions. The percentage of women participating in all three decisions increases with levels of education and wealth; 70 percent of women with a secondary education or higher participate in all three decisions, as compared with 55 percent of women with no education. Sixty-one percent of women who are employed for cash take part in all three decisions, as compared with 53 percent of women who are not employed and 56 percent of women who are employed but are not paid in cash. Women in urban areas (68 percent) are more likely than women in rural areas (57 percent) to participate in all three decisions.

15.4 ATTITUDES TOWARDS WIFE BEATING

The 2010 RDHS collected information on the degree of acceptance of wife beating by asking whether a husband is justified in beating his wife in five situations: 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 intercourse with him.

Tables 15.6.1 and 15.6.2 show the percentages of women and men who agree that a husband is justified in hitting or beating his wife for these specific reasons. The tables also show the summary percentages (of women or men) who feel that wife beating is justified for at least one of the specified reasons. Agreement of a high proportion of women that wife beating is acceptable is an indication that women generally accept the right of a man to control his wife's behaviour even by means of violence. If a low proportion of women agree that wife beating is acceptable, then the majority of women reject beliefs and behaviours that place them at a low status relative to men.

Table 15.6.1 Attitude toward wife beating: Women

Percentage of all women age 15-49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Rwanda 2010

Background Characteristic	Husband is justified in hitting or beating his wife if she:					Percentage who agree with at least one specified reason	Number
	Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him		
Age							
15-19	17.7	30.3	32.8	43.8	33.6	55.7	2,945
20-24	19.9	32.7	37.9	44.2	35.6	55.5	2,683
25-29	18.9	34.9	37.8	44.7	37.4	57.3	2,494
30-34	19.2	33.5	36.4	42.7	39.9	57.3	1,822
35-39	18.6	32.5	34.6	41.2	36.2	53.6	1,447
40-44	19.6	32.9	34.0	43.2	39.9	58.3	1,168
45-49	18.0	32.5	36.6	44.5	37.2	56.1	1,112
Employment (last 12 months)							
Not employed	20.2	32.9	34.5	42.4	38.6	55.2	2,227
Employed for cash	18.6	33.3	36.4	44.0	37.9	56.5	7,660
Employed not for cash	18.7	31.3	35.6	43.9	33.0	56.3	3,751
Missing	11.8	17.1	17.1	29.8	20.5	36.3	33
Number of living children							
0	17.2	29.8	33.5	42.6	32.9	53.6	5,207
1-2	19.7	34.3	37.3	43.6	38.1	56.8	3,552
3-4	20.0	35.6	38.5	45.1	39.8	58.7	2,704
5+	19.9	33.4	35.6	44.6	39.2	58.3	2,209
Marital status							
Never married	17.3	29.6	33.1	42.5	32.5	53.8	5,285
Married or living together	19.1	34.2	36.8	43.6	38.3	57.3	6,897
Divorced/separated/widowed	23.0	36.6	40.8	47.7	43.6	60.0	1,489
Residence							
Urban	12.5	23.2	26.6	30.2	24.5	40.3	2,057
Rural	20.0	34.4	37.4	46.0	38.8	59.0	11,614
Region							
City of Kigali	14.2	24.0	25.5	30.9	23.8	38.7	1,596
South	12.7	27.2	33.5	40.4	28.1	54.0	3,212
West	20.5	34.5	40.8	48.0	45.2	62.8	3,305
North	27.0	44.7	42.5	51.7	43.8	62.7	2,278
East	19.7	32.2	33.4	43.1	37.7	55.8	3,280
Education							
No education	26.6	42.5	44.5	52.5	48.2	66.1	2,119
Primary	19.7	34.6	38.3	46.3	38.7	59.8	9,337
Secondary and higher	7.8	15.2	17.0	23.9	16.8	31.7	2,216
Wealth quintile							
Lowest	25.3	41.5	45.3	51.4	46.8	66.3	2,622
Second	21.4	36.7	39.9	48.7	41.9	62.8	2,661
Middle	19.5	33.4	36.9	46.5	37.0	58.5	2,736
Fourth	17.2	31.4	33.6	42.5	35.3	55.5	2,677
Highest	11.8	21.8	24.7	30.6	23.8	39.9	2,976
Total	**18.8**	**32.7**	**35.8**	**43.6**	**36.6**	**56.2**	**13,671**

Table 15.6.1 shows that 56 percent of women believe that wife beating is justified for at least one of the specified reasons. Women are least likely to agree that a man is justified in beating his wife for burning the food (19 percent). Women are most likely to agree that a man is justified in beating his wife if she neglects the children (44 percent), refuses to have sexual intercourse with him (37 percent), or goes out without telling him (36 percent). Women who have never married (54 percent) are less likely than women who are currently married (57 percent) or formerly married (60 percent) to agree that wife beating is justified for any of the reasons. Women in urban areas are less likely to agree with at least one of the specified reasons than those in rural areas (40 percent and 59 percent, respectively). The North and West provinces have the highest proportions of women who say that wife beating is justified for at least one of the reasons (63 percent each), while the City of Kigali has the lowest proportion (39

percent). Women with no education (66 percent) or a primary education (60 percent) are more likely than women with a secondary education or higher (32 percent) to agree that wife beating is justified for at least one reason. Agreement with at least one reason that justifies wife beating decreases with wealth quintile, from 66 percent in the lowest quintile to 40 percent in the highest quintile.

Table 15.6.2 shows that the proportion of men age 15-49 who agree with at least one of the reasons justifying wife beating is lower than that observed among women (25 percent versus 56 percent). However, as was observed for women, men are most likely to agree that a husband is justified in beating his wife if she neglects the children (19 percent) and least likely to agree that a husband is justified in beating his wife if she burns the food (5 percent). Men age 15-19 (35 percent), men who are employed not for cash (29 percent), and formerly married men (36 percent) are more likely than other men to agree with at least one reason justifying wife beating. Rural men are more likely to agree with at least one reason for hitting or beating a wife than urban men (26 percent and 20 percent, respectively). By province, the City of Kigali has the lowest proportion of men who agree with at least one reason for hitting or beating a wife (12 percent).

Table 15.6.2 Attitude toward wife beating: Men

Percentage of all men age 15-49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Rwanda 2010

Background characteristic	Husband is justified in hitting or beating his wife if she:					Percentage who agree with at least one specified reason	Number
	Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him		
Age							
15-19	6.1	15.5	16.1	26.4	14.6	34.6	1,449
20-24	4.5	10.0	10.4	19.3	10.9	25.1	1,159
25-29	5.1	10.0	13.1	18.7	9.6	25.1	1,038
30-34	2.8	8.1	8.9	14.6	7.5	20.5	710
35-39	2.6	7.6	8.1	12.7	5.8	17.9	490
40-44	3.7	7.4	6.8	12.5	6.8	18.7	430
45-49	3.0	6.9	7.2	11.3	7.3	15.3	412
Employment (last 12 months)							
Not employed	2.1	8.0	8.9	16.7	9.6	25.0	457
Employed for cash	4.8	10.3	11.3	17.2	9.7	23.4	3,728
Employed not for cash	4.3	12.0	12.9	23.0	11.8	29.4	1,491
Number of living children							
0	5.3	12.5	13.4	22.0	12.6	29.2	2,987
1-2	3.9	9.5	10.4	17.2	8.7	23.1	1,177
3-4	3.5	7.9	8.6	14.7	6.4	19.7	841
5+	3.0	6.8	8.2	12.3	7.0	17.5	683
Marital status							
Never married	5.3	12.8	13.8	22.6	12.7	30.0	2,873
Married or living together	3.5	7.8	8.5	14.3	7.2	19.5	2,699
Divorced/separated/widowed	7.5	18.5	22.1	28.1	16.0	36.0	115
Residence							
Urban	2.0	7.1	7.9	13.5	7.7	19.5	939
Rural	5.0	11.2	12.2	19.8	10.7	26.2	4,748
Region							
City of Kigali	0.5	4.2	5.5	8.6	2.6	12.3	739
South	3.0	10.9	11.4	19.7	9.2	26.3	1,308
West	9.2	17.2	17.5	27.2	16.8	33.7	1,307
North	3.4	7.7	7.5	13.4	8.4	21.9	899
East	4.2	9.2	11.5	18.7	10.2	24.9	1,435
Education							
No education	4.7	12.9	12.8	19.5	11.0	26.1	583
Primary	5.4	12.1	13.3	20.9	11.5	28.0	3,916
Secondary and higher	1.2	4.1	4.6	11.3	5.3	15.2	1,189
Wealth quintile							
Lowest	7.5	15.1	16.4	25.4	15.3	34.2	854
Second	5.9	14.2	14.9	22.7	13.3	30.6	986
Middle	4.9	11.1	11.7	20.6	10.5	26.3	1,139
Fourth	3.9	8.9	9.7	17.7	9.3	23.6	1,235
Highest	1.9	6.4	7.6	11.7	5.6	16.6	1,474
Total 15-49	**4.5**	**10.5**	**11.5**	**18.8**	**10.2**	**25.1**	**5,687**
50-59	4.2	9.1	8.4	12.6	10.5	21.3	642
Total 15-59	**4.4**	**10.4**	**11.2**	**18.1**	**10.2**	**24.7**	**6,329**

The proportion of men who agree that a husband is justified in beating his wife for at least one reason is lower among men with a secondary education or higher (15 percent) than among men with a primary education (28 percent) or no education (26 percent). The proportion of men who agree that a husband is justified in beating his wife for at least one reason decreases as wealth quintile increases. Thirty-four percent of men in the lowest quintile agree with at least one reason for hitting or beating a wife, as compared with 17 percent of men in the highest quintile.

15.5 WOMEN'S EMPOWERMENT INDICATORS

Two sets of empowerment indicators, namely women's participation in making household decisions and women's attitudes towards wife beating, can be summarised in two indices.

The first index shows the number of decisions (see Table 15.5 for the list of decisions) in which women participate either alone or jointly with their husband or partner. This index ranges from 0 to 3 and reflects the degree of decision-making control that women are able to exercise in areas that affect their own lives and the level of women's empowerment in a society.

The second index, which ranges from 0 to 5, is the number of reasons (see Table 15.6.1 for a list of reasons) for which a woman thinks that a husband is justified in beating his wife. A lower score on this indicator is interpreted as reflecting a higher status of women in the household and society.

Table 15.7 shows how these indices relate to each other. There are clear relationships between the two indices. The percentage of women who disagree with all reasons justifying wife beating increases as the number of household decisions in which the women participate increases, from 25 percent among women who participate in none of the household decisions to 48 percent among women who participate in all three household decisions. The percentage of women who participate in all three household decisions decreases as the number of reasons for which wife beating is justified increases, from 66 percent among women who agree with none of the reasons justifying wife beating to 46 percent among women who agree with all five reasons justifying wife beating.

Table 15.7 Indicators of women's empowerment

Percentage of currently married women age 15-49 who participate in all decision-making and the percentage who disagree with all of the reasons justifying wife beating, by value on each of the indicators of women's empowerment, Rwanda 2010

Empowerment indicator	Percentage who participate in all decision-making	Percentage who disagree with all reasons justifying wife beating	Number of women
Number of decisions in which women participate[1]			
0	na	24.7	743
1-2	na	38.7	2,103
3	na	48.2	4,052
Number of reasons for which wife beating is justified[2]			
0	66.2	na	2,948
1-2	57.3	na	1,680
3-4	53.2	na	1,270
5	46.2	na	999

na = Not applicable
[1] See Table 15.5 for the list of decisions.
[2] See Table 15.6.1 for the list of reasons.

15.6 CURRENT USE OF CONTRACEPTION BY WOMEN'S EMPOWERMENT STATUS

A woman's desire and ability to control her fertility and her choice of contraceptive methods are affected by her status in the household and her own sense of empowerment. A woman who is unable to control other aspects of her life may be less able to make decisions regarding her fertility. She may also feel the need to choose contraceptive methods that are less obvious or do not need the approval or knowledge of her husband. Table 15.8 shows the relationship of each of the empowerment indicators with current use of contraceptive methods by currently married women.

As expected, contraceptive use is positively associated with participation in household decisions, although the relationship is not linear. Use of any contraceptive method is lower among women who do not participate in any household decisions (45 percent) than among women who participate in at least one household decision. Fifty-four percent of women who participate in one or two household decisions are currently using a method of family planning, as are 51 percent of women who participate in all three household decisions. Results are similar for use of a modern method.

Use of any contraceptive method and use of any modern method are slightly lower among women who agree will all five reasons justifying wife beating (47 percent and 43 percent, respectively) than among women who agree with none of the reasons (51 percent and 45 percent, respectively).

Table 15.8 Current use of contraception by women's empowerment

Percent distribution of currently married women age 15-49 by current contraceptive method, according to selected indicators of women's status, Rwanda 2010

			Modern methods							
Empowerment indicator	Any method	Any modern method	Female sterilization	Male steriliszation	Temporary modern female methods[1]	Male condom	Any traditional method	Not currently using	Total	Number of women
Number of decisions in which women participate[2]										
0	45.4	39.6	0.5	0.0	36.5	2.5	5.8	54.3	99.7	743
1-2	53.8	46.6	0.7	0.0	43.1	2.8	7.2	45.7	99.5	2,103
3	50.5	44.3	1.0	0.1	40.3	3.0	6.2	48.8	99.3	4,052
Number of reasons for which wife beating is justified[3]										
0	51.2	44.5	0.9	0.0	40.4	3.2	6.7	47.8	99.0	2,948
1-2	51.5	43.9	1.0	0.1	39.7	3.1	7.7	47.9	99.4	1,680
3-4	52.7	46.8	0.8	0.1	43.5	2.5	5.9	46.8	99.5	1,270
5	46.8	42.6	0.3	0.1	40.0	2.2	4.2	53.2	100.0	999
Total	**50.9**	**44.5**	**0.8**	**0.0**	**40.7**	**2.9**	**6.4**	**48.4**	**99.4**	**6,897**

Note: If more than one method is used, only the most effective method is considered in this tabulation.
[1] Pill, IUD, injectables, implants, female condom, diaphragm, foam/jelly, and lactational amenorrhoea method
[2] See Table 15.5 for the list of decisions.
[3] See Table 15.6.1 for the list of reasons.

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

Women's fertility preferences, for example the ideal number of children, are typically lower than those of their husband. As a woman becomes more empowered to negotiate fertility decision-making, she has more control over her ability to access and use contraceptives to space and limit her family size. Women who have a desire to space or limit their births but who are not using family planning are defined as having an unmet need for family planning. Table 15.9 shows how women's ideal family size and their unmet need for family planning vary by the two indicators of women's status.

Women who participate in none of the household decisions have a higher desired family size than women who participate in one or more decisions (3.7 children versus 3.6 children). Women who participate in three decisions have a lower total unmet need for family planning (19 percent) than women who do not participate in any decisions (25 percent). Women who participate in three decisions also have a lower unmet need for spacing and for limiting than women who do not participate in any decision-making.

Desired family size increases with the number of reasons a woman thinks that wife beating is justified, from 3.2 children among women who do not agree with any of the reasons justifying wife beating to 3.4 children among women who agree with all five reasons. However, there is no strong association between unmet need for family planning and the number of reasons justifying wife beating.

Table 15.9 Women's empowerment and ideal number of children and unmet need for family planning

Mean ideal number of children for women 15-49 and the percentage of currently married women age 15-49 with an unmet need for family planning, by indicators of women's empowerment, Rwanda 2010

Empowerment indicator	Mean ideal number of children[1]	Number of women	Percentage of currently married women with an unmet need for family planning[2]			Number of women
			For spacing	For limiting	Total	
Number of decisions in which women participate[3]						
0	3.7	732	14.3	10.3	24.6	743
1-2	3.6	2,083	9.7	7.6	17.3	2,103
3	3.6	4,003	8.8	9.9	18.7	4,052
Number of reasons for which wife-beating is justified[4]						
0	3.2	5,953	9.1	9.6	18.7	2,948
1-2	3.3	3,281	10.3	10.1	20.4	1,680
3-4	3.4	2,399	8.7	7.9	16.6	1,270
5	3.4	1,890	11.8	8.4	20.2	999
Total	**3.3**	**13,523**	**9.7**	**9.2**	**18.9**	**6,897**

[1] Mean excludes respondents who gave non-numeric responses.
[2] See Table 7.10.1 for the definition of unmet need for family planning.
[3] Restricted to currently married women. See Table 15.5 for the list of decisions.
[4] See Table 15.6.1 for the list of reasons.

15.8 WOMEN'S STATUS AND REPRODUCTIVE HEALTH CARE

Table 15.10 shows women's use of antenatal, delivery, and postnatal care services from health care workers by level of empowerment, as measured by the two indicators of women's status. Women's empowerment affects their ability to access reproductive health services. Increased empowerment of women is likely to increase their ability to seek out and use health services to better meet their reproductive health goals, including safe motherhood.

The results in Table 15.10 show that, overall, there is not much variation in use of maternal health care services by indicators of women's empowerment. Women who participate in none of the decisions are slightly less likely to receive antenatal care from a skilled provider, to receive delivery assistance from a skilled provider, and to receive postnatal care from a skilled provider within the first two days after delivery than women who participate in one or more household decisions. The percentage of women who receive delivery assistance from a skilled provider increases from 71 percent among those who participate in no decisions to 73 percent among those who participate in three decisions.

Women who agree with all five reasons justifying wife beating were less likely to receive postnatal care from a skilled provider within the first two days following delivery than women who agree with four or fewer reasons. Eleven percent of women who agree with all five reasons justifying wife beating received postnatal care

within two days following the birth, as compared with 15 to 16 percent of women who agree with four or fewer reasons justifying wife beating.

Table 15.10 Reproductive health care by women's empowerment

Percentage of women age 15-49 with a live birth in the five years preceding the survey who received antenatal care, delivery assistance, and postnatal care from health personnel for the most recent birth, by indicators of women's empowerment, Rwanda 2010

Empowerment indicator	Received antenatal care from health personnel	Received delivery assistance from health personnel	Received postnatal care from health personnel within the first two days since delivery[1]	Number of women with a child born in the last five years
Number of decisions in which women participate[2]				
0	97.3	70.5	13.2	602
1-2	99.1	71.7	15.9	1,641
3	98.6	73.2	15.0	3,063
Number of reasons for which wife-beating is justified[3]				
0	98.4	74.5	15.9	2,607
1-2	97.8	69.9	15.4	1,573
3-4	97.6	68.8	15.5	1,217
5	97.9	73.3	11.4	1,007
Total	**98.0**	**72.1**	**15.0**	**6,405**

Note: 'Health personnel' includes doctor, nurse, midwife, or auxiliary nurse or auxiliary midwife.
[1] Includes women who gave birth in a health facility and those who did not give birth in a health facility
[2] Restricted to currently married women. See Table 15.5 for the list of decisions.
[3] See Table 15.6.1 for the list of reasons.

ADULT AND MATERNAL MORTALITY 16

Estimates of maternal mortality require comprehensive and accurate reporting of maternal deaths. Such reporting can be obtained through vital registration, longitudinal studies of pregnant women, or repeated household surveys. The 2010 Rwanda Demographic and Health Survey (RDHS) is the third population-based national survey (after the 2000 RDHS and 2005 RDHS) to incorporate questions on maternal mortality. The RDHS asked female respondents a series of questions designed to elicit the information needed to make direct estimates of maternal mortality.

To avoid seriously misinterpreting the results of the survey, users of the information must understand the problems inherent in measuring maternal mortality. Direct estimates of maternal mortality rely on data such as the ages of surviving sisters of survey respondents, the ages at death of sisters who have died, and the number of years that have passed since the death of the sisters. RDHS interviewers had to list all brothers and sisters born to the natural mother of female respondents, in chronological order, starting with the first born. Information was then obtained on the survivorship of each of the siblings, the ages of surviving siblings, the year of death or years since death of deceased siblings, and the age at death of deceased siblings. For each sister who died at age 12 or older, the respondent was asked additional questions to determine whether the death was maternity related. The interviews asked whether the sister was pregnant when she died, and if so, whether she died during childbirth, and if not, whether she died within two months of the termination of a pregnancy or childbirth. Listing all siblings in chronological order of their birth may improve the completeness of reporting. Collecting data on both male and female siblings also allows direct estimation of adult male and adult female mortality.

16.1 DATA QUALITY ISSUES

Estimation of adult and maternal mortality requires reasonably accurate reporting of the number of sisters and brothers of the respondent, the number who have died, and the number of sisters who died of maternity-related causes. There is no definitive procedure for establishing the completeness or accuracy of retrospective data on sibling survivorship. Table 16.1 shows the number of siblings reported by female respondents and the completeness of the reported data on current age, age at death, and years since death.

Table 16.1 Data on siblings

Number of siblings reported by female survey respondents and completeness of reported data on sibling age, age at death (AD), and years since death (YSD), Rwanda 2010

	Sisters		Brothers		All siblings	
Sibling	Number	Percent	Number	Percent	Number	Percent
All siblings	41,562	100.0	42,048	100.0	83,609	100.0
Surviving	31,581	76.0	29,224	69.5	60,805	72.7
Dead	9,875	23.8	12,535	29.8	22,410	26.8
Missing survival information	105	0.3	289	0.7	395	0.5
Living siblings	31,581	100.0	29,224	100.0	60,805	100.0
Age reported	31,556	99.9	29,207	99.9	60,763	99.9
Age missing	25	0.1	16	0.1	42	0.1
Dead siblings	9,875	100.0	12,535	100.0	22,410	100.0
AD and YSD reported	9,811	99.3	12,461	99.4	22,271	99.4
AD missing	22	0.2	23	0.2	45	0.2
YSD missing	20	0.2	14	0.1	34	0.2
Both AD and YSD missing	22	0.2	37	0.3	59	0.3

As a group, 2010 RDHS female respondents were able to report the survival status of more than 99 percent of their siblings; whether or not a brother or sister was alive or dead was unknown for 0.5 percent of siblings. Sex ratio is defined as the number of males per 100 females. The sex ratio of siblings who have died is calculated as the number of brothers per 100 sisters (12,535 brothers who died compared with 9,875 sisters who died). The sex ratio of siblings who have died was 127, which is very high and may be the consequence of the high male mortality during the period of genocide. Overall, the data on siblings are nearly complete, with age reported for 99.9 percent of living siblings and age at death and years since death reported for 99.4 percent of siblings who have died, with little difference between brothers and sisters. Rather than excluding siblings with missing information from the analysis, the information on the birth order of siblings, in conjunction with other information, is used to impute the missing data.[1]

Another crude measure of data quality is the mean number of siblings, or the mean sibship size (Table 16.2). Sibship size is expected to decline as fertility declines over time. The monotonic decline in sibship size that would be expected to accompany declining fertility is supportive of more complete reporting of older siblings. Sex ratios at birth are near the internationally accepted range of 103 to 105, suggesting that there is no serious underreporting or overreporting of brothers or sisters. However, it should be borne in mind that any information that relies on recall will suffer from some degree of misreporting, especially if it pertains to deceased persons and involves events that occurred a long time before the survey.

Table 16.2 Sibship size and sex ratio of siblings

Mean sibship size and sex ratio of births, Rwanda 2010

Respondent's year of birth	Mean sibship size	Sex ratio at birth of siblings
1960-64	7.4	100.3
1965-69	7.6	103.0
1970-74	7.6	105.4
1975-79	7.6	99.8
1980-84	7.2	101.8
1985-89	7.0	100.6
1990-94	6.6	99.6
1995 or 1996	7.4	100.3
Total	**7.1**	**101.2**

16.2 ADULT MORTALITY

Because maternal mortality is a subset of adult mortality, estimates of overall adult mortality are calculated before estimates of maternal mortality. If overall adult mortality estimates display a general, stable, and plausible pattern, then credence is given to the maternal mortality estimates derived thereafter.

Direct estimates of male and female adult mortality are obtained from information collected in the sibling history. Age-specific death rates are computed by dividing the number of deaths in each age group by the total person-years of exposure in that age group during a specified reference period. In total, female respondents reported 83,609 siblings, of whom 41,562 were sisters and 42,048 were brothers (Table 16.1). Direct estimates of age-specific mortality rates for men and women are shown in Table 16.3. Direct estimates are presented for the period 0 to 4 years before the survey, which roughly corresponds[2] to September 2006 to March 2011. Aggregating the data over the age range 15-49 will reduce the effects of sampling variability. There are more male than female deaths in the seven years preceding the survey (406 versus 373). The male mortality rate is 3.6 deaths per 1,000 population, a figure higher than the female mortality rate of 3.1 deaths per 1,000 population.

[1] The imputation procedure is based on the assumption that the reported birth ordering of the siblings in the birth history is correct. The first step is to calculate birth dates. For each living sibling with a reported age and for each dead sibling with complete information on both age at death and year of death, the birth date is calculated. For a sibling missing these data, a birth date is imputed within the range defined by the birth dates of the bracketing siblings. In the case of living siblings, an age is calculated from the imputed birth date. In the case of dead siblings, if either age at death or year of death is reported, that information is combined with the birth date to provide missing information. If both pieces of information are missing, the age at death is imputed. This imputation is based on the distribution of the ages at death for those whose year of death is unreported but age at death is reported.

[2] The time period is not exact because, as with all DHS calculations of exposure time, exposure is calculated separately for each respondent, counting back in time from the date of the interview, and dates of interview in the 2010 RDHS spanned a period of six months.

Table 16.3 Adult mortality rates

Estimated adult mortality rates for women and men for the period 0 to 4 years prior to the survey, Rwanda 2010

Age	Deaths	Exposure	Mortality rate[1]
WOMEN			
15-19	29	21,511	1.4
20-24	49	26,065	1.9
25-29	69	24,195	2.9
30-34	84	18,732	4.5
35-39	61	13,943	4.4
40-44	58	9,888	5.9
45-49	23	6,566	3.4
15-49	373	120,900	3.1 [a]
MEN			
15-19	50	20,509	2.4
20-24	37	25,361	1.5
25-29	64	22,817	2.8
30-34	76	16,423	4.6
35-39	71	12,160	5.9
40-44	57	8,745	6.5
45-49	51	5,631	9.1
15-49	406	111,646	3.6 [a]

Note: Exposure years are calculated using a life table technique; here, they represent the number of person-years that men or women are exposed to the probability of dying.
[1] Expressed per 1,000 population
[a] Age-adjusted rate

16.3 MATERNAL MORTALITY

Estimates of maternal mortality for the period 0 to 4 years before the survey are shown in Table 16.4. This period of time was chosen to produce estimate that is comparable to the previous surveys. Age-specific mortality rates are calculated by dividing the number of maternal deaths by years of exposure. To remove the effect of truncation bias (the upper boundary for eligibility in the 2010 RDHS is 49 years), the overall rate for women age 15-49 is standardized by the age distribution of the survey respondents. Maternal deaths are defined as any death that occurred during pregnancy, childbirth, or within two months after the birth or termination of a pregnancy. This time-specific definition includes all deaths occurring during the specified period even if the death is due to causes that are not pregnancy related. However, this definition is unlikely to result in overreporting of maternal deaths because most deaths to women in the specified period are due to maternal causes, and maternal deaths in general are more likely to be underreported than overreported. For any given age group, maternal deaths are a relatively rare occurrence, and as such the age-specific pattern should be interpreted with caution.

There were 91 maternal deaths (in the survey sample) in the period 0 to 4 years preceding the survey. During the period 2006-2010, the maternal mortality rate, which is the annual number of maternal deaths per 1,000 women age 15-49, was 0.80. Maternal deaths accounted for 24 percent of all deaths to women age 15-49; in other words, about 1 in 4 Rwandan women who died in the seven years preceding the survey died as a result of pregnancy or pregnancy-related causes. Maternal deaths accounted for a higher proportion of overall deaths than they had in the past; in the 2000 RDHS and 2005 RDHS, respectively, maternal deaths accounted for 16 percent and 20 percent of all female deaths in the seven years prior to each survey.

The maternal mortality ratio, obtained by dividing the age-standardized maternal mortality rate by the age-standardized general fertility rate, is often considered a more useful measure of maternal mortality because it measures the obstetric risk associated with each live birth. Table 16.4 shows that the maternal mortality ratio for

Rwanda for the period 2004-2010 was 476 deaths per 100,000 live births (or, alternatively, 4.76 deaths per 1,000 live births). The maternal mortality ratio can be converted to an estimate of the lifetime risk of dying from maternal causes: 0.023 or, in other words, a risk of dying of 1 in 43.

Table 16.4 Direct estimates of maternal mortality

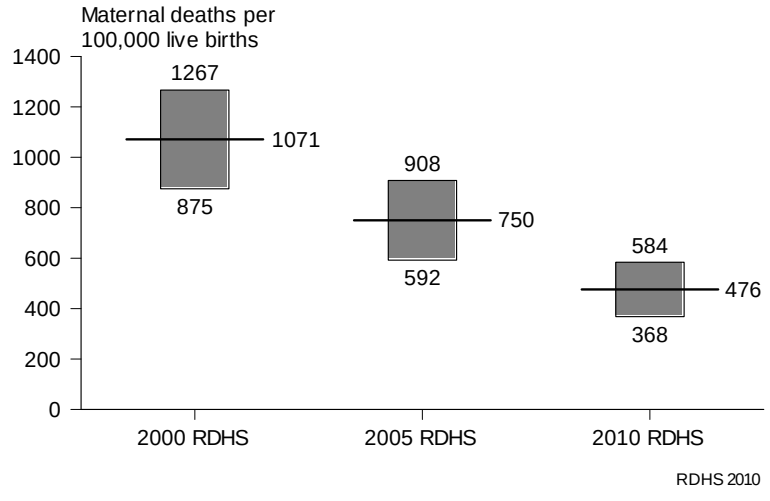
Direct estimates of maternal mortality for the period 0 to 4 years prior to the survey, Rwanda 2010

Age	Maternal deaths	Exposure years	Maternal mortality rate[1]	Proportion of maternal deaths to all women deaths
15-19	4	21,511	0.2	13.9
20-24	16	26,065	0.6	33.2
25-29	20	24,195	0.8	28.3
30-34	23	18,732	1.2	27.9
35-39	17	13,943	1.2	27.5
40-44	8	9,888	0.8	13.3
45-49	3	6,566	0.5	13.8
Total	**91**	**165,352**	**0.8[a]**	**24.3**
General fertility rate (GFR)		149[a]		
Maternal mortality ratio (MMR)[2]		476		
Lifetime risk of maternal death[3]		0.023		

[1] Expressed per 1,000 woman-years of exposure
[2] Expressed per 100,000 live births; calculated as the maternal mortality rate divided by the general fertility rate
[3] Lifetime risk of maternal death = $1 - (1 - MMR/100,000)^{TFR}$ where TFR represents the total fertility rate for the period 0 to 4 years prior to the survey (= 4.9)
[a] Age-adjusted rate

In the 2000 RDHS and 2005 RDHS, the maternal mortality ratios were 1,051 deaths per 100,000 live births and 750 deaths per 100,000 live births respectively. A comparison of the maternal mortality ratio from these three surveys shows no reason to doubt that there has been a steady decline in the maternal mortality ratio between 2000 and 2010. Nevertheless, the level of decline should be interpreted with caution and with consideration of the sampling error of the estimates.

Figure 16.1 **Maternal Mortality Ratio with Confidence Interval for the Period of 0-4 years Prior to the Survey, 2000 RDHS, 2005 RDHS and 2010 RDHS**



DOMESTIC VIOLENCE 17

In the words of former United Nations Secretary General Kofi Annan, "Violence against women is perhaps the most shameful human rights violation, and it is perhaps the most pervasive. It knows no boundaries of geography, culture or wealth. As long as it continues, we cannot claim to be making real progress towards equality, development, and peace" (UNIFEM, 2003).

The World Health Organization defines domestic violence as "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, mal-development, or deprivation" (Krug et al., 2002). Domestic violence is defined here as any act of violence resulting in physical, sexual, or psychological harm or suffering to women, girls, and also men, including threats of such acts, coercion, or arbitrary deprivation of liberty.

The 2010 RDHS included a series of questions that focused on specific aspects of domestic and interpersonal violence. These questions addressed women's experience of interpersonal violence, including acts of physical and sexual violence. Information was collected on both domestic violence (also known as spousal violence or intimate partner violence) and violence by other family members or unrelated individuals. Specifically, this chapter presents the findings on women who have experienced *interpersonal violence*—physical violence since the age of 15 and sexual violence at any age. It also presents findings on women who have experienced *spousal violence*, ever and in the past 12 months. Detailed information is presented on the physical consequences of partner violence, and when partner violence began.

17.1 MEASUREMENT OF VIOLENCE

Collecting valid, reliable, and ethical data on intimate partner violence poses particular challenges because (1) what constitutes violence or abuse varies across cultures and individuals; (2) a culture of silence usually surrounds domestic violence and can affect reporting; and (3) the topic is a sensitive one. Assuring the safety of respondents and interviewers and protecting women who disclose violence, when asking about domestic violence in a familial setting, are responsibilities that raise specific ethical concerns. The responses to these challenges by the 2010 RDHS respondents and interviewers are described in the paragraphs that follow.

17.1.1 The Use of Valid Measures of Violence

The 2010 RDHS measures violence committed by spouses and by other household members. Accordingly, information was obtained from ever-married women on violence by spouses and by others, and from never-married women on violence by anyone, including boyfriends.

International research on violence shows that intimate partner violence is one of the most common forms of violence against women. Thus, spousal/partner violence was measured in more detail than violence by other perpetrators by using a greatly shortened and modified Conflict Tactics Scale (CTS) (Strauss, 1990). Specifically, spousal violence was measured using the following set of questions for women:

(Does/did) your (last) husband/partner ever do any of the following things to you?

a) Slap you?
b) Twist your arm or pull your hair?
c) Push you, shake you, or throw something at you?

d) Punch you with his fist or with something that could hurt you?
e) Kick you, drag you or beat you up?
f) Try to choke you or burn you on purpose?
g) Threaten or attack you with a knife, gun, or any other weapon?
h) Physically force you to have sexual intercourse with him even when you did not want to?
i) Force you to perform any sexual acts you did not want to?

When the answer to the question was "yes," women were asked about the frequency of the act in the 12 months preceding the survey. An affirmative answer to one or more of items (a) through (g) constitutes evidence of physical violence, while a similar answer to items (h) or (i) constitutes evidence of sexual violence.

This approach of asking about specific acts to measure different forms of violence has the advantage of not being affected by different understandings of what constitutes a summary term such as violence. By including a wide range of acts, this approach has the additional advantage of giving the respondent multiple opportunities to disclose any experience of violence.

In addition to these questions asked only of ever-married women, all women were asked about physical violence from persons other than the current or most recent spouse/partner with the question: *From the time you were 15 years old, has anyone [other than your (current/last) husband] hit, slapped, kicked, or done anything else to hurt you physically?* Respondents who answered this question in the affirmative were asked who had done this to them.

Although this approach to questioning is generally considered to be optimal, the possibility of underreporting of violence, particularly sexual violence, cannot be entirely ruled out in any survey.

17.1.2 Ethical Considerations

Three specific protections were built into the questionnaire, in accordance with the World Health Organization's ethical and safety recommendations for research on domestic violence (WHO, 2001b):

- Only one eligible woman in each household was administered the questions on violence. The DHS protocol specifies that the domestic violence module can only be administered to one randomly selected woman per household. Therefore, in households with more than one eligible woman, the respondent for the module was randomly selected through a specially designed simple selection procedure based on the "Kish Grid", which was built into the Household Questionnaire. Interviewing only one woman in each household using the domestic violence module provides assurance to the selected respondent that other respondents in the household will not know about the types of questions the selected respondent was asked.

- Informed consent for the survey was obtained from the respondent at the beginning of the individual interview. In addition, at the beginning of the section on domestic violence, respondents were read an additional statement informing them that the subsequent questions could be sensitive, and reassuring them of the confidentiality of their responses.

- The domestic violence module was implemented only if privacy could be obtained. If privacy could not be obtained, the interviewer was instructed to skip the module, thank the respondent, and end the interview. To maintain privacy, when a translator needed to conduct the interview, respondents were not asked questions from the domestic violence module.

17.1.3 Special Training for Implementing the Domestic Violence Module

Complete privacy is essential for ensuring the security of the respondent and the interviewer. Asking about or reporting violence, especially in households where the perpetrator may be present at the time of the interview, carries the risk of further violence. Accordingly, interviewers were provided specific training for implementing the domestic violence module that would enable the field staff to collect violence data in a secure, confidential, and ethical manner.

Table 17.1 Experience of physical violence

Percentage of women age 15-49 who have ever experienced physical violence since age 15, by background characteristics Rwanda 2010

Background characteristic	Percentage who have ever experienced physical violence since age 15[1]	Number of women
Current age		
15-19	15.8	1,115
20-24	28.9	975
25-29	49.1	909
30-39	57.4	1,154
40-49	57.9	855
Employed last 12 months		
Not employed	26.7	845
Employed for cash	47.3	2,745
Employed not for cash	38.3	1,401
Marital status		
Never married	14.4	1,966
Married or living together	56.1	2,499
Divorced/separated/widowed	69.7	542
Number of living children		
0	16.6	1,918
1-2	50.8	1,315
3-4	61.6	959
5+	59.5	816
Residence		
Urban	36.4	768
Rural	42.1	4,240
Province		
City of Kigali	34.5	587
South	42.7	1,154
West	41.1	1,215
North	37.4	852
East	45.7	1,199
Education		
No education	53.2	776
Primary	42.5	3,393
Secondary or higher	24.2	769
Wealth quintile		
Lowest	48.5	901
Second	41.9	1,012
Middle	43.4	994
Fourth	40.7	999
Highest	33.0	1,101
Total	**41.2**	**5,008**

Note: Total includes 17 women with missing information on employment.
[1] Includes a few women who were married before age 15 and who reported only spousal violence. Such women could have first experienced the violence before age 15.

17.2 SUB-SAMPLE FOR THE VIOLENCE MODULE

The domestic violence module was implemented in half the households selected for the RDHS. Further, in keeping with the ethical requirements, only one woman per household was selected for the module. In all, 5,016 women were eligible for the module, of which 5,008 were successfully interviewed. Only 8 women were not interviewed, either because they refused or because complete privacy could not be obtained. Specially constructed weights were used to adjust for the selection of only one woman per household and to ensure that the domestic violence subsample was nationally representative.

17.3 EXPERIENCE OF PHYSICAL VIOLENCE AND PERPETRATORS OF PHYSICAL VIOLENCE

The section first examines women's experience of physical violence since age 15 and then continues with a report on lifetime experience of sexual violence. Background characteristics associated with increased risk of violence are considered.

Table 17.1 shows that approximately two in five women (41 percent) have experienced physical violence since age 15.[1]

The proportion of women who have ever experienced physical violence increases with the age of women, from 16 percent (age 15-19) to 58 percent (age 40-49). Women who are employed for cash are more likely to report having experienced physical violence compared with women who are unemployed or employed but not paid in cash.

Formerly married women (divorced, separated, or widowed) are more likely to have ever experienced physical violence since age 15 than currently married and never married women (70 percent, compared with 56 and 14 percent, respectively). Women with no living children are least likely to have experienced physical violence since age 15 (17 percent).

There is little variation in the level of physical violence by urban-rural residence and by province. The percentage of women who have ever experienced physical violence ranges from 35 percent in the City of Kigali to 46 percent in the East province.

The proportion of women who have ever experienced physical violence declines steeply with education, from 53 percent of women with no education to 24 percent of women with secondary and higher education. Women's experience of physical violence is highest in the lowest wealth quintile (49 percent), and is lowest in the highest wealth quintile (33 percent); however, the relationship is not linear.

Among women who have ever experienced physical violence, Table 17.2 shows, by current marital status, the percentages who reported that specific persons committed the violence. Because respondents could have experienced violence at the hands of several people, the percentages do not sum to 100. Among currently married women who have experienced physical violence since age 15, 95 percent reported that a current husband or partner committed the physical violence against them.

[1] For the few women who married before age 15 and reported only spousal violence, the violence reported could have occurred before age 15.

Table 17.2 Persons committing physical violence

Among women age 15-49 who have experienced physical violence since age 15, the percentage who report specific persons who committed the violence, according to the respondent's marital status, Rwanda 2010

Person	Marital status			Total
	Never married	Currently married	Formerly married	
Current husband/partner	-	95.4	-	64.8
Former husband/partner	-	0.8	94.7	17.9
Current boyfriend	1.1	0.4	0.4	0.5
Former boyfriend	0.2	0.1	0.0	0.1
Father/stepfather	15.6	2.0	1.2	3.7
Mother/stepmother	14.1	1.7	1.4	3.4
Sister/brother	16.8	2.0	3.9	4.4
Other relative	6.9	1.0	1.4	1.9
Mother-in-law	0.0	0.1	0.0	0.0
Other in-law	1.1	0.4	0.4	0.5
Teacher	13.1	0.9	0.4	2.5
Employer/someone at work	0.9	0.1	0.0	0.2
Police/soldier	1.1	0.5	1.0	0.7
Stanger	8.1	2.5	2.8	3.3
Neighbor/community member	21.9	2.9	2.8	5.5
Other	11.1	2.0	3.1	3.4
Number of women	**283**	**1,401**	**378**	**2,062**

na = Not applicable

Among women who have never been married, the most common perpetrators of physical violence are neighbor/community member (22 percent), sister/brother (17 percent), father/stepfather (16 percent), and mother/stepmother (14 percent).

17.4 EXPERIENCE OF SEXUAL VIOLENCE AND PERPETRATORS OF SEXUAL VIOLENCE

As shown in Table 17.3, more than one in five women have experienced sexual violence (22 percent). Women age 15-19 are less likely than other women to have experienced sexual violence. Differentials on women's experience of sexual violence by urban-rural residence and province are small. Women who are employed for cash and those who are formerly married are more likely to have experienced sexual violence than other women. The likelihood of experiencing sexual violence decreases only marginally with women's educational attainment—from 24 percent among women with no education to 20 percent among women with secondary and higher education. Sexual violence is also higher in prevalence among women in the lowest wealth quintile than among those in the other wealth quintiles, but the differentials are small.

Table 17.3 Experience of sexual violence

Percentage of women age 15-49 who have ever experienced sexual violence, by background characteristics, Rwanda 2010

	Percentage who have ever experienced sexual violence	Number of women
Current age		
15-19	12.0	1,115
20-24	23.0	975
25-29	25.6	909
30-39	27.5	1,154
40-49	24.1	855
Employed last 12 months		
Not employed	15.8	845
Employed for cash	26.1	2,745
Employed not for cash	18.8	1,401
Marital status		
Never married	17.0	1,966
Married or living together	23.1	2,499
Divorced/separated/widowed	37.4	542
Residence		
Urban	24.2	768
Rural	21.9	4,240
Province		
City of Kigali	24.3	587
South	22.3	1,154
West	21.4	1,215
North	18.3	852
East	24.9	1,199
Education		
No education	24.0	776
Primary	22.4	3,393
Secondary and higher	19.8	769
Wealth quintile		
Lowest	26.2	901
Second	21.5	1,012
Middle	21.6	994
Fourth	20.8	999
Highest	21.6	1,101
Total	**22.3**	**5,008**

Note: Total includes 17 women with missing information on employment.

Table 17.4 shows the percent distribution of women who have experienced sexual violence, by age at first experience. In the RDHS questionnaire, if a respondent had experienced sexual violence committed only by the current spouse/partner (or the most recent spouse if currently divorced/separated), information was not collected on age at first experience of sexual violence. These respondents are included in the "Don't know" column, which represents 36 percent of women.

For 37 percent of women who experienced sexual violence, the first experience of such violence occurred at age 15-19; 14 percent first experienced sexual violence at age 10-14; and 2 percent first experienced sexual violence before age 10. Twelve percent of women who experienced sexual violence first experienced it at age 20-49.

Table 17.4 Age at first experience of sexual violence

Percent distribution of women age 15-49 who have experienced sexual violence by age at first experience of sexual violence, according to current age, Rwanda 2010.

	Age at first experience of sexual violence							
	Less than 10 years	10-14 years	15-19 years	20-49 years	Don't know[1]	Missing	Total	Number of women
Current age								
15-19	4.9	41.2	50.3	na	3.0	0.5	100.0	134
20-24	4.1	12.3	50.4	12.8	19.8	0.6	100.0	225
25-29	1.9	14.0	31.1	15.8	37.2	0.0	100.0	236
30-39	1.1	7.6	36.6	10.6	44.1	0.0	100.0	321
40-49	0.0	7.0	21.2	13.9	57.6	0.3	100.0	213
Total	**2.1**	**13.7**	**36.9**	**11.5**	**35.5**	**0.2**	**100.0**	**1,129**

[1] Includes women who report having ever experienced sexual violence committed only by their current husband if currently married or most recent husband if divorced, separated, or widowed. For these women, the age at first experience of sexual violence is not known.
na: Not applicable

Table 17.5 shows that the main perpetrator of the first experience of sexual violence against women is a current or former husband or partner. Overall, 27 percent of women who have experienced sexual violence have experienced it at the hands of their current husband or partner, while 13 percent have experienced sexual violence committed by a former husband or partner. Other perpetrators of sexual violence reported by women are a current or former boyfriend (11 percent), a stranger (10 percent), and a neighbor or community member (10 percent, each). Among women who report experiencing sexual violence before age 15, the most frequently mentioned perpetrators are neighbours/community members, strangers, and other relatives.

Table 17.5 Person committing sexual violence at first experience of sexual violence

Among women age 15-49 who have experienced sexual violence, percent distribution by the person committing sexual violence at first experience of sexual violence, according to age at first experience of sexual violence and current marital status, Rwanda 2010

	Age at first experience of sexual violence			Marital status			
Person committing sexual violence	< 15 years	15 years or higher	Don't know[1]	Never married	Currently married	Formerly married	Total
Current husband/partner	0.0	5.1	68.9	0.0	51.7	na	27.0
Former husband/partner	1.3	3.0	30.9	0.0	0.6	67.5	12.6
Current/former boyfriend	5.6	20.9	0.0	19.1	9.2	3.1	11.0
Other relative	11.7	7.2	0.0	6.6	4.9	4.6	5.3
In-law	0.0	0.7	0.0	0.0	0.2	1.3	0.3
Own friend/acquaintance	3.3	5.3	0.0	4.9	2.7	1.5	3.1
Family friend	7.9	4.7	0.0	8.0	1.9	0.9	3.5
Teacher	2.2	1.2	0.0	2.0	0.5	0.4	0.9
Employer/someone at work	3.5	2.2	0.0	2.6	1.6	0.0	1.6
Police/soldier	0.5	1.5	0.0	0.5	1.0	0.8	0.8
Priest/religious leader	0.5	0.1	0.0	0.1	0.0	0.4	0.1
Stranger	16.7	15.5	0.0	17.1	7.7	5.7	10.1
Stepfather alone	0.0	0.3	0.0	0.0	0.1	0.4	0.1
Neighbor/community member	20.8	13.9	0.0	15.7	8.6	5.5	10.1
Other	23.7	17.4	0.2	22.0	8.5	7.3	12.3
Missing	2.2	1.0	0.0	1.2	0.8	0.6	0.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Number of women	179	547	401	334	589	206	1,129

[1] Includes women who report having ever experienced sexual violence committed only by their current husband if currently married or most recent husband if divorced, separated, or widowed. For these women, the age of first experience of sexual violence is not known.
na: Not applicable

17.5 EXPERIENCE OF DIFFERENT TYPES OF VIOLENCE

Table 17.6 shows the percentage of respondents who have experienced different combinations of physical and sexual violence, by respondent's current age. Overall, 26 percent of women age 15-49 have experienced only physical violence, 7 percent have experienced only sexual violence, and 16 percent have experienced both physical and sexual violence. Nearly half of all women age 15-49 (48 percent) have experienced either physical or sexual violence. The likelihood of having experienced physical or sexual violence increases with age, from 24 percent among women age 15-19 to 41 percent among women age 20-24 and then reaching a maximum of 61-62 percent among women age 30-49.

Table 17.6 Experience of different forms of violence

Percentage of women age 15-49 who have experienced different forms of violence by current age, Rwanda 2010

	Physical violence only	Sexual violence only	Physical and sexual violence	Physical or sexual violence	Number of women
Age					
15-19	11.9	8.1	3.9	23.9	1,115
15-17	12.0	7.5	2.9	22.4	704
18-19	11.7	9.1	5.6	26.5	411
20-24	17.5	11.6	11.4	40.5	975
25-29	29.2	5.7	19.9	54.8	909
30-39	34.5	4.6	22.9	62.0	1,154
40-49	37.0	3.1	21.0	61.1	855
Total	**25.6**	**6.7**	**15.6**	**47.9**	**5,008**

17.6 TYPES OF SPOUSAL VIOLENCE

This section of the chapter looks at violence perpetrated by intimate partners who are either married to the respondent or living with the respondent as if married. Because spousal or intimate partner violence is the most common form of violence for women age 15-49, the 2010 RDHS collected detailed information on the different types of spousal violence experienced by ever married women, including both physical and sexual violence. Currently married women were asked about violence perpetrated by their current husband, and formerly married women were asked about violence perpetrated by their most recent husband. Respondents were asked about seven specific acts of physical violence and two acts of sexual violence. The acts are listed in Table 17.7.

Table 17.7 Forms of spousal violence

Percentage of ever-married women age 15-49 who have experienced various forms of violence ever or in the 12 months preceding the survey, committed by their (former) husband/partner, Rwanda 2010

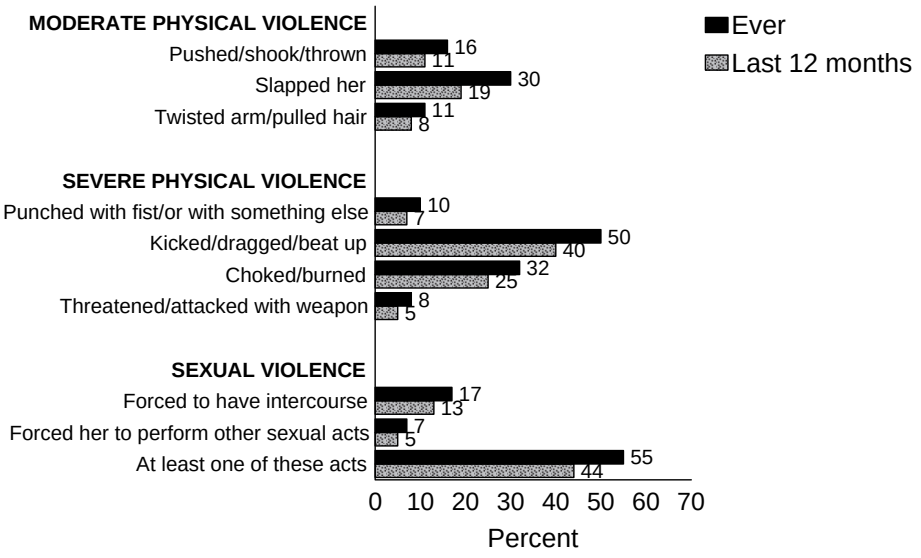
		In the past 12 months		
	Ever	Often	Sometimes	Often or sometimes
Physical violence				
Any	55.6	3.4	29.5	32.8
Pushed her, shook her, or threw something at her	15.6	1.0	10.2	11.2
Slapped her	29.9	1.4	17.3	18.7
Twisted her arm or pulled her hair	11.2	0.7	7.1	7.8
Punched her with his fist or with something that could hurt her	9.5	0.4	6.1	6.5
Kicked her, dragged her, or beat her up	48.9	3.8	35.0	38.8
Tried to choke her or burn her on purpose	31.9	2.3	22.4	24.7
Threatened her or attacked her with a knife, gun, or any other weapon	7.5	0.4	4.8	5.2
Sexual violence				
Any	17.5	1.4	11.9	13.3
Physically forced her to have sexual intercourse with him even when she did not want to	16.9	1.2	11.5	12.7
Forced her to perform any sexual acts she did not want to	6.9	0.6	4.7	5.2
Any form of physical and/or sexual violence	56.4	5.2	39.1	44.3
Any form of physical and sexual violence	16.7	0.9	11.1	11.9
Number of ever married women	3,042	3,042	3,042	3,042

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women.

Table 17.7 shows that 56 percent of ever married women have experienced physical violence at the hands of their current or most recent husband or partner, and 33 percent have experienced spousal physical violence in the past 12 months. Eighteen percent have ever experienced spousal sexual violence, and 13 percent have experienced such violence in the past 12 months. Overall, 56 percent of ever married women have experienced some kind of violence (physical or sexual) by their husband or partner, and 44 percent have experienced some form of spousal violence in the past 12 months.

Among the physical acts of violence experienced by women in the past 12 months, kicking or dragging or beating was the most commonly reported act experienced by 39 percent of women. Eleven percent of women were slapped by their husband or partner, and 25 percent were choked or burned. Thirteen percent of women were forced to have sexual intercourse with their husband/partner when they did not want to, and 5 percent were forced to perform other sexual acts that they did not want to. Figure 17.1 shows the different forms of spousal violence experienced by ever married women.

Figure 17.1 **Percentage of ever-married women who have experienced specific forms of physical and sexual violence committed by their husband/partner, ever and during the past 12 months, Rwanda 2010**



RDHS 2010

Table 17.8 shows the experience of spousal violence among ever married women by background characteristics. Women age 15-19 are less likely to have experienced physical or sexual violence by their spouse than those in the older age groups. Women with no children are much less likely than women with three or more children to have experienced such violence.

Experience of spousal physical or sexual violence varies strongly with marital status. Women who are divorced, separated, or widowed are more likely to have experienced each type of violence than other women. This finding suggests that the experience of violence may have contributed to the termination of the relationship. Currently married women who have been married more than once are more likely to experience physical or sexual violence than currently married women married only once. Among women who have been married only once, the likelihood of having experienced violence increases with the duration of the union.

Rural women are more likely than urban women to experience each type of violence. Women in the City of Kigali are less likely to have experienced physical or sexual violence than their counterparts in other provinces. The proportions of women experiencing such violence decline with both education and wealth, although the relationship is not linear.

Despite these variations in the prevalence of spousal physical or sexual violence by background characteristics, the most notable finding is that at least 50 percent of women in most categories have experienced spousal violence. Even among the most educated and wealthiest groups, 48 percent of women have experienced such violence.

Table 17.8 Spousal violence by background characteristics

Percentage of ever married women age 15-49 by whether they have ever experienced physical, or sexual violence committed by their husband/ partner, according to background characteristics, Rwanda 2010

	Physical violence	Sexual violence	Physical or sexual violence
Current age			
15-19	40.9	9.4	42.9
20-24	49.7	15.3	50.3
25-29	54.7	16.1	55.6
30-39	58.5	17.8	59.1
40-49	56.3	17.6	57.2
Employed last 12 months			
Not employed	49.8	17.1	51.2
Employed for cash	57.0	17.6	57.5
Employed not for cash	54.5	15.1	55.7
Number of living children			
0	34.7	10.4	36.2
1-2	54.3	16.2	55.2
3-4	59.7	18.9	60.3
5+	57.5	17.1	58.2
Marital status and duration			
Currently married woman	53.5	14.0	54.2
Married only once	52.4	13.5	53.0
0-4 years	42.5	9.1	43.5
5-9 years	57.6	16.4	57.8
10+ years	55.4	14.5	56.1
Married more than once	62.1	18.3	63.0
Divorced/separated/widowed	65.6	30.2	66.7
Residence			
Urban	47.6	13.4	48.9
Rural	56.9	17.5	57.6
Province			
City of Kigali	45.4	11.8	46.3
South	57.0	18.2	58.2
West	54.9	17.4	55.9
North	54.1	13.1	54.9
East	59.7	19.5	59.9
Education			
No education	55.7	17.4	56.3
Primary	57.1	17.3	57.8
Secondary and higher	46.1	14.1	48.2
Wealth quintile			
Lowest	60.4	21.7	61.4
Second	56.1	18.5	57.1
Middle	59.5	17.9	60.4
Fourth	54.3	14.2	54.4
Highest	46.8	11.4	47.7
Total	**55.6**	**16.9**	**56.4**

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women.

17.7 VIOLENCE BY SPOUSAL CHARACTERISTICS AND WOMEN'S EMPOWERMENT INDICATORS

Because the perpetrators of spousal violence are husbands or partners, it is important to understand how a woman's experience of violence varies by the characteristics of her husbands or partner. It is also useful to examine whether spousal violence varies with indicators of women's status. Table 17.9 shows the percentage of ever married women who have experienced different forms of spousal violence, by the current or most recent husband, by spousal characteristics, and by women's empowerment indicators.

The table shows that women whose husbands are more educated are less likely than women whose husbands have no education to have ever experienced spousal violence. Women who are at least 10 years younger than their husbands are less likely to experience spousal violence than those who are in the other categories of spousal age difference. Women in marriages in which both spouses are equally educated are the least likely to have experienced violence from their husbands, and women who are more educated than their husbands are most likely to have experienced such violence. However, these differences are quite small.

As expected, women who do not participate in household decisions are more likely to experience spousal violence than women who participate in all three specific decisions. There is no clear relationship between views about wife beating and actual experience of physical abuse, although women who agree with no reasons are the least likely to have ever experienced sexual violence.

Table 17.9 Spousal violence by husband's characteristics and empowerment indicators

Percentage of ever married women age 15-49 who have ever suffered physical, or sexual violence committed by their husband/partner, according to his characteristics, marital characteristics, and empowerment indicators, Rwanda 2010

	Physical violence	Sexual violence	Physical or sexual violence	Number of women
Husband's/partner's education				
No education	58.8	18.4	59.6	657
Primary	56.3	16.7	56.8	1,983
Secondary and higher	45.4	14.9	47.4	368
DK/missing	(66.3)	(21.8)	(66.3)	33
Spousal age difference[1]				
Wife older	54.3	16.9	55.5	342
Wife is same age	56.8	16.9	57.4	220
Wife is 1-4 years younger	52.2	12.7	53.0	889
Wife is 5-9 years younger	55.2	14.8	55.5	629
Wife is 10+ years younger	50.8	10.6	51.6	403
Missing	*	*	*	16
Spousal education difference				
Husband better educated	54.1	16.6	54.8	1,306
Wife better educated	58.9	18.2	59.7	1,031
Both equally educated	50.4	13.3	51.4	366
Neither educated	54.5	17.2	55.0	272
DK/missing	69.2	21.8	69.2	67
Number of decisions in which women participate				
0	63.7	17.2	65.2	278
1-2	60.3	15.4	60.8	769
3	48.0	12.7	48.6	1,453
Number of reasons given for refusing to have sexual intercourse with husband				
0	57.8	15.4	59.2	518
1-2	55.2	17.2	55.8	2,524
Number of reasons for which wife-beating is justified				
0	50.9	14.2	51.8	1,297
1-2	60.3	17.6	61.1	720
3-4	62.0	21.9	62.8	557
5	54.1	17.4	54.6	467
Total	**55.6**	**16.9**	**56.4**	**3,042**

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women. Figures in the 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.
[1] Includes only currently married women.

17.8 FREQUENCY OF SPOUSAL VIOLENCE BY HUSBANDS

Table 17.10 shows the percent distribution by frequency of violence of ever married women who reported physical or sexual violence by their current or most recent husband or partner in the 12 months preceding the survey. Seventy-eight percent of women who have experienced physical or sexual violence by their current or most recent husband have experienced such violence in the 12 months preceding the survey; this includes the 9 percent who have experienced such violence often.

Table 17.10 Frequency of spousal violence among those who report violence

Among ever married women age 15-49, percent distribution of those who have ever experienced physical or sexual violence committed by their husband/partner by frequency of violence in the 12 months preceding the survey, according to background characteristics, Rwanda 2010

	Frequency of physical or sexual violence in the past 12 months				
	Often	Sometimes	Not at all	Total	Number of women
Current age					
15-19	*	*	*	100.0	19
20-24	10.7	77.6	11.6	100.0	201
25-29	7.4	78.7	13.9	100.0	392
30-39	9.4	68.4	22.1	100.0	630
40-49	9.5	59.1	31.5	100.0	474
Employed last 12 months					
Not employed	14.0	73.5	12.5	100.0	149
Employed for cash	8.9	70.7	20.3	100.0	1,128
Employed not for cash	8.6	64.1	27.3	100.0	440
Number of living children					
0	7.5	78.1	14.3	100.0	67
1-2	8.9	71.1	20.1	100.0	609
3-4	10.0	66.7	23.3	100.0	567
5+	9.2	68.8	22.0	100.0	474
Marital status and duration					
Currently married woman	9.6	78.6	11.7	100.0	1,355
Married only once	9.1	78.6	12.3	100.0	1,172
0-4 years	6.7	88.0	5.3	100.0	265
5-9 years	8.8	83.4	7.8	100.0	288
10+ years	10.3	72.3	17.4	100.0	619
Married more than once	13.1	79.1	7.9	100.0	183
Divorced/separated	7.9	34.2	57.9	100.0	362
Residence					
Urban	7.0	64.4	28.7	100.0	200
Rural	9.6	69.9	20.5	100.0	1,517
Province					
City of Kigali	8.6	57.6	33.8	100.0	137
South	12.2	69.2	18.6	100.0	408
West	11.4	77.0	11.6	100.0	397
North	8.0	66.7	25.3	100.0	276
East	6.0	67.8	26.1	100.0	498
Education					
No education	9.9	61.6	28.5	100.0	369
Primary	8.9	72.0	19.0	100.0	1,206
Secondary and higher	11.1	65.7	23.2	100.0	126
Wealth quintile					
Lowest	12.4	65.0	22.5	100.0	386
Second	9.6	70.3	20.0	100.0	369
Middle	7.7	71.5	20.8	100.0	370
Fourth	8.9	74.0	17.0	100.0	332
Highest	6.7	64.8	28.4	100.0	260
Total	**9.3**	**69.3**	**21.5**	**100.0**	**1,717**

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Recent experience of spousal violence (i.e., within the past 12 months) varies by age. Among women who have ever experienced spousal physical or sexual violence, 88 percent of women age 20-24 have experienced such violence in the past year, compared with 68 percent of women age 40-49. Similarly, unemployed women experienced more recent spousal violence, and also experienced such violence more often than employed women.

The frequency of violence varies little by education. The proportion of women who have experienced spousal violence often in the past year declines more or less steadily with wealth.

17.9 HELP-SEEKING TO STOP VIOLENCE

All respondents who have ever experienced physical or sexual violence by any person were asked whether and from whom they sought help to try to end the violence. This information is presented in Tables 17.11 and 17.12.

Table 17.11 Help seeking to stop violence

Percent distribution of women age 15-49 who have ever experienced physical or sexual violence by whether they have ever sought help from any source, according to type of violence and background characteristics, Rwanda 2010

Background characteristic	Never sought help	Have sought help from any source	Missing/DK	Total	Number of women
Type of violence					
Physical only	60.8	37.2	2.0	100.0	1,283
Sexual only	65.0	34.8	0.2	100.0	335
Both physical and sexual	45.4	54.1	0.5	100.0	779
Current age					
15-19	56.1	42.9	1.0	100.0	267
20-24	55.3	43.5	1.2	100.0	395
25-29	58.2	39.8	2.0	100.0	498
30-39	56.3	42.9	0.8	100.0	715
40-49	55.9	42.8	1.3	100.0	522
Employed last 12 months					
Not employed	58.4	38.8	2.8	100.0	284
Employed for cash	55.9	43.1	1.1	100.0	1,479
Employed not for cash	56.9	42.1	1.0	100.0	632
Number of living children					
0	54.9	44.3	0.8	100.0	508
1-2	56.7	41.6	1.6	100.0	769
3-4	56.8	42.3	0.9	100.0	613
5+	56.8	41.6	1.6	100.0	507
Marital status and duration					
Never married	56.4	43.1	0.5	100.0	521
Currently married woman	60.4	38.3	1.3	100.0	1,481
Married only once	61.5	36.9	1.5	100.0	1,279
0-4 years	65.4	32.2	2.4	100.0	320
5-9 years	58.6	39.9	1.4	100.0	309
10+ years	61.0	37.8	1.2	100.0	651
Married more than once	52.9	47.1	0.0	100.0	201
Divorced/separated/widowed	41.6	56.6	1.9	100.0	396
Residence					
Urban	59.4	40.0	0.7	100.0	356
Rural	55.9	42.8	1.4	100.0	2,042
Province					
City of Kigali	59.9	40.1	0.0	100.0	264
South	58.2	41.4	0.4	100.0	565
West	58.8	38.8	2.4	100.0	569
North	54.6	43.2	2.2	100.0	383
East	52.1	47.0	0.9	100.0	616
Education					
No education	50.1	48.0	1.8	100.0	452
Primary	58.3	40.6	1.1	100.0	1,650
Secondary and higher	53.6	45.2	1.2	100.0	270
Wealth quintile					
Lowest	51.6	46.7	1.7	100.0	489
Second	53.4	45.7	0.9	100.0	485
Middle	55.4	43.5	1.1	100.0	489
Fourth	61.2	37.7	1.1	100.0	465
Highest	60.8	37.7	1.4	100.0	468
Total	**56.4**	**42.4**	**1.3**	**100.0**	**2,398**

Note: Total includes 2 women with missing information on employment.

Slightly more than 2 in 5 women (42 percent) who have experienced any type of violence have ever sought help. Women who experience both physical and sexual violence (54 percent) are most likely to seek help, and those who have experienced only sexual violence are least likely to do so. The percentage of respondents who seek help varies little by age and by number of living children. Unemployed women are less likely to seek help than those who

are employed. Formerly married women and women who have been married more than once are more likely to have sought help than women who have been married only once.

More women in the East province (47 percent) sought help, compared with women in the City of Kigali and the West province (40 and 39 percent, respectively). Women with primary education and those in the fourth and highest wealth quintiles are less likely to seek help than other women.

Table 17.12 shows the sources of help for women who have ever experienced violence and have sought help, by type of violence. Women were most likely to have sought help from their friends or neighbours (53 percent). Women were also likely to seek help from their in-laws (25 percent) and their own family (22 percent). Only 7 percent of women sought help from the police.

Table 17.12 Sources from where help was sought

Percentage of women age 15-49 who have ever experienced physical or sexual violence and sought help according to source from which help was sought, by type of violence experienced, Rwanda 2010

	Type of violence		
Sources from where help was sought	Any physical	Any sexual	Total
Own family	22.6	24.0	22.4
In-laws	28.1	23.5	25.3
Husband/partner boyfriend	0.2	0.3	0.2
Friend/neighbor	54.6	50.2	52.8
Police	6.4	7.7	6.5
Other	18.9	26.3	21.0
Number of women	899	544	1,016

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SAMPLE IMPLEMENTATION

Appendix A

A.1 INTRODUCTION

The 2010 Rwanda Demographic and Health Survey (RDHS) followed surveys implemented in 1992, 2000, and 2005. A nationally representative sample, of about 12,800 households, was selected. All women age 15-49 who are usual residents of the selected households or who sleep in the households the night before the survey are eligible for the survey. A survey of men as also conducted in a subsample consisting of every second household. All men age 15-59 who are usual residents or who sleep in the subsample households the night before the survey are eligible.. Altogether about 13,400 women age 15-49 and 5,700 men age 15-59 were interviewed. As with prior surveys, the main objectives of the 2010 RDHS are to provide up-to-date information on fertility and childhood mortality levels; fertility preferences; awareness, approval, and use of family planning methods; maternal and child health; knowledge and attitudes toward HIV/AIDS and other sexually transmitted infections (STIs); and prevalence of HIV among the adult population.

The survey was designed to produce representative estimates for the main demographic and health indictors for the country as a whole, for the urban and rural areas, and for each of the five provinces. For some indicators, representative results may be available for each of the thirty districts.

A.2 SAMPLING FRAME

The sampling frame used for the 2010 RDHS is the preparatory frame for the Rwanda General Population and Housing Census (RGPH), which will be conducted in 2012. Provided by the National Institute of Statistics of Rwanda (NISR), the sampling frame is a complete list of natural villages covering the entire country. Though it is preferable to work with a frame consisting of enumeration areas (EAs) because the natural villages are too variable in size, an EA frame is not available at the time of sampling design. The sampling frame that was available is the list of 14,837 natural villages, which contains the administrative characteristics for each village and village population. The village population comes from the national ID card project carried out in 2007-08, which may be under estimated compared with the population projection conducted in 2009 by NISR.

Rwanda's administrative units were reformed in 2006, so the country is currently divided into 5 provinces; 30 districts, 417 sectors, and 14,837 villages. Table A.1 below shows the distribution of number of villages, population, and population share by province and by district within province. Table B.2 below shows the average village size and population distribution by district. The average village size is 610 residents, which is equivalent to 133 households. The sizes of the districts are quite homogeneous, varying from 2.7 percent to 4.4 percent. There is no urban-rural specification in the sampling frame because the urban-rural definition has not been released by the Ministry of Local Administration (MINALOC). It was expected that the urban-rural definition of the sampled villages will be determined during the data collection or in the office once the MINALOC releases the definition.

Table A.1 Distribution of village and population by province and by district within province

Province	District	Number of Villages	Population	Population share
East	Bugesera	585	294,013	0.144
	Gatsibo	594	350,403	0.172
	Kayonza	418	255,119	0.125
	Kirehe	613	278,708	0.137
	Ngoma	473	277,129	0.136
	Nyagatare	630	326,588	0.160
	Rwamagana	472	256,147	0.126
East Total		**3,785**	**2,038,107**	**0.225**
Kigali City	Gasabo	494	398,282	0.446
	Kicukiro	327	246,664	0.277
	Nyarugenge	356	247,090	0.277
Kigali City Total		**1,177**	**892,036**	**0.098**
North	Burera	567	320,123	0.199
	Gakenke	617	334,236	0.207
	Gicumbi	629	360,237	0.224
	Musanze	434	331,254	0.206
	Rulindo	494	264,981	0.164
North Total		**2,741**	**1,610,831**	**0.178**
South	Gisagara	524	278,367	0.123
	Huye	516	288,203	0.127
	Kamonyi	319	287,881	0.127
	Muhanga	331	299,658	0.132
	Nyamagabe	536	311,808	0.138
	Nyanza	421	262,713	0.116
	Nyaruguru	332	256,855	0.113
	Ruhango	533	280,625	0.124
South Total		**3,512**	**2,266,110**	**0.250**
West	Karongi	538	293,816	0.131
	Ngororero	419	311,834	0.139
	Nyabihu	473	298,163	0.133
	Nyamasheke	586	344,222	0.153
	Rubavu	525	349,224	0.155
	Rusizi	596	356,823	0.159
	Rutsiro	485	296,004	0.132
West Total		**3,622**	**2,250,086**	**0.248**
Rwanda		**14,837**	**9,057,170**	**1.000**

Note: Source is 2012 population census preparatory frame, Rwanda

Table A.2 Average village size and population distribution by district

Province	District	Average village size	Population distribution
East	Bugesera	502	0.032
	Gatsibo	589	0.039
	Kayonza	610	0.028
	Kirehe	454	0.031
	Ngoma	585	0.031
	Nyagatare	518	0.036
	Rwamagana	542	0.028
	Gasabo	806	0.044
Kigali City	Kicukiro	754	0.027
	Nyarugenge	694	0.027
	Burera	564	0.035
	Gakenke	541	0.037
North	Gicumbi	572	0.040
	Musanze	763	0.037
	Rulindo	536	0.029
	Gisagara	531	0.031
	Huye	558	0.032
	Kamonyi	902	0.032
South	Muhanga	905	0.033
	Nyamagabe	581	0.034
	Nyanza	624	0.029
	Nyaruguru	773	0.028
	Ruhango	526	0.031
	Karongi	546	0.032
	Ngororero	744	0.034
	Nyabihu	630	0.033
West	Nyamasheke	587	0.038
	Rubavu	665	0.039
	Rusizi	598	0.039
	Rutsiro	610	0.033
Rwanda		**610**	**1.000**

Note: Source is 2012 population census preparatory frame, Rwanda

A.3 STRUCTURE OF THE SAMPLE AND THE SAMPLING PROCEDURE

The sample for the 2010 RDHS was a stratified sample selected in two stages from the 2012 census preparatory frame. Stratification was achieved by separating each province into districts; each district formed a sampling stratum. In total, 30 sampling strata had been created. Samples was selected independently in each sampling stratum, by a two-stage selection process. Implicit stratification and proportional allocation was achieved at each of the lower administrative unit levels by sorting the sampling frame according to administrative unit in different levels before sample selection and by using a probability proportional to size selection at the first stage of sampling.

In the first stage, 492 villages were selected with probability proportional to the village size and with independent selection in each sampling stratum, according to the sample allocation given in Table A.3. A household listing operation was carried out in all of the selected villages before the main survey. The household listing operation consists of visiting each of the 492 selected villages (1) to draw a location map and a detailed sketch map and (2) to record on the household listing forms all residential households found in the village with the address and the name of the heads of the households. The resulting list of households was used as the sampling frame for the selection of households in the second stage. Some of the selected villages may be found to be large in size in the household listing operation. To minimize the task of household listing, the selected villages with an estimated number of households greater than 300 were segmented. Only one segment was selected for the survey, with its probability proportional to the segment size. The methodology and the detailed household listing procedure are addressed in the household listing manual.

At the second stage, a fixed number of 26 households was selected from each selected village. Table A.3 shows the sample allocation of villages and households and the expected number of interviews with women by district. Table A.4 shows the sample allocation of villages and households and the expected number of interviews

with men by district. Table A.5 shows the expected number of eligible individuals for HIV testing and the expected number of completed HIV tests, by district and by sex.

Because the total sample size is too small to provide representative results for some indicators, an equal size allocation was adopted, with a slightly larger sample size for the districts in the province of City of Kigali because of the low fertility level. In fact, the equal size allocation is not different from the proportional allocation, which is the best allocation, because the district sizes are quite homogeneous. On the other hand, the total sample size is already large; any substantial increase in the total sample size to provide representative results for most of the indicators at district level will compromise the data quality because of the limited implementing capability. With the current sample size, adequate survey precision at district level is obtained for women indicators above 15 percent; and for children (under 5) indicators is above 20 percent.

The expected survey results were calculated based on the survey results of the 2005 RDHS: the average number of women age 15-49 per household was 1.12; the average number of men age 15-59 per household was 0.96; the household response rate was 96.5 percent; the women's individual response rate was 98 percent; the men's individual response rate was 97 percent; and the response rate for HIV testing was 98 percent for both men and women.

Table A.3 Sample allocation of clusters, households and expected number of women's interviews by district

Province	District	Number of Villages	Number of households	Expected number of woman interviews
East	Bugesera	16	416	438
	Gatsibo	16	416	438
	Kayonza	16	416	438
	Kirehe	16	416	438
	Ngoma	16	416	438
	Nyagatare	16	416	438
	Rwamagana	16	416	438
	Gasabo	20	520	548
City of Kigali	Kicukiro	20	520	548
	Nyarugenge	20	520	548
	Burera	16	416	438
	Gakenke	16	416	438
North	Gicumbi	16	416	438
	Musanze	16	416	438
	Rulindo	16	416	438
	Gisagara	16	416	438
	Huye	16	416	438
	Kamonyi	16	416	438
South	Muhanga	16	416	438
	Nyamagabe	16	416	438
	Nyanza	16	416	438
	Nyaruguru	16	416	438
	Ruhango	16	416	438
	Karongi	16	416	438
	Ngororero	16	416	438
	Nyabihu	16	416	438
West	Nyamasheke	16	416	438
	Rubavu	16	416	438
	Rusizi	16	416	438
	Rutsiro	16	416	438
Rwanda		**492**	**12,792**	**13,470**

Table A.4 Sample allocation of clusters, households and expected number of men's interviews by district

Province	District	Number of Villages	Number of households	Expected number of men's interviews
East	Bugesera	16	208	186
	Gatsibo	16	208	186
	Kayonza	16	208	186
	Kirehe	16	208	186
	Ngoma	16	208	186
	Nyagatare	16	208	186
	Rwamagana	16	208	186
Kigali City	Gasabo	20	260	232
	Kicukiro	20	260	232
	Nyarugenge	20	260	232
North	Burera	16	208	186
	Gakenke	16	208	186
	Gicumbi	16	208	186
	Musanze	16	208	186
	Rulindo	16	208	186
South	Gisagara	16	208	186
	Huye	16	208	186
	Kamonyi	16	208	186
	Muhanga	16	208	186
	Nyamagabe	16	208	186
	Nyanza	16	208	186
	Nyaruguru	16	208	186
	Ruhango	16	208	186
West	Karongi	16	208	186
	Ngororero	16	208	186
	Nyabihu	16	208	186
	Nyamasheke	16	208	186
	Rubavu	16	208	186
	Rusizi	16	208	186
	Rutsiro	16	208	186
Rwanda		**492**	**6,396**	**5,718**

Note: Men's survey will be carried out in one half of households selected for women's survey.

Table A.5 Expected number of eligible individuals for HIV testing and expected number of completed HIV tests by sex and by district

Province	District	Eligible individuals for HIV testing			Expected number of HIV tests		
		Men	Women	Total	Men	Women	Total
East	Bugesera	192	224	416	182	215	397
	Gatsibo	192	224	416	182	215	397
	Kayonza	192	224	416	182	215	397
	Kirehe	192	224	416	182	215	397
	Ngoma	192	224	416	182	215	397
	Nyagatare	192	224	416	182	215	397
	Rwamagana	192	224	416	182	215	397
City of Kigali	Gasabo	240	280	520	228	268	496
	Kicukiro	240	280	520	228	268	496
	Nyarugenge	240	280	520	228	268	496
North	Burera	192	224	416	182	215	397
	Gakenke	192	224	416	182	215	397
	Gicumbi	192	224	416	182	215	397
	Musanze	192	224	416	182	215	397
	Rulindo	192	224	416	182	215	397
South	Gisagara	192	224	416	182	215	397
	Huye	192	224	416	182	215	397
	Kamonyi	192	224	416	182	215	397
	Muhanga	192	224	416	182	215	397
	Nyamagabe	192	224	416	182	215	397
	Nyanza	192	224	416	182	215	397
	Nyaruguru	192	224	416	182	215	397
	Ruhango	192	224	416	182	215	397
West	Karongi	192	224	416	182	215	397
	Ngororero	192	224	416	182	215	397
	Nyabihu	192	224	416	182	215	397
	Nyamasheke	192	224	416	182	215	397
	Rubavu	192	224	416	182	215	397
	Rusizi	192	224	416	182	215	397
	Rutsiro	192	224	416	182	215	397
Rwanda		**5,904**	**6,888**	**12,792**	**5,598**	**6,609**	**12,207**

A.4 SELECTION PROBABILITY AND SAMPLING WEIGHT

Because of the nonproportional allocation of the sample to the different provinces and to their districts and the possible differences in response rates, sampling weights is required for any analysis using 2010 RDHS data; this ensures the actual representativeness of the survey results at the national level as well as at the domain level. Because the 2010 RDHS sample is a two-stage stratified cluster sample, sampling weights was calculated based on separate sampling probabilities for each sampling stage and for each cluster. We used the following notations:

P_{1hi}: first-stage sampling probability of the i^{th} village in stratum h
P_{2hi}: second -stage sampling probability within the i^{th} village (household selection)

Let a_h be the number of villages selected in stratum h, M_{hi} be the total population according to the sampling frame in the i^{th} village, and $\sum M_{hi}$ be the total population in the stratum h. The probability of selecting the i^{th} village in the 2010 RDHS sample is calculated as follows:

$$\frac{a_h M_{hi}}{\sum M_{hi}}$$

Let b_{hi} be the proportion of households in the selected segment compared with the total number of households in the village i in stratum h if the village is segmented; otherwise $b_{hi} = 1$. Then the probability of selecting village i in the sample is:

$$P_{1hi} = \frac{a_h M_{hi}}{\sum M_{hi}} \times b_{hi}$$

A 2010 RDHS cluster is either a village or a segment of a large village. Let L_{hi} be the number of households listed in the household listing operation in the cluster i in stratum h, let g_{hi} be the number of households selected in the cluster. The second stage's selection probability for each household in the cluster is calculated as follows:

$$P_{2hi} = \frac{g_{hi}}{L_{hi}}$$

The overall selection probability of each household in cluster i of stratum h is therefore the production of the two stages of selection probabilities:

$$P_{hi} = P_{1hi} \times P_{2hi}$$

The design weight for each household in cluster i of stratum h is the inverse of its overall selection probability:

$$W_{hi} = 1/P_{hi}$$

A spreadsheet containing all sampling parameters and selection probabilities was prepared to facilitate the calculation of the design weights. Design weights was adjusted for household nonresponse as well as for individual nonresponse to get the sampling weights for women's and men's surveys, respectively. The differences in the household sampling weights and the individual sampling weights are introduced by individual nonresponse. The final sampling weights was normalized to give the total number of unweighted cases, equal to the total number of weighted cases at the national level, for both household weights and individual weights, respectively. The normalized weights are relative weights, which are valid for estimating means, proportions, and ratios but not valid for estimating population totals and pooled data. The sampling weights for HIV testing were calculated in a similar way, but the normalization of the individual sampling weights differs compared with the individual survey weights. The HIV testing weights were normalized for men and women together at the national level so that the HIV prevalence calculated for men and women together is valid.

Sampling errors were calculated for selected indicators for the national sample, for the urban and rural areas separately, and for each of the five provinces.

Table A.6 Sample implementation: Women

Percent distribution of households and eligible women by results of the household and individual interviews, and household, eligible women and overall women's response rates, according to urban-rural residence and region (unweighted), Rwanda 2010

	Residence		Region					
,Result	Urban	Rural	City of Kigali	South	West	North	East	Total
Selected households								
Completed (C)	97.8	98.1	97.6	98.0	97.5	98.4	98.5	98.0
Household present but no competent respondent at home (HP)	0.1	0.2	0.1	0.2	0.3	0.0	0.1	0.2
Refused (R)	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Dwelling not found (DNF)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Household absent (HA)	0.1	0.3	0.3	0.2	0.3	0.3	0.2	0.3
Dwelling vacant/address not a dwelling (DV)	1.7	1.0	1.8	1.1	1.3	0.7	0.7	1.1
Dwelling destroy (DD)	0.1	0.4	0.1	0.3	0.5	0.4	0.3	0.3
Other (O)	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Number of sampled households	2,054	10,738	1,560	3,328	2,912	2,080	2,912	12,792
Household response rate (HRR)[1]	99.8	99.8	99.7	99.7	99.6	100.0	99.9	99.8
Eligible women								
Completed (EWC)	99.2	99.1	99.0	99.4	98.7	99.2	99.3	99.1
Not at home (EWNH)	0.3	0.3	0.5	0.2	0.7	0.2	0.2	0.3
Postponed (EWP)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Refused (EWR)	0.2	0.0	0.3	0.0	0.0	0.0	0.0	0.1
Partly completed (EWPC)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Incapacitated (EWI)	0.2	0.5	0.2	0.3	0.5	0.5	0.5	0.4
Other (EWO)	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Number of women	2,386	11,404	1,909	3,361	3,178	2,216	3,126	13,790
Eligible women response rate (EWRR)[2]	99.2	99.1	99.0	99.4	98.7	99.2	99.3	99.1
Overall women response rate (ORR)[3]	99.0	98.9	98.7	99.1	98.3	99.2	99.2	98.9

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

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

[2] The eligible women response rate (EWRR) is equivalent to the percentage of interviews completed (EWC)
[3] The overall women response rate (OWRR) is calculated as:
OWRR = HRR * EWRR/100

Table A.7 Sample implementation: Men

Percent distribution of households and eligible men by results of the household and individual interviews, and household, eligible men, and overall men's response rates, according to urban-rural residence and region (unweighted), Rwanda 2010

	Residence		Region					
Result	Urban	Rural	City of Kigali	South	West	North	East	Total
Selected households								
Completed (C)	98.0	98.0	97.4	97.8	97.7	98.3	98.6	98.0
Household present but no competent respondent at home (HP)	0.1	0.2	0.1	0.2	0.3	0.1	0.1	0.2
Refused (R)	0.2	0.0	0.3	0.0	0.0	0.0	0.1	0.0
Dwelling not found (DNF)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Household absent (HA)	0.2	0.4	0.5	0.2	0.3	0.5	0.2	0.3
Dwelling vacant/address not a dwelling (DV)	1.6	0.9	1.5	1.1	1.2	0.8	0.6	1.0
Dwelling destroy (DD)	0.0	0.4	0.1	0.4	0.4	0.3	0.3	0.3
Other (O)	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Number of sampled households	1,027	5,369	780	1,664	1,456	1,040	1,456	6,396
Household response rate (HRR)[1]	99.7	99.8	99.6	99.7	99.6	99.9	99.9	99.7
Eligible men								
Completed (EMC)	98.1	98.8	98.3	99.2	98.3	98.4	98.9	98.7
Not at home (EMNH)	0.8	0.5	0.8	0.5	0.7	0.6	0.4	0.6
Postponed (EMP)	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Refused (EMR)	0.8	0.1	0.6	0.1	0.3	0.1	0.1	0.2
Partly completed (EMPC)	0.1	0.1	0.0	0.0	0.2	0.1	0.0	0.1
Incapacitated (EMI)	0.2	0.4	0.1	0.3	0.5	0.4	0.6	0.4
Other (EMO)	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Number of men	1,178	5,236	948	1,529	1,437	987	1,513	6,414
Eligible men response rate (EMRR)[2]	98.1	98.8	98.3	99.2	98.3	98.4	98.9	98.7
Overall men response rate (ORR)[3]	97.8	98.6	97.9	98.9	98.0	98.3	98.7	98.4

[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] The eligible men response rate (EMRR) is equivalent to the percentage of interviews completed (EMC)
[3] The overall men response rate (OMRR) is calculated as:
OMRR = HRR * EMRR/100

Table A.8 Coverage of HIV testing by social and demographic characteristics: Women

Percent distribution of interviewed women age 15-49 by HIV testing status, according to social and demographic characteristics (unweighted), Rwanda 2010

Characteristic	Testing status				Total	Number
	DBS Tested[1]	Refused to provide blood	Absent at the time of blood collection	Other/ missing[2]		
Marital status						
Never married	99.5	0.2	0.0	0.3	100.0	2,804
Ever had sexual intercourse	99.5	0.3	0.0	0.2	100.0	652
Never had sexual intercourse	99.5	0.2	0.0	0.3	100.0	2,152
Married/living together	99.7	0.1	0.0	0.2	100.0	3,446
Divorced or separated	99.2	0.3	0.3	0.3	100.0	372
Widowed	99.4	0.6	0.0	0.0	100.0	360
Type of union						
In polygynous union	99.3	0.4	0.0	0.4	100.0	267
In nonpolygynous union	99.7	0.1	0.0	0.2	100.0	3,166
Not currently in union	99.5	0.3	0.0	0.3	100.0	3,536
DK/missing	100.0	0.0	0.0	0.0	100.0	13
Ever had sexual intercourse						
Yes	99.6	0.2	0.0	0.2	100.0	4,830
No	99.5	0.2	0.0	0.3	100.0	2,149
Missing	100.0	0.0	0.0	0.0	100.0	3
Currently pregnant						
Pregnant	99.4	0.2	0.0	0.4	100.0	481
Not pregnant or not sure	99.6	0.2	0.0	0.2	100.0	6,501
Times slept away from home in past 12 months						
None	99.7	0.2	0.0	0.1	100.0	3,710
1-2	99.4	0.2	0.0	0.4	100.0	2,458
3-4	99.6	0.0	0.0	0.4	100.0	559
5+	99.2	0.8	0.0	0.0	100.0	255
Time away in past 12 months						
Away for more than 1 month	99.1	0.6	0.0	0.2	100.0	466
Away for less than 1 month	99.5	0.1	0.0	0.4	100.0	2,804
No away	99.7	0.2	0.0	0.1	100.0	3,710
Missing	100.0	0.0	0.0	0.0	100.0	2
Religion						
Catholic	99.7	0.1	0.0	0.2	100.0	2,973
Protestant	99.4	0.2	0.0	0.3	100.0	2,840
Adventist	99.6	0.3	0.0	0.1	100.0	949
Muslim	98.9	1.1	0.0	0.0	100.0	91
Traditional/Other/No religion	99.1	0.9	0.0	0.0	100.0	117
Missing	100.0	0.0	0.0	0.0	100.0	12
Total	**99.6**	**0.2**	**0.0**	**0.2**	**100.0**	**6,982**

[1] Includes all dried blood samples (DBS) tested at the lab and for which there is a result, i.e., positive, negative, or indeterminate. Indeterminate means that the sample went through the entire algorithm, but the final result was inconclusive.
[2] Includes (1) other results of blood collection (e.g., technical problem in the field), (2) lost specimens, (3) noncorresponding bar codes, and (4) other lab results such as blood not tested for technical reasons, not enough blood to complete the algorithm, etc.

Table A.9 Coverage of HIV testing by social and demographic characteristics: Men

Percent distribution of interviewed men age 15-59 by HIV testing status, according to social and demographic characteristics (unweighted), Rwanda 2010

Characteristic	Testing status				Total	Number
	DBS Tested[1]	Refused to provide blood	Absent at the time of blood collection	Other/ missing[2]		
Marital status						
Never married	99.4	0.3	0.0	0.2	100.0	2,906
Ever had sexual intercourse	99.4	0.3	0.0	0.3	100.0	1,160
Never had sexual intercourse	99.5	0.3	0.0	0.2	100.0	1,746
Married/living together	99.5	0.2	0.0	0.2	100.0	3,261
Divorced or separated	99.1	0.9	0.0	0.0	100.0	110
Widowed	100.0	0.0	0.0	0.0	100.0	52
Type of union						
In polygynous union	100.0	0.0	0.0	0.0	100.0	83
In nonpolygynous union	99.5	0.3	0.0	0.2	100.0	3,178
Not currently in union	99.4	0.3	0.0	0.2	100.0	3,068
Ever had sexual intercourse						
Yes	99.5	0.3	0.0	0.2	100.0	4,582
No	99.5	0.3	0.0	0.2	100.0	1,744
Missing	66.7	33.3	0.0	0.0	100.0	3
Male circumcision						
Circumcised	97.9	1.4	0.1	0.6	100.0	871
Not circumcised	99.7	0.1	0.0	0.2	100.0	5,452
DK/Missing	100.0	0.0	0.0	0.0	100.0	6
Times slept away from home in past 12 months						
None	99.6	0.3	0.0	0.2	100.0	3,464
1-2	99.7	0.1	0.1	0.2	100.0	1,754
3-4	99.3	0.4	0.0	0.4	100.0	555
5+	98.6	0.9	0.0	0.5	100.0	556
Time away in past 12 months						
Away for more than 1 month	99.3	0.3	0.0	0.4	100.0	712
Away for less than 1 month	99.4	0.3	0.0	0.2	100.0	2,148
No away	99.6	0.3	0.0	0.2	100.0	3,464
Missing	100.0	0.0	0.0	0.0	100.0	5
Religion						
Catholic	99.5	0.2	0.0	0.2	100.0	3,086
Protestant	99.2	0.5	0.0	0.3	100.0	2,210
Adventist	100.0	0.0	0.0	0.0	100.0	746
Muslim	100.0	0.0	0.0	0.0	100.0	123
Traditional/Other/No religion	99.4	0.6	0.0	0.0	100.0	164
Total	**99.5**	**0.3**	**0.0**	**0.2**	**100.0**	**6,329**

[1] Includes all dried blood samples (DBS) tested at the lab and for which there is a result, i.e., positive, negative, or indeterminate. Indeterminate means that the sample went through the entire algorithm, but the final result was inconclusive.
[2] Includes (1) other results of blood collection (e.g., technical problem in the field), (2) lost specimens, (3) noncorresponding bar codes, and (4) other lab results such as blood not tested for technical reasond, not enough blood to complete the algorithm, etc.

Table A.10 Coverage of HIV testing by sexual behavior characteristics: Women

Percent distribution of interviewed women age 15-49 who ever had sexual intercourse by HIV test status, according to sexual behavior characteristics (unweighted), Rwanda 2010

Sexual behavior characteristic	Testing status				Total	Number
	DBS Tested[1]	Refused to provide blood	Absent at the time of blood collection	Other/ missing[2]		
Age at first sexual intercourse						
<16	99.4	0.4	0.0	0.2	100.0	479
16-17	99.6	0.3	0.0	0.1	100.0	793
18-19	99.6	0.2	0.1	0.1	100.0	1,097
20+	99.7	0.1	0.0	0.2	100.0	2,360
Missing	99.0	1.0	0.0	0.0	100.0	101
Multiple sexual partners and partner concurrency in past 12 months						
0	99.5	0.4	0.0	0.1	100.0	985
1	99.6	0.2	0.0	0.2	100.0	3,802
2+	100.0	0.0	0.0	0.0	100.0	43
Has concurrent partners[2]	100.0	0.0	0.0	0.0	100.0	11
None of the partners are concurrent	100.0	0.0	0.0	0.0	100.0	32
Condom use at last sexual intercourse in past 12 months						
Used condom	98.7	0.6	0.3	0.3	100.0	313
Did not use condom	99.7	0.1	0.0	0.2	100.0	3,531
No sexual intercourse in last 12 months[3]	99.5	0.4	0.0	0.1	100.0	985
DK/Missing	100.0	0.0	0.0	0.0	100.0	1
Number of lifetime partners						
1	99.7	0.1	0.0	0.1	100.0	3,446
2	99.2	0.4	0.1	0.3	100.0	1,012
3-4	99.7	0.3	0.0	0.0	100.0	326
5-9	100.0	0.0	0.0	0.0	100.0	32
10+	100.0	0.0	0.0	0.0	100.0	11
Missing	100.0	0.0	0.0	0.0	100.0	3
Prior HIV testing						
Ever tested	99.6	0.2	0.0	0.2	100.0	4,345
Received results	99.6	0.2	0.0	0.2	100.0	4,288
Did not received results	100.0	0.0	0.0	0.0	100.0	57
Never tested	99.4	0.4	0.0	0.2	100.0	473
Missing	100.0	0.0	0.0	0.0	100.0	12
Total	**99.6**	**0.2**	**0.0**	**0.2**	**100.0**	**4,830**

[1] Includes all dried blood samples (DBS) tested at the lab and for which there is a result, i.e., positive, negative, or indeterminate. Indeterminate means that the sample went through the entire algorithm, but the final result was inconclusive.
[2] Includes (1) other results of blood collection (e.g., technical problem in the field), (2) lost specimens, (3) noncorresponding bar codes, and (4) other lab results such as blood not tested for technical reasons, not enough blood to complete the algorithm, etc.
[3] Overlapping sexual partnerships during the 12 months before the survey

Table A.11 Coverage of HIV testing by sexual behavior characteristics: Men

Percent distribution of interviewed men age 15-59 who ever had sexual intercourse by HIV test status, according to sexual behavior characteristics (unweighted), Rwanda 2010

Sexual behavior characteristic	Testing status				Total	Number
	DBS Tested[1]	Refused to provide blood	Absent at the time of blood collection	Other/ missing[2]		
Age at first sexual intercourse						
<16	99.7	0.0	0.0	0.3	100.0	686
16-17	99.4	0.2	0.0	0.4	100.0	500
18-19	99.5	0.2	0.0	0.2	100.0	859
20+	99.5	0.3	0.0	0.2	100.0	2,416
Missing	98.3	1.7	0.0	0.0	100.0	121
Multiple sexual partners and partner concurrency in past 12 months						
0	99.6	0.2	0.0	0.1	100.0	818
1	99.4	0.3	0.0	0.3	100.0	3,498
2+	99.6	0.0	0.0	0.4	100.0	265
Has concurrent partners[2]	100.0	0.0	0.0	0.0	100.0	111
None of the partners are concurrent	99.4	0.0	0.0	0.6	100.0	154
Missing	100.0	0.0	0.0	0.0	100.0	1
Condom use at last sexual intercourse in past 12 months						
Used condom	99.0	0.4	0.0	0.6	100.0	522
Did not use condom	99.5	0.2	0.0	0.2	100.0	3,241
No sexual intercourse in last 12 months	99.6	0.2	0.0	0.1	100.0	819
Paid for sexual intercourse in past 12 months[3]						
Yes	98.8	1.2	0.0	0.0	100.0	81
Used condom	98.4	1.6	0.0	0.0	100.0	64
Did not use condom	100.0	0.0	0.0	0.0	100.0	17
No (No paid sexual intercourse/no sexual intercourse in last 12 months)	99.5	0.2	0.0	0.2	100.0	4,501
Number of lifetime partners						
1	99.6	0.2	0.1	0.2	100.0	1,889
2	99.6	0.4	0.0	0.0	100.0	1,246
3-4	99.5	0.1	0.0	0.3	100.0	888
5-9	99.2	0.3	0.0	0.5	100.0	367
10+	98.2	0.6	0.0	1.2	100.0	170
Missing	95.5	0.0	0.0	4.5	100.0	22
Prior HIV testing						
Ever tested	99.5	0.2	0.0	0.3	100.0	3,766
Received results	99.4	0.2	0.0	0.3	100.0	3,635
Did not received results	100.0	0.0	0.0	0.0	100.0	131
Never tested	99.5	0.4	0.0	0.1	100.0	816
Total	**99.5**	**0.3**	**0.0**	**0.2**	**100.0**	**4,582**

[1] Includes all dried blood samples (DBS) tested at the lab and for which there is a result, i.e., positive, negative, or indeterminate. Indeterminate means that the sample went through the entire algorithm, but the final result was inconclusive.
[2] Includes (1) other results of blood collection (e.g., technical problem in the field), (2) lost specimens, (3) noncorresponding bar codes, and (4) other lab results such as blood not tested for technical reason, not enough blood to complete the algorithm, etc.
[3] Overlapping sexual partnerships during the 12 months before the survey
[4] Includes men who report having a prostitute for at least one of their last three sexual partners in the past 12 months

SAMPLING ERRORS

Appendix B

Estimates from a sampled survey are affected by two types of errors: nonsampling errors and sampling errors. Nonsampling errors are errors made during data collection and data processing, i.e., failure to identify and interview the correct household, misunderstanding of the questions, and data entry errors. Efforts were made during the survey implementation to minimize these errors, but it is not possible to completely eliminate them. It is also difficult to evaluate nonsampling errors statistically.

Sampling errors are errors made during the sample selection. The sample of clusters and households selected for the 2010 RDHS is only one of many possible samples. Estimates obtained from each of those possible samples would differ from those obtained from the selected sample. Sampling error is the measure of the variability among all possible samples. The degree of variability can be estimated from the survey results. Sampling errors can be evaluated statistically.

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, which include the true population parameters. For example, for any given statistic calculated from a sample survey, the true population parameters will fall within a range of plus or minus two standard errors in 95 percent of all possible samples.

If the sample is selected as a simple random sample, the sampling errors can be simply calculated. However, the 2010 RDHS sample is the result of a multi-stage stratified design; consequently it requires more complex formulae. The sampling errors are calculated using the Taylor linearization method for variance estimation of survey estimates that are means or proportions. This method is programmed in SAS statistical software. 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:

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

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 h^{th} stratum
- y_{hi} is the sum of the weighted values of variable y in the i^{th} cluster in the h^{th} stratum
- x_{hi} is the sum of the weighted number of cases in the i^{th} cluster in the h^{th} stratum
- f_h is the sampling fraction of PSU in the h^{th} stratum

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* cluster in the calculation of the estimates. Pseudo-independent replications are thus created. In the 2010 RDHS, there were 492 nonempty clusters. Hence, 492 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 492 clusters
$r_{(i)}$ is the estimate computed from the reduced sample of 491 clusters (i^{th} cluster excluded)
k is the total number of clusters

In addition to the standard error, the program 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 an increase in the sampling error due to the use of a more complex and less statistically efficient design, such as multistage and cluster selection. The program also computes the relative standard error and the confidence limits for the estimate)s.

Sampling errors for the 2010 RDHS are calculated for selected variables considered to be of primary interest for women's surveys and for men's surveys, respectively. The results are presented in this appendix for the country as a whole, for the urban and the rural areas separately, and for each of the five provinces. 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.9 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 over age 40*) can be interpreted as follows: the overall average from the national sample is 5.921, and its standard error is 0.062. Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate, i.e., 5.921±2×0.062. There is a high probability (95 percent) that the *true* average number of children ever born to all women over age 40 is between 5.797 and 6.044.

For the total sample, the value of the design effect (DEFT), averaged over all variables for the womn's survey, is 1.235 which means that, due to multistage and clustering of the sample, the average standard error is increased by a factor of 1.235 over that in an equivalent simple random sample.

Table B.1. List of selected variables for sampling errors, Rwanda DHS 2010

Variable	Estimate	Base Population
	WOMEN	
Urban residence	Proportion	All women 15-49
Literacy	Proportion	All women 15-49
No education	Proportion	All women 15-49
Secondary and higher education	Proportion	All women 15-49
Never married (never in union)	Proportion	All women 15-49
Currently married (in union)	Proportion	All women 15-49
Married before age 20	Proportion	Women 25-49
Currently pregnant	Proportion	All women 15-49
Children ever born	Mean	All women 15-49
Children surviving	Mean	All women 15-49
Children ever born to women over age 40	Mean	Women age 40-49
Knowing any contraceptive method	Proportion	Currently married women 15-49
Currently using any method	Proportion	Currently married women 15-49
Currently using pill	Proportion	Currently married women 15-49
Currently using condom	Proportion	Currently married women 15-49
Currently using female sterilization	Proportion	Currently married women 15-49
Currently using periodic abstinence	Proportion	Currently married women 15-49
Used public sector sources	Proportion	Users of modern methods, 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 family size	Proportion	All women 15-49
Mothers protected against tetanus for last birth	Proportion	Last birth in last 5 years
Mothers received medical assistance at delivery	Proportion	Births in last 5 years
Had diarrhea in last 2 weeks	Proportion	Children under 5
Treated with ORS packets or pre-packed liquid	Proportion	Children under 5 with diarrhea in last 2 weeks
Consulted medical personnel for diarrhea	Proportion	Children under 5 with diarrhea in last 2 weeks
Having health card, seen	Proportion	Children 12-23 months
Received BCG vaccination	Proportion	Children 12-23 months
Received DPT vaccination (3 doses)	Proportion	Children 12-23 months
Received polio vaccination (3 doses)	Proportion	Children 12-23 months
Received measles vaccination	Proportion	Children 12-23 months
Fully immunized	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
Prevalence of anemia (children)	Proportion	Children under 6-59 months who were tested
Prevalence of anemia (women)	Proportion	Women 15-49 who were tested
Body mass index (BMI) <18.5	Proportion	Women 15-49 who were measured
Total fertility rate (last 3 years)	Rate	Women-years of exposure to childbearing
Neonatal mortality rate[1]	Rate	Children-months of exposure to death
Post neonatal mortality rate[1]	Rate	Children-months of exposure to death
Infant mortality rate[1]	Rate	Children-months of exposure to death
Child mortality rate[1]	Rate	Children-months of exposure to death
Under-five mortality rate[1]	Rate	Children-months of exposure to death
Maternal mortality ratio[2] (last 0-6 years)	Rate	Women-years of exposure to pregnancy
Prevalence of HIV	Proportion	Women 15-49 who were tested
	MEN	
Urban residence	Proportion	All men 15-49
No education	Proportion	All men 15-49
Secondary and higher education	Proportion	All men 15-49
Never married (never in union)	Proportion	All men 15-49
Currently married (in union)	Proportion	All men 15-49
Prevalence of HIV (men 15-49)	Proportion	Men 15-49 who were tested
Prevalence of HIV (men 15-59)	Proportion	Men 15-59 who were tested
	MEN AND WOMEN	
Prevalence of HIV (men and women 15-49)	Proportion	Men and women 15-49 who were tested

[1] The mortality rates are calculated for last 5 years for the total sample, and 10 years for the urban, rural and the regional samples.
[2] The maternal mortality rate is calculated just for the total sample since the regional sample sizes are not big enough for a reliable estimation.

Table B.2 Sampling errors: Total sample, Rwanda DHS 2010

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			WOMEN					
Urban residence	0.150	0.013	13,671	13,671	4.256	0.087	0.124	0.176
Literacy	0.769	0.005	13,671	13,671	1.525	0.007	0.758	0.780
No education	0.155	0.005	13,671	13,671	1.454	0.029	0.146	0.164
Secondary school or higher	0.162	0.006	13,671	13,671	2.019	0.039	0.149	0.175
Never married (in union)	0.387	0.005	13,671	13,671	1.250	0.013	0.376	0.397
Currently married (in union)	0.505	0.005	13,671	13,671	1.234	0.010	0.494	0.515
Married before age 20	0.356	0.007	8,016	8,043	1.355	0.020	0.342	0.371
Currently pregnant	0.070	0.002	13,671	13,671	1.100	0.034	0.065	0.075
Children ever born	2.417	0.026	13,671	13,671	1.141	0.011	2.364	2.469
Children surviving	2.050	0.021	13,671	13,671	1.090	0.010	2.008	2.092
Children ever born to women age 40-49	5.921	0.062	2,257	2,280	1.109	0.010	5.797	6.044
Knows any contraceptive method	0.999	0.000	6,834	6,897	1.186	0.000	0.998	1.000
Currently using any method	0.516	0.007	6,834	6,897	1.160	0.014	0.502	0.530
Currently using pill	0.071	0.004	6,834	6,897	1.199	0.052	0.064	0.079
Currently using condoms	0.029	0.002	6,834	6,897	1.022	0.071	0.025	0.033
Currently using female sterilization	0.008	0.001	6,834	6,897	1.127	0.149	0.006	0.011
Currently using periodic abstinence	0.029	0.002	6,834	6,897	0.973	0.068	0.025	0.033
Used public sector source	0.920	0.006	3,375	3,367	1.199	0.006	0.908	0.931
Want no more children	0.529	0.006	6,834	6,897	1.052	0.012	0.516	0.542
Want to delay birth at least 2 years	0.356	0.006	6,834	6,897	1.043	0.017	0.344	0.368
Ideal family size	3.289	0.016	13,527	13,523	1.296	0.005	3.256	3.321
Mothers protected against tetanus for last birth	0.786	0.006	6,328	6,405	1.156	0.008	0.774	0.798
Mothers received medical assistance at delivery	0.687	0.008	9,002	9,137	1.497	0.012	0.670	0.704
Having diarrhea in the last 2 weeks	0.132	0.004	8,484	8,605	1.193	0.034	0.123	0.141
Treated with oral rehydration salts (ORS)	0.291	0.015	1,109	1,132	1.065	0.051	0.261	0.321
Taken to a health provider	0.372	0.016	1,109	1,132	1.061	0.043	0.341	0.404
Vaccination card seen	0.822	0.012	1,596	1,616	1.216	0.014	0.799	0.846
Received BCG	0.991	0.002	1,596	1,616	0.983	0.002	0.987	0.996
Received DPT (3 doses)	0.968	0.005	1,596	1,616	1.205	0.005	0.958	0.979
Received polio (3 doses)	0.933	0.007	1,596	1,616	1.169	0.008	0.918	0.948
Received measles	0.950	0.006	1,596	1,616	1.134	0.007	0.938	0.963
Fully immunized	0.901	0.009	1,596	1,616	1.142	0.010	0.884	0.918
Height-for-age (below -2SD)	0.442	0.009	4,333	4,356	1.101	0.020	0.425	0.460
Weight-for-height (below -2SD)	0.028	0.003	4,333	4,356	1.035	0.093	0.023	0.033
Weight-for-age (below -2SD)	0.114	0.005	4,333	4,356	1.018	0.046	0.104	0.125
Anemia children	0.381	0.009	4,009	4,037	1.118	0.023	0.364	0.399
Anemia women	0.173	0.005	6,949	6,945	1.181	0.031	0.162	0.183
BMI < 18.5	0.073	0.004	6,381	6,367	1.099	0.049	0.066	0.080
Total fertility rate (last 3 years)	4.563	0.073	38,010	38,012	1.287	0.016	4.418	4.709
Neonatal mortality (last 0-4 years)	27.044	1.897	9,095	9,229	1.002	0.070	23.249	30.838
Post-neonatal mortality (last 0-4 years)	22.764	1.651	9,112	9,246	1.057	0.073	19.463	26.066
Infant mortality (last 0-4 years)	49.808	2.557	9,116	9,252	1.055	0.051	44.695	54.921
Child mortality (last 0-4 years)	27.231	1.866	9,200	9,336	1.045	0.069	23.498	30.963
Under-five mortality (last 0-4 years)	75.682	3.080	9,225	9,362	1.067	0.041	69.523	81.842
Maternal mortality ratio (last 0-6 years)	487	47	165,481	165,352	1.083	0.096	393	581
HIV prevalence (women 15-49)	0.037	0.002	6,952	6,917	1.070	0.065	0.032	0.042
			MEN					
Urban residence	0.165	0.015	5,695	5,687	2.959	0.088	0.136	0.194
No education	0.103	0.004	5,695	5,687	1.067	0.042	0.094	0.111
Secondary school or higher	0.209	0.008	5,695	5,687	1.434	0.037	0.194	0.224
Never married (in union)	0.505	0.008	5,695	5,687	1.184	0.016	0.490	0.521
Currently married (in union)	0.475	0.008	5,695	5,687	1.166	0.016	0.459	0.490
HIV prevalence (men 15-49)	0.022	0.002	5,666	5,690	1.041	0.092	0.018	0.026
HIV prevalence (men 15-59)	0.024	0.002	6,296	6,331	1.051	0.084	0.020	0.028
			MEN AND WOMEN					
HIV prevalence (men and women 15-49)	0.030	0.002	12,618	12,607	1.202	0.060	0.027	0.034

Table B.3 Sampling errors: Urban sample, Rwanda DHS 2010

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
R+2SE WOMEN								
Urban residence	1.000	0.000	2,367	2,057	na	0.000	1.000	1.000
Literacy	0.888	0.008	2,367	2,057	1.207	0.009	0.872	0.903
No education	0.067	0.005	2,367	2,057	1.023	0.078	0.057	0.078
Secondary school or higher	0.375	0.019	2,367	2,057	1.899	0.050	0.338	0.413
Never married (in union)	0.443	0.014	2,367	2,057	1.397	0.032	0.415	0.472
Currently married (in union)	0.450	0.013	2,367	2,057	1.315	0.030	0.423	0.477
Married before age 20	0.264	0.017	1,308	1,148	1.395	0.064	0.230	0.298
Currently pregnant	0.073	0.006	2,367	2,057	1.160	0.085	0.060	0.085
Children ever born	1.829	0.058	2,367	2,057	1.223	0.032	1.714	1.944
Children surviving	1.607	0.047	2,367	2,057	1.149	0.029	1.513	1.700
Children ever born to women age 40-49	5.121	0.166	297	266	1.051	0.032	4.789	5.454
Knows any contraceptive method	1.000	0.000	1,046	926	na	0.000	1.000	1.000
Currently using any method	0.531	0.016	1,046	926	1.011	0.029	0.500	0.562
Currently using pill	0.079	0.011	1,046	926	1.283	0.135	0.058	0.101
Currently using condoms	0.043	0.006	1,046	926	0.965	0.141	0.031	0.055
Currently using female sterilization	0.020	0.005	1,046	926	1.111	0.242	0.010	0.029
Currently using periodic abstinence	0.025	0.005	1,046	926	1.039	0.200	0.015	0.035
Used public sector source	0.722	0.021	546	476	1.093	0.029	0.680	0.764
Want no more children	0.498	0.014	1,046	926	0.883	0.027	0.471	0.526
Want to delay birth at least 2 years	0.351	0.014	1,046	926	0.931	0.039	0.324	0.379
Ideal family size	3.120	0.034	2,353	2,045	1.213	0.011	3.053	3.187
Mothers protected against tetanus for last birth	0.767	0.015	921	819	1.060	0.019	0.737	0.796
Mothers received medical assistance at delivery	0.819	0.018	1,225	1,094	1.495	0.023	0.782	0.855
Having diarrhea in the last 2 weeks	0.136	0.013	1,161	1,033	1.249	0.094	0.110	0.161
Treated with oral rehydration salts (ORS)	0.263	0.027	155	140	0.734	0.102	0.209	0.317
Taken to a health provider	0.330	0.029	155	140	0.748	0.088	0.272	0.389
Vaccination card seen	0.778	0.030	207	181	1.023	0.038	0.718	0.837
Received BCG	0.997	0.003	207	181	0.816	0.003	0.990	1.003
Received DPT (3 doses)	0.957	0.010	207	181	0.673	0.010	0.938	0.976
Received polio (3 doses)	0.941	0.014	207	181	0.826	0.014	0.914	0.968
Received measles	0.973	0.007	207	181	0.573	0.007	0.960	0.986
Fully immunized	0.933	0.014	207	181	0.790	0.015	0.906	0.961
Height-for-age (below -2SD)	0.273	0.021	593	517	1.077	0.078	0.230	0.316
Weight-for-height (below -2SD)	0.035	0.008	593	517	1.044	0.226	0.019	0.050
Weight-for-age (below -2SD)	0.063	0.010	593	517	0.906	0.154	0.044	0.082
Anemia children	0.357	0.021	540	475	1.019	0.060	0.315	0.400
Anemia women	0.162	0.012	1,218	1,050	1.121	0.073	0.138	0.186
BMI < 18.5	0.069	0.010	1,132	973	1.290	0.142	0.049	0.088
Total fertility rate (last 3 years)	3.440	0.174	6,642	5,770	1.433	0.051	3.092	3.787
Neonatal mortality (last 0-9 years)	21.375	3.717	2,320	2,068	1.070	0.174	13.941	28.810
Post-neonatal mortality (last 0-9 years)	33.827	4.138	2,325	2,072	0.917	0.122	25.551	42.102
Infant mortality (last 0-9 years)	55.202	5.869	2,325	2,073	1.059	0.106	43.465	66.939
Child mortality (last 0-9 years)	27.132	3.747	2,321	2,065	0.851	0.138	19.639	34.625
Under-five mortality (last 0-9 years)	80.837	6.988	2,346	2,091	1.044	0.086	66.860	94.813
HIV prevalence (women 15-49)	0.087	0.008	1,216	1,049	1.007	0.094	0.070	0.103
MEN								
Urban residence	1.000	0.000	1,082	939	na	0.000	1.000	1.000
No education	0.056	0.008	1,082	939	1.105	0.137	0.041	0.072
Secondary school or higher	0.383	0.023	1,082	939	1.577	0.061	0.336	0.429
Never married (in union)	0.563	0.019	1,082	939	1.240	0.033	0.525	0.600
Currently married (in union)	0.416	0.017	1,082	939	1.149	0.041	0.382	0.451
HIV prevalence (men 15-49)	0.054	0.007	1,063	938	1.028	0.132	0.040	0.068
HIV prevalence (men 15-59)	0.053	0.007	1,133	1,001	1.016	0.127	0.040	0.067
MEN AND WOMEN								
HIV prevalence (men and women 15-49)	0.071	0.006	2,279	1,987	1.204	0.091	0.058	0.084

Table B.4 Sampling errors: Rural sample, Rwanda DHS 2010

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
R+2SE WOMEN								
Urban residence	0.000	0.000	11,304	11,614	na	na	0.000	0.000
Literacy	0.748	0.006	11,304	11,614	1.498	0.008	0.736	0.761
No education	0.171	0.005	11,304	11,614	1.428	0.030	0.160	0.181
Secondary school or higher	0.124	0.006	11,304	11,614	1.870	0.047	0.113	0.136
Never married (in union)	0.377	0.005	11,304	11,614	1.204	0.015	0.366	0.388
Currently married (in union)	0.514	0.006	11,304	11,614	1.211	0.011	0.503	0.525
Married before age 20	0.372	0.008	6,708	6,895	1.303	0.021	0.356	0.387
Currently pregnant	0.069	0.003	11,304	11,614	1.091	0.038	0.064	0.075
Children ever born	2.521	0.027	11,304	11,614	1.058	0.011	2.466	2.575
Children surviving	2.128	0.022	11,304	11,614	1.023	0.010	2.085	2.172
Children ever born to women age 40-49	6.026	0.066	1,960	2,015	1.116	0.011	5.894	6.158
Knows any contraceptive method	0.999	0.000	5,788	5,971	1.169	0.000	0.998	1.000
Currently using any method	0.514	0.008	5,788	5,971	1.171	0.015	0.498	0.529
Currently using pill	0.070	0.004	5,788	5,971	1.185	0.057	0.062	0.078
Currently using condoms	0.027	0.002	5,788	5,971	1.047	0.083	0.023	0.031
Currently using female sterilization	0.007	0.001	5,788	5,971	1.126	0.183	0.004	0.009
Currently using periodic abstinence	0.030	0.002	5,788	5,971	0.958	0.072	0.025	0.034
Used public sector source	0.952	0.005	2,829	2,891	1.179	0.005	0.943	0.961
Want no more children	0.534	0.007	5,788	5,971	1.053	0.013	0.520	0.547
Want to delay birth at least 2 years	0.357	0.007	5,788	5,971	1.046	0.018	0.344	0.370
Ideal family size	3.319	0.018	11,174	11,477	1.308	0.005	3.282	3.355
Mothers protected against tetanus for last birth	0.789	0.006	5,407	5,586	1.163	0.008	0.776	0.802
Mothers received medical assistance at delivery	0.669	0.009	7,777	8,043	1.479	0.013	0.651	0.687
Having diarrhea in the last 2 weeks	0.131	0.005	7,323	7,572	1.166	0.036	0.122	0.140
Treated with oral rehydration salts (ORS)	0.295	0.016	954	992	1.077	0.055	0.263	0.328
Taken to a health provider	0.378	0.017	954	992	1.072	0.046	0.344	0.413
Vaccination card seen	0.828	0.013	1,389	1,436	1.241	0.015	0.803	0.853
Received BCG	0.991	0.003	1,389	1,436	0.980	0.003	0.986	0.996
Received DPT (3 doses)	0.970	0.005	1,389	1,436	1.159	0.006	0.959	0.980
Received polio (3 doses)	0.932	0.008	1,389	1,436	1.115	0.008	0.917	0.947
Received measles	0.948	0.007	1,389	1,436	1.127	0.007	0.934	0.961
Fully immunized	0.897	0.009	1,389	1,436	1.106	0.010	0.879	0.915
Height-for-age (below -2SD)	0.465	0.009	3,740	3,839	1.085	0.020	0.446	0.484
Weight-for-height (below -2SD)	0.027	0.003	3,740	3,839	1.034	0.102	0.022	0.033
Weight-for-age (below -2SD)	0.121	0.006	3,740	3,839	1.010	0.048	0.110	0.133
Anemia children	0.384	0.009	3,469	3,562	1.113	0.025	0.366	0.403
Anemia women	0.174	0.006	5,731	5,895	1.185	0.034	0.163	0.186
BMI < 18.5	0.074	0.004	5,249	5,393	1.073	0.052	0.066	0.082
Total fertility rate (last 3 years)	4.759	0.076	31,368	32,243	1.227	0.016	4.608	4.911
Neonatal mortality (last 0-9 years)	30.576	1.713	15,220	15,687	1.056	0.056	27.150	34.002
Post-neonatal mortality (last 0-9 years)	31.377	1.578	15,251	15,714	1.058	0.050	28.221	34.532
Infant mortality (last 0-9 years)	61.953	2.372	15,261	15,728	1.087	0.038	57.210	66.697
Child mortality (last 0-9 years)	45.775	2.090	15,366	15,824	1.056	0.046	41.595	49.955
Under-five mortality (last 0-9 years)	104.892	3.111	15,438	15,911	1.087	0.030	98.671	111.114
HIV prevalence (women 15-49)	0.028	0.002	5,736	5,867	1.060	0.082	0.024	0.033
MEN								
Urban residence	0.000	0.000	4,613	4,748	na	na	0.000	0.000
No education	0.112	0.005	4,613	4,748	1.062	0.044	0.102	0.121
Secondary school or higher	0.175	0.008	4,613	4,748	1.363	0.044	0.159	0.190
Never married (in union)	0.494	0.009	4,613	4,748	1.169	0.017	0.477	0.511
Currently married (in union)	0.486	0.009	4,613	4,748	1.155	0.017	0.469	0.503
HIV prevalence (men 15-49)	0.016	0.002	4,603	4,752	1.026	0.119	0.012	0.020
HIV prevalence (men 15-59)	0.019	0.002	5,163	5,330	1.055	0.107	0.015	0.023
MEN AND WOMEN								
HIV prevalence (men and women 15-49)	0.023	0.002	10,339	10,619	1.139	0.073	0.019	0.026

Table B.5 Sampling errors: City of Kigali sample, Rwanda DHS 2010

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
R+2SE WOMEN								
Urban residence	0.807	0.055	1,890	1,596	5.961	0.068	0.697	0.916
Literacy	0.904	0.011	1,890	1,596	1.612	0.012	0.882	0.926
No education	0.062	0.009	1,890	1,596	1.667	0.149	0.044	0.081
Secondary school or higher	0.420	0.024	1,890	1,596	2.149	0.058	0.371	0.469
Never married (in union)	0.451	0.017	1,890	1,596	1.491	0.038	0.417	0.485
Currently married (in union)	0.455	0.016	1,890	1,596	1.356	0.034	0.424	0.486
Married before age 20	0.247	0.025	1,036	882	1.828	0.099	0.198	0.296
Currently pregnant	0.072	0.007	1,890	1,596	1.181	0.097	0.058	0.086
Children ever born	1.739	0.084	1,890	1,596	1.623	0.048	1.572	1.907
Children surviving	1.528	0.064	1,890	1,596	1.443	0.042	1.401	1.656
Children ever born to women age 40-49	5.079	0.255	217	190	1.314	0.050	4.569	5.588
Knows any contraceptive method	1.000	0.000	835	726	na	0.000	1.000	1.000
Currently using any method	0.536	0.017	835	726	0.974	0.031	0.502	0.570
Currently using pill	0.082	0.012	835	726	1.309	0.152	0.057	0.107
Currently using condoms	0.050	0.007	835	726	0.867	0.130	0.037	0.063
Currently using female sterilization	0.022	0.006	835	726	1.214	0.278	0.010	0.035
Currently using periodic abstinence	0.028	0.006	835	726	1.140	0.234	0.015	0.041
Used public sector source	0.677	0.033	425	360	1.450	0.049	0.611	0.743
Want no more children	0.486	0.019	835	726	1.098	0.039	0.448	0.524
Want to delay birth at least 2 years	0.350	0.018	835	726	1.092	0.052	0.314	0.386
Ideal family size	3.010	0.033	1,878	1,587	1.145	0.011	2.945	3.076
Mothers protected against tetanus for last birth	0.732	0.021	731	635	1.262	0.028	0.690	0.773
Mothers received medical assistance at delivery	0.827	0.022	990	872	1.709	0.027	0.782	0.872
Having diarrhea in the last 2 weeks	0.114	0.014	947	830	1.269	0.123	0.086	0.142
Treated with oral rehydration salts (ORS)	0.325	0.039	108	95	0.884	0.120	0.247	0.403
Taken to a health provider	0.331	0.041	108	95	0.865	0.124	0.249	0.414
Vaccination card seen	0.770	0.041	168	142	1.245	0.053	0.688	0.851
Received BCG	0.996	0.004	168	142	0.828	0.004	0.988	1.004
Received DPT (3 doses)	0.985	0.008	168	142	0.790	0.008	0.970	1.000
Received polio (3 doses)	0.966	0.015	168	142	1.045	0.015	0.936	0.995
Received measles	0.982	0.008	168	142	0.762	0.008	0.966	0.998
Fully immunized	0.963	0.015	168	142	1.017	0.015	0.933	0.993
Height-for-age (below -2SD)	0.235	0.025	469	397	1.193	0.105	0.186	0.285
Weight-for-height (below -2SD)	0.044	0.011	469	397	1.168	0.250	0.022	0.065
Weight-for-age (below -2SD)	0.074	0.015	469	397	1.196	0.203	0.044	0.104
Anemia children	0.381	0.022	426	365	0.921	0.058	0.337	0.425
Anemia women	0.180	0.016	964	807	1.272	0.088	0.148	0.211
BMI < 18.5	0.064	0.009	892	743	1.146	0.148	0.045	0.082
Total fertility rate (last 3 years)	3.539	0.257	5,347	4,524	1.665	0.073	3.025	4.053
Neonatal mortality (last 0-9 years)	21.193	5.393	1,795	1,555	1.439	0.254	10.407	31.979
Post-neonatal mortality (last 0-9 years)	34.028	5.607	1,801	1,559	1.160	0.165	22.813	45.243
Infant mortality (last 0-9 years)	55.221	6.493	1,800	1,559	1.079	0.118	42.234	68.207
Child mortality (last 0-9 years)	25.511	5.320	1,777	1,530	1.387	0.209	14.870	36.152
Under-five mortality (last 0-9 years)	79.323	9.132	1,818	1,575	1.271	0.115	61.059	97.587
HIV prevalence (women 15-49)	0.094	0.010	961	808	1.028	0.103	0.075	0.114
MEN								
Urban residence	0.792	0.058	876	739	4.198	0.073	0.676	0.908
No education	0.039	0.007	876	739	1.034	0.175	0.025	0.052
Secondary school or higher	0.436	0.026	876	739	1.558	0.060	0.383	0.488
Never married (in union)	0.562	0.022	876	739	1.318	0.039	0.518	0.606
Currently married (in union)	0.416	0.020	876	739	1.225	0.049	0.375	0.457
HIV prevalence (men 15-49)	0.051	0.008	858	741	1.008	0.149	0.035	0.066
HIV prevalence (men 15-59)	0.052	0.007	910	790	0.983	0.139	0.037	0.066
MEN AND WOMEN								
HIV prevalence (men and women 15-49)	0.073	0.007	1,819	1,548	1.206	0.101	0.059	0.088

Table B.6 Sampling errors: South sample, Rwanda DHS 2010

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			R+2SE WOMEN					
Urban residence	0.112	0.028	3,340	3,212	5.040	0.246	0.057	0.168
Literacy	0.783	0.010	3,340	3,212	1.360	0.012	0.764	0.802
No education	0.134	0.008	3,340	3,212	1.326	0.058	0.119	0.150
Secondary school or higher	0.137	0.009	3,340	3,212	1.513	0.066	0.119	0.155
Never married (in union)	0.380	0.010	3,340	3,212	1.166	0.026	0.361	0.400
Currently married (in union)	0.503	0.010	3,340	3,212	1.129	0.019	0.483	0.522
Married before age 20	0.259	0.012	2,055	1,985	1.207	0.045	0.236	0.282
Currently pregnant	0.062	0.005	3,340	3,212	1.109	0.075	0.052	0.071
Children ever born	2.406	0.048	3,340	3,212	1.090	0.020	2.310	2.502
Children surviving	2.039	0.039	3,340	3,212	1.047	0.019	1.962	2.116
Children ever born to women age 40-49	5.295	0.111	654	635	1.133	0.021	5.073	5.517
Knows any contraceptive method	1.000	0.000	1,682	1,614	na	0.000	1.000	1.000
Currently using any method	0.553	0.015	1,682	1,614	1.204	0.026	0.523	0.582
Currently using pill	0.075	0.007	1,682	1,614	1.110	0.095	0.060	0.089
Currently using condoms	0.025	0.004	1,682	1,614	1.090	0.165	0.017	0.034
Currently using female sterilization	0.006	0.002	1,682	1,614	1.064	0.340	0.002	0.010
Currently using periodic abstinence	0.024	0.003	1,682	1,614	0.911	0.141	0.017	0.031
Used public sector source	0.938	0.009	905	863	1.153	0.010	0.919	0.956
Want no more children	0.554	0.013	1,682	1,614	1.091	0.024	0.527	0.580
Want to delay birth at least 2 years	0.335	0.012	1,682	1,614	1.047	0.036	0.311	0.359
Ideal family size	3.217	0.028	3,284	3,155	1.167	0.009	3.160	3.274
Mothers protected against tetanus for last birth	0.794	0.011	1,585	1,532	1.057	0.014	0.773	0.816
Mothers received medical assistance at delivery	0.660	0.016	2,244	2,169	1.385	0.024	0.629	0.692
Having diarrhea in the last 2 weeks	0.156	0.010	2,122	2,049	1.267	0.065	0.136	0.176
Treated with oral rehydration salts (ORS)	0.271	0.023	323	319	0.898	0.084	0.226	0.317
Taken to a health provider	0.330	0.027	323	319	1.022	0.082	0.275	0.384
Vaccination card seen	0.824	0.022	397	383	1.171	0.027	0.779	0.869
Received BCG	0.990	0.005	397	383	1.039	0.005	0.979	1.000
Received DPT (3 doses)	0.968	0.010	397	383	1.109	0.010	0.949	0.988
Received polio (3 doses)	0.944	0.014	397	383	1.241	0.015	0.915	0.973
Received measles	0.976	0.009	397	383	1.052	0.009	0.959	0.993
Fully immunized	0.928	0.016	397	383	1.221	0.017	0.896	0.960
Height-for-age (below -2SD)	0.423	0.016	1,097	1,050	1.013	0.038	0.390	0.455
Weight-for-height (below -2SD)	0.038	0.005	1,097	1,050	0.930	0.139	0.028	0.049
Weight-for-age (below -2SD)	0.124	0.010	1,097	1,050	0.934	0.082	0.104	0.144
Anemia children	0.375	0.020	1,030	986	1.280	0.052	0.336	0.414
Anemia women	0.174	0.010	1,656	1,593	1.090	0.058	0.153	0.194
BMI < 18.5	0.106	0.009	1,550	1,490	1.120	0.083	0.088	0.124
Total fertility rate (last 3 years)	4.590	0.127	9,302	8,953	1.115	0.028	4.336	4.845
Neonatal mortality (last 0-9 years)	31.408	3.235	4,408	4,263	1.047	0.103	24.938	37.877
Post-neonatal mortality (last 0-9 years)	28.319	2.618	4,413	4,267	0.966	0.092	23.083	33.556
Infant mortality (last 0-9 years)	59.727	4.291	4,420	4,275	1.053	0.072	51.145	68.310
Child mortality (last 0-9 years)	38.684	3.120	4,424	4,281	0.952	0.081	32.443	44.925
Under-five mortality (last 0-9 years)	96.101	5.285	4,460	4,314	1.006	0.055	85.531	106.671
HIV prevalence (women 15-49)	0.030	0.005	1,662	1,593	1.087	0.152	0.021	0.039
			MEN					
Urban residence	0.123	0.030	1,373	1,308	3.356	0.243	0.063	0.183
No education	0.112	0.009	1,373	1,308	1.023	0.078	0.095	0.130
Secondary school or higher	0.152	0.012	1,373	1,308	1.240	0.079	0.128	0.176
Never married (in union)	0.505	0.014	1,373	1,308	1.046	0.028	0.477	0.533
Currently married (in union)	0.477	0.014	1,373	1,308	1.039	0.029	0.449	0.505
HIV prevalence (men 15-49)	0.018	0.004	1,370	1,308	0.988	0.198	0.011	0.025
HIV prevalence (men 15-59)	0.017	0.003	1,514	1,445	0.992	0.191	0.011	0.024
			MEN AND WOMEN					
HIV prevalence (men and women 15-49)	0.024	0.003	3,032	2901	1.115	0.128	0.018	0.031

Table B.7 Sampling errors: West sample, Rwanda DHS 2010

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
R+2SE WOMEN								
Urban residence	0.043	0.019	3,138	3,305	5.279	0.446	0.005	0.082
Literacy	0.727	0.014	3,138	3,305	1.707	0.019	0.700	0.755
No education	0.199	0.011	3,138	3,305	1.579	0.057	0.176	0.221
Secondary school or higher	0.121	0.015	3,138	3,305	2.515	0.121	0.092	0.151
Never married (in union)	0.396	0.011	3,138	3,305	1.303	0.029	0.373	0.419
Currently married (in union)	0.507	0.011	3,138	3,305	1.255	0.022	0.484	0.529
Married before age 20	0.366	0.015	1,786	1,878	1.297	0.040	0.336	0.395
Currently pregnant	0.074	0.005	3,138	3,305	1.116	0.071	0.063	0.084
Children ever born	2.442	0.054	3,138	3,305	1.082	0.022	2.334	2.549
Children surviving	2.117	0.043	3,138	3,305	1.017	0.020	2.031	2.204
Children ever born to women age 40-49	6.413	0.135	495	519	1.147	0.021	6.143	6.683
Knows any contraceptive method	1.000	0.000	1,591	1,675	na	0.000	1.000	1.000
Currently using any method	0.427	0.016	1,591	1,675	1.265	0.037	0.396	0.459
Currently using pill	0.050	0.007	1,591	1,675	1.292	0.141	0.036	0.065
Currently using condoms	0.026	0.004	1,591	1,675	1.088	0.169	0.017	0.034
Currently using female sterilization	0.012	0.003	1,591	1,675	1.219	0.282	0.005	0.018
Currently using periodic abstinence	0.037	0.005	1,591	1,675	0.984	0.127	0.027	0.046
Used public sector source	0.951	0.012	602	627	1.350	0.013	0.927	0.975
Want no more children	0.488	0.012	1,591	1,675	0.955	0.025	0.464	0.512
Want to delay birth at least 2 years	0.393	0.013	1,591	1,675	1.028	0.032	0.368	0.418
Ideal family size	3.469	0.037	3,109	3,272	1.412	0.011	3.394	3.543
Mothers protected against tetanus for last birth	0.760	0.013	1,467	1,545	1.162	0.017	0.734	0.786
Mothers received medical assistance at delivery	0.708	0.019	2,167	2,284	1.634	0.027	0.670	0.745
Having diarrhea in the last 2 weeks	0.134	0.010	2,048	2,159	1.241	0.073	0.115	0.154
Treated with oral rehydration salts (ORS)	0.294	0.037	270	290	1.277	0.127	0.219	0.369
Taken to a health provider	0.455	0.037	270	290	1.156	0.080	0.382	0.528
Vaccination card seen	0.829	0.021	404	426	1.107	0.025	0.787	0.871
Received BCG	0.983	0.006	404	426	0.927	0.006	0.972	0.995
Received DPT (3 doses)	0.945	0.015	404	426	1.310	0.016	0.915	0.974
Received polio (3 doses)	0.863	0.020	404	426	1.161	0.023	0.822	0.903
Received measles	0.911	0.017	404	426	1.175	0.018	0.878	0.945
Fully immunized	0.809	0.023	404	426	1.167	0.029	0.763	0.856
Height-for-age (below -2SD)	0.499	0.020	1,038	1,086	1.194	0.040	0.459	0.539
Weight-for-height (below -2SD)	0.020	0.004	1,038	1,086	0.888	0.202	0.012	0.028
Weight-for-age (below -2SD)	0.126	0.011	1,038	1,086	1.013	0.088	0.104	0.148
Anemia children	0.384	0.018	958	1,003	1.117	0.047	0.348	0.421
Anemia women	0.153	0.010	1,608	1,698	1.116	0.065	0.133	0.173
BMI < 18.5	0.061	0.007	1,475	1,556	1.125	0.115	0.047	0.075
Total fertility rate (last 3 years)	4.966	0.145	8,669	9,127	1.244	0.029	4.676	5.256
Neonatal mortality (last 0-9 years)	26.681	2.918	4,183	4,378	1.059	0.109	20.845	32.518
Post-neonatal mortality (last 0-9 years)	29.404	2.477	4,188	4,380	0.910	0.084	24.450	34.358
Infant mortality (last 0-9 years)	56.085	3.877	4,189	4,385	1.012	0.069	48.332	63.838
Child mortality (last 0-9 years)	34.212	3.475	4,176	4,361	1.146	0.102	27.262	41.162
Under-five mortality (last 0-9 years)	88.378	4.924	4,220	4,419	1.032	0.056	78.530	98.226
HIV prevalence (women 15-49)	0.032	0.005	1,608	1,688	1.147	0.156	0.022	0.043
MEN								
Urban residence	0.063	0.032	1,243	1,307	4.561	0.503	0.000	0.126
No education	0.118	0.010	1,243	1,307	1.124	0.087	0.097	0.138
Secondary school or higher	0.196	0.018	1,243	1,307	1.637	0.094	0.159	0.233
Never married (in union)	0.513	0.017	1,243	1,307	1.208	0.033	0.479	0.547
Currently married (in union)	0.477	0.017	1,243	1,307	1.214	0.036	0.442	0.511
HIV prevalence (men 15-49)	0.020	0.004	1,236	1,307	1.018	0.203	0.012	0.028
HIV prevalence (men 15-59)	0.026	0.005	1,406	1,489	1.088	0.177	0.017	0.036
MEN AND WOMEN								
HIV prevalence (men and women 15-49)	0.027	0.004	2,844	2,995	1.233	0.139	0.020	0.035

Table B.8 Sampling errors: North sample, Rwanda DHS 2010

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
			R+2SE WOMEN					
Urban residence	0.056	0.027	2,199	2,278	5.521	0.486	0.002	0.111
Literacy	0.757	0.013	2,199	2,278	1.444	0.017	0.730	0.783
No education	0.163	0.011	2,199	2,278	1.347	0.065	0.142	0.184
Secondary school or higher	0.125	0.013	2,199	2,278	1.789	0.101	0.099	0.150
Never married (in union)	0.394	0.011	2,199	2,278	1.058	0.028	0.372	0.416
Currently married (in union)	0.506	0.012	2,199	2,278	1.119	0.024	0.482	0.529
Married before age 20	0.409	0.021	1,291	1,340	1.548	0.052	0.366	0.451
Currently pregnant	0.065	0.005	2,199	2,278	0.879	0.071	0.056	0.074
Children ever born	2.469	0.060	2,199	2,278	1.006	0.024	2.350	2.588
Children surviving	2.078	0.049	2,199	2,278	1.004	0.024	1.979	2.176
Children ever born to women age 40-49	6.178	0.151	361	374	1.094	0.024	5.876	6.480
Knows any contraceptive method	1.000	0.000	1,108	1,151	na	0.000	1.000	1.000
Currently using any method	0.569	0.014	1,108	1,151	0.967	0.025	0.540	0.598
Currently using pill	0.080	0.010	1,108	1,151	1.214	0.124	0.060	0.100
Currently using condoms	0.026	0.005	1,108	1,151	0.992	0.183	0.016	0.035
Currently using female sterilization	0.003	0.002	1,108	1,151	1.010	0.563	0.000	0.006
Currently using periodic abstinence	0.030	0.005	1,108	1,151	0.966	0.165	0.020	0.040
Used public sector source	0.967	0.008	617	642	1.072	0.008	0.952	0.983
Want no more children	0.522	0.016	1,108	1,151	1.095	0.031	0.489	0.555
Want to delay birth at least 2 years	0.366	0.014	1,108	1,151	0.983	0.039	0.337	0.394
Ideal family size	3.204	0.048	2,184	2,262	1.591	0.015	3.108	3.300
Mothers protected against tetanus for last birth	0.807	0.016	992	1,035	1.259	0.020	0.776	0.839
Mothers received medical assistance at delivery	0.635	0.019	1,374	1,437	1.337	0.030	0.597	0.674
Having diarrhea in the last 2 weeks	0.137	0.012	1,283	1,342	1.227	0.087	0.113	0.161
Treated with oral rehydration salts (ORS)	0.255	0.031	172	183	0.948	0.123	0.192	0.318
Taken to a health provider	0.315	0.033	172	183	0.930	0.105	0.249	0.381
Vaccination card seen	0.868	0.031	238	251	1.442	0.036	0.806	0.931
Received BCG	1.000	0.000	238	251	na	0.000	1.000	1.000
Received DPT (3 doses)	0.992	0.005	238	251	0.974	0.005	0.982	1.003
Received polio (3 doses)	0.970	0.013	238	251	1.164	0.013	0.944	0.996
Received measles	0.974	0.013	238	251	1.241	0.013	0.948	0.999
Fully immunized	0.936	0.017	238	251	1.110	0.019	0.901	0.971
Height-for-age (below -2SD)	0.507	0.022	684	710	1.114	0.044	0.462	0.552
Weight-for-height (below -2SD)	0.012	0.004	684	710	1.076	0.376	0.003	0.021
Weight-for-age (below -2SD)	0.104	0.013	684	710	1.052	0.127	0.078	0.131
Anemia children	0.306	0.020	632	656	1.018	0.064	0.267	0.345
Anemia women	0.116	0.010	1,138	1,178	1.092	0.090	0.095	0.136
BMI < 18.5	0.048	0.007	1,043	1,082	1.018	0.141	0.034	0.061
Total fertility rate (last 3 years)	4.136	0.178	6,039	6,256	1.308	0.043	3.781	4.491
Neonatal mortality (last 0-9 years)	38.654	4.796	2,794	2,915	1.169	0.124	29.062	48.246
Post-neonatal mortality (last 0-9 years)	32.797	3.788	2,814	2,936	1.006	0.115	25.221	40.372
Infant mortality (last 0-9 years)	71.451	6.431	2,801	2,922	1.194	0.090	58.588	84.313
Child mortality (last 0-9 years)	38.625	3.638	2,887	3,010	0.983	0.094	31.348	45.901
Under-five mortality (last 0-9 years)	107.315	7.402	2,834	2,956	1.166	0.069	92.511	122.120
HIV prevalence (women 15-49)	0.031	0.006	1,138	1,168	1.104	0.183	0.020	0.042
			MEN					
Urban residence	0.071	0.035	859	899	3.981	0.498	0.000	0.141
No education	0.097	0.012	859	899	1.197	0.125	0.073	0.121
Secondary school or higher	0.206	0.020	859	899	1.458	0.098	0.166	0.246
Never married (in union)	0.506	0.021	859	899	1.250	0.042	0.463	0.548
Currently married (in union)	0.478	0.021	859	899	1.212	0.043	0.437	0.520
HIV prevalence (men 15-49)	0.018	0.005	859	899	1.195	0.302	0.007	0.029
HIV prevalence (men 15-59)	0.019	0.005	971	1,014	1.187	0.271	0.009	0.030
			MEN AND WOMEN					
HIV prevalence (men and women 15-49)	0.025	0.004	1,997	2,067	1.250	0.173	0.017	0.034

Table B.9 Sampling errors: East sample, Rwanda DHS 2010

Variable	R	SE	N	WN	DEFT	SE/R	R-2SE	R+2SE
R+2SE WOMEN								
Urban residence	0.042	0.018	3,104	3,280	4.914	0.423	0.006	0.077
Literacy	0.742	0.011	3,104	3,280	1.414	0.015	0.720	0.764
No education	0.171	0.009	3,104	3,280	1.340	0.053	0.153	0.189
Secondary school or higher	0.128	0.010	3,104	3,280	1.676	0.078	0.108	0.148
Never married (in union)	0.347	0.011	3,104	3,280	1.236	0.030	0.326	0.368
Currently married (in union)	0.528	0.012	3,104	3,280	1.308	0.022	0.504	0.551
Married before age 20	0.460	0.014	1,848	1,958	1.211	0.031	0.432	0.488
Currently pregnant	0.077	0.005	3,104	3,280	1.149	0.071	0.066	0.088
Children ever born	2.695	0.053	3,104	3,280	1.046	0.020	2.589	2.800
Children surviving	2.227	0.042	3,104	3,280	1.033	0.019	2.143	2.311
Children ever born to women age 40-49	6.286	0.110	530	562	0.979	0.017	6.067	6.506
Knows any contraceptive method	0.997	0.002	1,618	1,731	1.144	0.002	0.993	1.000
Currently using any method	0.523	0.015	1,618	1,731	1.184	0.028	0.494	0.553
Currently using pill	0.078	0.008	1,618	1,731	1.154	0.098	0.063	0.094
Currently using condoms	0.029	0.004	1,618	1,731	1.018	0.146	0.021	0.038
Currently using female sterilization	0.005	0.002	1,618	1,731	0.926	0.321	0.002	0.008
Currently using periodic abstinence	0.026	0.004	1,618	1,731	0.934	0.141	0.019	0.034
Used public sector source	0.944	0.009	826	875	1.150	0.010	0.926	0.963
Want no more children	0.568	0.013	1,618	1,731	1.047	0.023	0.542	0.593
Want to delay birth at least 2 years	0.336	0.012	1,618	1,731	1.060	0.037	0.311	0.361
Ideal family size	3.372	0.031	3,072	3,247	1.073	0.009	3.311	3.433
Mothers protected against tetanus for last birth	0.810	0.011	1,553	1,658	1.107	0.014	0.788	0.832
Mothers received medical assistance at delivery	0.672	0.016	2,227	2,376	1.453	0.024	0.639	0.704
Having diarrhea in the last 2 weeks	0.110	0.007	2,084	2,225	0.940	0.060	0.097	0.123
Treated with oral rehydration salts (ORS)	0.328	0.032	236	245	1.023	0.099	0.263	0.393
Taken to a health provider	0.389	0.034	236	245	1.024	0.086	0.322	0.457
Vaccination card seen	0.805	0.025	389	414	1.216	0.030	0.756	0.854
Received BCG	0.995	0.004	389	414	1.013	0.004	0.987	1.002
Received DPT (3 doses)	0.972	0.009	389	414	1.042	0.009	0.954	0.989
Received polio (3 doses)	0.962	0.010	389	414	1.006	0.010	0.942	0.981
Received measles	0.942	0.012	389	414	1.009	0.013	0.918	0.966
Fully immunized	0.928	0.013	389	414	0.963	0.014	0.902	0.953
Height-for-age (below -2SD)	0.439	0.017	1,045	1,112	1.039	0.038	0.405	0.472
Weight-for-height (below -2SD)	0.032	0.006	1,045	1,112	1.155	0.200	0.019	0.044
Weight-for-age (below -2SD)	0.115	0.011	1,045	1,112	1.021	0.095	0.093	0.136
Anemia children	0.432	0.017	963	1,027	1.065	0.040	0.398	0.467
Anemia women	0.228	0.013	1,583	1,668	1.239	0.057	0.202	0.254
BMI < 18.5	0.077	0.008	1,421	1,495	1.085	0.100	0.061	0.092
Total fertility rate (last 3 years)	4.934	0.141	8,654	9,152	1.246	0.029	4.652	5.216
Neonatal mortality (last 0-9 years)	27.441	2.751	4,360	4,645	0.918	0.100	21.939	32.944
Post-neonatal mortality (last 0-9 years)	35.325	3.379	4,360	4,645	1.172	0.096	28.567	42.083
Infant mortality (last 0-9 years)	62.767	4.599	4,376	4,660	1.122	0.073	53.569	71.964
Child mortality (last 0-9 years)	65.906	4.471	4,423	4,707	1.064	0.068	56.965	74.847
Under-five mortality (last 0-9 years)	124.536	6.370	4,452	4,738	1.158	0.051	111.796	137.275
HIV prevalence (women 15-49)	0.025	0.004	1,583	1,660	0.937	0.147	0.018	0.033
Urban residence	0.033	0.015	1,344	1,435	2.961	0.436	0.004	0.063
MEN								
No education	0.116	0.008	1,344	1,435	0.939	0.071	0.100	0.133
Secondary school or higher	0.158	0.012	1,344	1,435	1.211	0.076	0.134	0.182
Never married (in union)	0.469	0.016	1,344	1,435	1.162	0.034	0.437	0.501
Currently married (in union)	0.498	0.016	1,344	1,435	1.160	0.032	0.467	0.530
HIV prevalence (men 15-49)	0.016	0.004	1,343	1,435	1.021	0.216	0.009	0.023
HIV prevalence (men 15-59)	0.017	0.003	1,495	1,594	1.011	0.197	0.011	0.024
MEN AND WOMEN								
HIV prevalence (men and women 15-49)	0.021	0.003	2,926	3,095	1.102	0.139	0.015	0.027

DATA QUALITY TABLES

Appendix C

Table C.1 Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Rwanda 2010

	Women		Men			Women		Men	
Age	Number	Percent	Number	Percent	Age	Number	Percent	Number	Percent
0	801	2.7	798	3.1	37	303	1.0	232	0.9
1	826	2.8	792	3.0	38	299	1.0	198	0.8
2	889	3.0	983	3.8	39	232	0.8	145	0.6
3	909	3.1	968	3.7	40	262	0.9	220	0.8
4	963	3.3	1,019	3.9	41	206	0.7	164	0.6
5	862	2.9	857	3.3	42	255	0.9	170	0.7
6	886	3.0	908	3.5	43	201	0.7	144	0.6
7	920	3.1	997	3.8	44	244	0.8	162	0.6
8	921	3.1	893	3.4	45	202	0.7	163	0.6
9	601	2.1	658	2.5	46	227	0.8	147	0.6
10	919	3.1	908	3.5	47	233	0.8	147	0.6
11	642	2.2	657	2.5	48	262	0.9	195	0.7
12	667	2.3	690	2.6	49	186	0.6	134	0.5
13	757	2.6	660	2.5	50	180	0.6	178	0.7
14	651	2.2	658	2.5	51	257	0.9	171	0.7
15	686	2.3	635	2.4	52	235	0.8	153	0.6
16	654	2.2	657	2.5	53	179	0.6	138	0.5
17	534	1.8	519	2.0	54	145	0.5	119	0.5
18	605	2.1	558	2.1	55	185	0.6	122	0.5
19	488	1.7	481	1.8	56	166	0.6	105	0.4
20	566	1.9	536	2.1	57	140	0.5	93	0.4
21	497	1.7	448	1.7	58	150	0.5	114	0.4
22	567	1.9	441	1.7	59	97	0.3	85	0.3
23	535	1.8	430	1.7	60	144	0.5	98	0.4
24	521	1.8	416	1.6	61	91	0.3	72	0.3
25	556	1.9	444	1.7	62	98	0.3	69	0.3
26	534	1.8	453	1.7	63	78	0.3	38	0.1
27	480	1.6	384	1.5	64	73	0.3	41	0.2
28	505	1.7	464	1.8	65	99	0.3	48	0.2
29	427	1.5	340	1.3	66	75	0.3	47	0.2
30	461	1.6	412	1.6	67	66	0.2	42	0.2
31	340	1.2	287	1.1	68	71	0.2	48	0.2
32	392	1.3	290	1.1	69	46	0.2	15	0.1
33	322	1.1	261	1.0	70+	748	2.6	432	1.7
34	313	1.1	218	0.8	DK/ missing	5	0.0	2	0.0
35	318	1.1	241	0.9					
36	306	1.0	215	0.8	Total	29,264	100.0	26,029	100.0

Table C.2.1 Age distribution of eligible and interviewed women

De facto household population of women age 10-54, interviewed women age 15-49; and percent distribution and percentage of eligible women who were interviewed (weighted), by five-year age groups, Rwanda 2010

Age group	Household population of women age 10-54	Interviewed women age 15-49		Percentage of eligible women interviewed
		Number	Percentage	
10-14	3,637	na	na	na
15-19	2,966	2,932	21.6	98.9
20-24	2,687	2,667	19.6	99.3
25-29	2,502	2,478	18.2	99.1
30-34	1,827	1,814	13.3	99.2
35-39	1,458	1,445	10.6	99.1
40-44	1,168	1,160	8.5	99.3
45-49	1,111	1,106	8.1	99.5
50-54	996	na	na	na
15-49	13,719	13,601	100.0	99.1

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

Table C.2.2 Age distribution of eligible and interviewed men

De facto household population of men age 10-64, interviewed men age 15-59 and percent of eligible men who were interviewed (weighted), by five-year age groups, Rwanda 2010

Age group	Household population of men age 10-59	Interviewed men age 15-54		Percentage of eligible men interviewed
		Number	Percentage	
10-14	1,731	na	na	na
15-19	1,448	1,438	22.8	99.3
20-24	1,184	1,158	18.3	97.9
25-29	1,052	1,039	16.5	98.8
30-34	720	708	11.2	98.3
35-39	493	489	7.7	99.1
40-44	436	430	6.8	98.7
45-49	415	410	6.5	98.8
50-54	386	380	6.0	98.6
55-59	262	259	4.1	98.8
60-64	156	na	na	na
15-59	6,396	6,313	100.0	98.7

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

Table C.3 Completeness of reporting

Percentage of observations missing information for selected demographic and health questions (weighted), Rwanda 2010

Subject	Percentage with information missing	Number of cases
Month Only (Births in the 15 years preceding the survey)	0.36	24,624
Month and Year (Births in the 15 years preceding the survey)	0.00	24,624
Age at Death (Deceased children born in the 15 years preceding the survey)	0.00	2,895
Age/date at first union[1] (Ever married women age 15-49)	0.01	8,386
Age/date at first union (Ever married men age 15-54)	0.00	3,450
Respondent's education (All women age 15-49)	0.10	13,671
Respondent's education (All men age 15-54)	0.00	6,329
Diarrhea in last 2 weeks (Living children 0-59 months)	0.73	8,605
Height (Living children age 0-59 months from the Household Questionnaire)	0.29	4,443
Weight (Living children age 0-59 months from the Household Questionnaire)	0.25	4,443
Height or weight (Living children age 0-59 months from the Household Questionnaire)	0.41	4,443
Anemia (Living children age 6-59 months from the Household Questionnaire)	0.94	4,075
Anemia (All women from the Household Questionnaire)	1.05	6,990
Anemia (All men from the Household Questionnaire)	100.00	6,398

[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 (L), dead (D), and total (T) children (weighted), Rwanda 2010

	Number of births			Percentage with complete birth date[1]			Sex ratio at birth[2]			Calendar year ratio[3]		
Calendar year	L	D	T	L	D	T	L	D	T	L	D	T
2011	68	1	69	100.0	100.0	100.0	109.4	na	112.3	na	na	na
2010	1,520	43	1,562	100.0	100.0	100.0	101.0	142.8	102.0	na	na	na
2009	1,645	97	1,742	100.0	100.0	100.0	95.5	132.2	97.2	98.7	113.4	99.4
2008	1,814	129	1,943	100.0	100.0	100.0	108.0	100.4	107.5	107.7	120.0	108.4
2007	1,723	118	1,841	100.0	100.0	100.0	101.7	122.9	102.9	93.7	86.7	93.2
2006	1,866	142	2,008	100.0	100.0	100.0	110.4	129.1	111.6	111.6	114.3	111.8
2005	1,620	131	1,752	100.0	100.0	100.0	93.6	107.8	94.6	92.3	77.3	91.0
2004	1,644	198	1,842	99.8	100.0	99.8	105.0	101.8	104.6	101.3	101.4	101.3
2003	1,628	259	1,886	99.5	98.9	99.4	109.3	130.0	112.0	100.4	127.3	103.4
2002	1,597	209	1,805	99.8	98.3	99.6	95.6	103.9	96.5	119.1	91.7	115.1
2007-2011	6,770	387	7,157	100.0	100.0	100.0	101.7	119.4	102.6	na	na	na
2002-2006	8,355	939	9,294	99.8	99.3	99.8	102.8	114.3	103.9	na	na	na
1997-2001	5,641	1,273	6,914	99.5	97.5	99.2	102.3	116.7	104.8	na	na	na
1992-1996	3,877	1,269	5,145	99.3	98.0	99.0	96.7	119.8	102.0	na	na	na
<1992	3,382	1,146	4,528	98.5	96.8	98.0	100.2	117.0	104.2	na	na	na
All	28,025	5,013	33,039	99.6	98.0	99.3	101.3	117.3	103.5	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), Rwanda 2010

	Number of years preceding the survey				Total
Age at death (days)	0-4	5-9	10-14	15-19	0-19
<1	78	74	89	44	285
1	33	41	44	26	145
2	18	17	36	15	86
3	22	25	24	22	93
4	8	12	12	7	38
5	1	12	3	7	22
6	6	3	9	2	21
7	33	41	56	35	166
8	0	1	7	2	10
9	0	0	3	3	6
10	2	0	1	3	6
11	2	0	1	1	4
12	0	3	5	1	9
13	2	2	1	2	7
14	18	23	25	13	80
15	7	2	3	3	15
16	0	0	1	0	1
17	1	1	0	0	2
18	0	0	0	1	1
19	0	0	0	1	1
20	0	1	1	2	4
21	10	15	8	4	38
23	2	0	0	1	3
25	1	0	1	1	3
27	1	0	0	1	2
28	0	0	1	0	1
29	0	1	0	0	1
30	2	8	3	0	13
Total 0-30	**247**	**282**	**334**	**200**	**1,063**
Percentage early neonatal[1]	67.3	64.9	64.7	62.4	64.9

[1] ≤ 6 days / ≤ 30 days

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, Rwanda 2010

Age at death (months)	Number of years preceding the survey				Total
	0-4	5-9	10-14	15-19	0-19
<1	247	282	334	200	1,063
1	28	46	41	23	138
2	22	44	46	30	141
3	26	30	39	27	122
4	7	24	52	30	113
5	10	25	28	21	83
6	17	24	47	40	128
7	22	27	42	27	119
8	18	23	19	24	84
9	18	52	68	41	179
10	9	8	16	7	41
11	8	14	15	7	44
12	23	49	58	43	174
13	5	15	8	14	42
14	9	19	30	24	82
15	5	22	14	16	57
16	4	8	9	8	30
17	4	12	10	20	47
18	8	35	48	22	112
19	1	7	9	5	22
20	1	6	11	4	22
21	1	1	2	3	7
22	0	3	6	3	12
23	2	3	2	2	10
24+	0	0	0	1	1
1 Year	0	1	3	3	7
Total 0-11	**432**	**598**	**749**	**476**	**2,255**
Percentage neonatal[1]	57.3	47.1	44.6	41.9	47.1

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

Table C.7 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, Rwanda 2010

	Height-for-age[1]			Weight-for-height				Weight-for-age				
Background characteristic	Percentage below -3 SD	Percentage below -2 SD[2]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[2]	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[2]	Percentage above +2 SD	Mean Z-score (SD)	Number of children
Age in months												
<6	1.1	5.8	(0.4)	0.6	2.0	12.9	0.6	0.3	1.7	5.6	0.2	339
6-8	2.2	13.6	(0.7)	0.0	4.0	11.3	0.2	1.0	7.9	2.3	(0.4)	200
9-11	7.5	23.2	(1.2)	1.9	7.2	3.6	(0.2)	5.7	19.3	1.7	(1.1)	215
12-17	13.2	40.6	(1.6)	0.8	4.6	3.7	(0.1)	4.0	20.9	1.1	(1.2)	384
18-23	19.9	52.8	(2.0)	0.2	5.1	5.3	(0.1)	2.7	23.3	1.1	(1.2)	416
24-35	12.5	37.2	(1.6)	0.0	1.7	2.0	(0.0)	2.7	17.5	0.9	(1.0)	940
36-47	14.0	42.2	(1.8)	0.2	0.8	2.0	0.2	0.7	12.5	0.3	(1.0)	926
48-59	16.0	43.9	(1.9)	0.3	1.7	1.7	0.1	2.3	15.8	0.7	(1.1)	924
Sex												
Male	13.3	38.8	(1.6)	0.5	3.0	3.1	0.0	2.5	16.1	1.2	(1.0)	2,190
Female	12.1	35.7	(1.5)	0.2	1.9	4.5	0.1	1.9	14.5	1.3	(0.9)	2,156
Birth interval in months[3]												
First birth4	9.2	29.7	(1.4)	0.5	1.8	4.8	0.2	1.1	10.8	1.2	(0.8)	998
<24	12.1	37.7	(1.7)	0.2	1.8	3.5	0.2	1.3	13.8	0.6	(0.9)	616
24-47	14.3	41.0	(1.7)	0.4	2.9	4.1	0.0	2.7	17.7	1.3	(1.0)	1,865
48+	13.4	36.5	(1.5)	0.4	3.6	2.6	(0.0)	2.8	18.3	1.6	(1.0)	579
Size at birth[3]												
Very small	15.4	56.3	(2.0)	0.0	3.8	4.3	(0.1)	6.7	30.0	2.0	(1.3)	82
Small	16.3	43.2	(1.8)	0.4	2.8	3.9	(0.1)	3.2	24.8	0.4	(1.2)	533
Average or larger	11.9	35.7	(1.5)	0.4	2.5	3.9	0.1	1.8	13.7	1.3	(0.9)	3,424
Missing	13.1	37.0	(1.6)	0.0	0.0	12.5	0.4	0.0	16.8	12.5	(0.7)	17
Mother's interview status												
Interviewed	12.6	37.1	(1.6)	0.4	2.6	3.9	0.1	2.1	15.5	1.2	(0.9)	4,057
Not interviewed but in household	22.3	45.1	(2.2)	0.0	0.0	0.0	(0.6)	3.0	16.6	3.0	(1.6)	36
Not interviewed, and not in the household[5]	13.9	38.7	(1.6)	0.0	1.7	1.8	0.1	3.6	12.8	1.5	(0.9)	252
Mother's nutritional status[6]												
Thin (BMI<18.5)	12.3	40.1	(1.7)	1.3	5.9	2.1	(0.4)	5.1	30.1	0.0	(1.4)	184
Normal (BMI 18.5-24.9)	13.4	38.7	(1.6)	0.4	2.6	3.5	0.0	2.1	16.1	0.9	(1.0)	3,167
Overweight/ obese (BMI >= 25)	9.4	29.7	(1.3)	0.2	1.7	6.2	0.3	1.2	9.3	2.8	(0.5)	722
Missing	14.6	22.8	(2.8)	0.0	0.0	0.0	(1.3)	8.4	22.7	8.4	(2.1)	13
Residence												
Urban	6.2	20.6	(1.0)	0.6	2.7	4.3	0.1	1.0	9.6	2.5	(0.6)	513
Rural	13.6	39.5	(1.7)	0.3	2.4	3.7	0.1	2.4	16.1	1.1	(1.0)	3,833
Region												
Kigali City	5.8	18.3	(0.9)	0.8	3.4	4.5	0.1	1.8	10.3	3.1	(0.5)	392
South	10.3	34.8	(1.5)	0.6	3.1	3.7	(0.1)	2.5	16.2	1.3	(1.0)	1,049
West	15.6	42.2	(1.8)	0.1	1.9	2.5	0.1	1.8	17.1	0.4	(1.0)	1,085
North	14.5	43.3	(1.8)	0.2	1.2	3.5	0.2	1.7	14.2	1.2	(0.9)	707
East	13.5	37.6	(1.6)	0.3	3.0	4.9	0.1	2.8	15.3	1.4	(0.9)	1,112
Education												
No education	17.1	44.4	(1.8)	0.4	2.3	2.5	0.1	2.9	18.0	0.5	(1.1)	801
Primary	12.4	37.6	(1.6)	0.4	2.6	4.1	0.1	2.0	16.0	1.1	(0.9)	2,941
Secondary and higher	4.9	16.6	(0.8)	0.4	2.3	5.5	0.1	1.1	5.5	4.1	(0.4)	352
Wealth quintile												
Lowest	17.8	46.5	(1.9)	0.2	2.9	4.3	0.1	3.1	19.1	1.0	(1.1)	961
Second	15.2	43.5	(1.8)	0.7	2.8	2.9	(0.0)	2.5	19.3	0.7	(1.1)	959
Middle	12.8	38.9	(1.7)	0.1	2.4	4.0	0.1	2.4	15.5	0.9	(0.9)	878
Fourth	9.7	33.2	(1.5)	0.4	2.0	3.0	0.1	1.5	12.4	1.3	(0.9)	843
Highest	5.8	18.9	(0.9)	0.3	2.0	4.8	0.1	1.1	8.2	2.6	(0.5)	704
Total	**12.7**	**37.3**	**(1.6)**	**0.3**	**2.5**	**3.8**	**0.1**	**2.2**	**15.3**	**1.2**	**(0.9)**	**4,346**

Note: Table is based on children who slept in the household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the NCHS/CDC/WHO Child Growth Standards.
Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.
[1] Includes children who are below -3 standard deviations (SD) from the International Reference Population median
[2] Excludes children whose mothers were not interviewed
[3] First born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval
[4] Includes children whose mothers are deceased
[5] Excludes children whose mothers were not weighed and measured. Mother's nutritional status in terms of BMI (Body Mass Index) is presented in Table 11.10
[6] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire

Table C.8 Prevalence of anemia in children in 2005

Percentage of children age 6-59 months classified as having anemia, by background characteristics, Rwanda 2005

Background characteristic	Any anemia	Anemia status by hemoglobin level			Number of children
		Mild (10.0-10.9 g/dl)	Moderate (7.0-9.9 g/dl)	Severe (below 7.0 g/dl)	
Age in months					
6-9	74.2	23.0	48.2	3.0	254
10-11	67.7	25.4	41.1	1.2	149
12-23	59.5	22.5	32.3	4.6	796
24-35	50.1	23.5	24.4	2.1	898
36-47	46.0	23.2	21.9	0.8	708
48-59	38.9	17.1	20.9	1.0	732
Sex					
Male	53.0	23.5	27.0	2.5	1,741
Female	50.1	20.4	27.7	2.0	1,797
Residence					
Urban	46.6	17.8	26.8	2.0	495
Rural	52.3	22.6	27.5	2.3	3,042
Province					
Kigali	54.6	16.6	35.2	2.7	226
South	47.0	20.8	24.0	2.2	908
West	58.2	27.4	30.2	0.5	933
North	43.5	19.6	22.1	1.9	729
East	55.7	20.4	30.8	4.6	741
Mother's education[1]					
No education	54.4	22.4	29.2	2.8	923
Primary	53.0	22.4	28.5	2.1	1,656
Secondary and higher	47.7	21.0	24.6	2.1	588
Missing	43.7	17.4	24.9	1.4	174
Wealth quintile					
Lowest	54.2	21.9	29.3	2.9	721
Second	56.1	24.9	28.2	2.9	755
Middle	51.1	20.9	28.1	2.1	733
Fourth	50.7	21.0	27.9	1.7	740
Highest	44.1	20.5	22.3	1.3	588
Total	**51.5**	**21.9**	**27.4**	**2.2**	**3,537**

Note: Table is based on children who slept in the household the night before the interview. Prevalence of anemia, based on hemoglobin levels, is adjusted for correct altitude using formulas in CDC, 1998. Hemoglobin in grams per deciliter (g/dl).

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

Table C.9 Prevalence of anemia in women in 2005

Percentage of women age 15-49 with anemia, by background characteristics, Rwanda 2005

Background characteristic	Any anemia	Anemia status by hemoglobin level			Number of women
		Mild anemia	Moderate anemia	Severe anemia	
Age					
15-19	21.8	17.0	3.8	1.0	1,317
20-24	25.2	19.0	5.3	0.9	1,145
25-29	25.3	19.2	5.3	0.8	826
30-34	24.7	18.2	5.5	1.0	811
35-39	30.1	20.2	9.5	0.5	536
40-44	29.2	21.9	6.5	0.8	555
45-49	30.3	21.4	8.0	1.0	466
Number of children ever born					
0	22.6	17.4	4.2	1.0	2,142
1	26.8	18.6	7.2	1.0	539
2-3	25.8	20.8	4.5	0.6	1,028
4-5	27.8	18.6	8.1	1.2	876
6+	29.0	21.3	7.1	0.6	1,072
Maternity status					
Pregnant	28.8	14.2	13.6	1.0	432
Breastfeeding	25.8	19.9	5.1	0.8	1,923
Neither	25.1	19.2	5.0	0.9	3,302
Residence					
Urban	22.6	16.7	5.2	0.8	938
Rural	26.2	19.5	5.8	0.9	4,719
Province					
Kigali	24.8	18.4	5.6	0.8	547
South	28.3	20.9	6.3	1.2	1,518
West	22.8	17.8	4.5	0.5	1,397
North	17.7	13.1	3.9	0.7	1,020
East	32.7	23.6	8.0	1.1	1,175
Education					
No education	29.2	20.5	7.9	0.8	1,273
Primary	24.9	18.8	5.2	0.9	3,824
Secondary and higher	22.7	17.7	3.9	1.1	560
Wealth quintile					
Lowest	28.3	19.4	8.1	0.8	1,197
Second	27.2	20.8	5.2	1.2	1,197
Middle	25.9	19.9	4.9	1.1	1,044
Fourth	25.4	18.5	6.2	0.7	1,115
Highest	21.0	16.5	3.9	0.6	1,103
Total	**25.6**	**19.0**	**5.7**	**0.9**	**5,657**

Note: Prevalence is adjusted for correct altitude and for smoking status if known using formulas in CDC, 1998.

Table C.10 Prevalence of anemia in children in 2007-08

Percentage of children age 6-59 months classified as having anemia, by background characteristics, Rwanda 2007-08

Background characteristic	Anemia status by hemoglobin level: Mild (10.0-10.9 g/dl)	Moderate (7.0-9.9 g/dl)	Severe (below 7.0 g/dl)	Any anemia	Number of children
Age in months					
6-8	33.3	39.7	1.8	74.8	260
9-11	30.5	39.1	0.3	69.8	254
12-17	30.7	22.1	0.5	53.4	593
18-23	25.3	17.5	0.6	43.4	608
24-35	21.9	14.7	0.1	36.6	953
36-47	20.0	10.2	0.4	30.6	1,084
48-59	17.3	8.2	0.1	25.5	1,000
Sex					
Male	22.7	17.6	0.5	40.8	2,373
Female	23.5	14.9	0.3	38.7	2,379
Residence					
Urban	22.2	14.6	0.4	37.3	666
Rural	23.2	16.5	0.4	40.1	4,086
Province					
Kigali	21.4	17.5	0.3	39.3	340
South	22.1	17.6	0.4	40.2	1,243
West	25.1	15.7	0.2	41.0	1,191
North	21.5	15.0	0.0	36.4	835
East	23.7	16.0	0.8	40.5	1,143
Mother's education[1]					
No education	23.5	18.8	0.4	42.7	1,124
Primary	24.0	15.8	0.4	40.1	2,913
Secondary and higher	19.6	19.3	0.2	39.2	324
Missing	18.0	10.2	0.6	28.8	391
Wealth quintile					
Lowest	21.4	19.7	0.6	41.7	693
Second	23.9	15.2	0.4	39.5	1,373
Middle	24.1	16.7	0.2	41.0	949
Fourth	23.5	16.0	0.5	39.9	928
Highest	21.6	15.0	0.2	36.8	809
Total	**23.1**	**16.3**	**0.4**	**39.7**	**4,752**

Note: Table is based on children who slept in the household the night before the interview. Prevalence of anemia, based on hemoglobin levels, is adjusted for correct altitude using formulas in CDC, 1998. Hemoglobin in grams per deciliter (g/dl).

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

Table C.11 Prevalence of anemia in women in 2007-08

Percentage of women age 15-49 with anemia, by background characteristics, Rwanda 2007-08

Background characteristic	Anemia status by hemoglobin level			Any anemia	Number of women
	Mild anemia	Moderate anemia	Severe anemia		
Age					
15-19	13.2	2.0	0.1	15.3	1,325
20-29	15.0	2.4	0.1	17.5	2,851
30-39	16.2	2.8	0.1	19.1	1,678
40-49	15.6	2.6	0.1	18.3	1,284
Number of children ever born					
0	14.8	2.2	0.2	17.2	2,427
1	14.1	3.5	0.1	17.7	817
2-3	15.3	2.5	0.0	17.8	1,515
4-5	15.8	2.3	0.1	18.2	1,182
6+	15.5	2.1	0.0	17.6	1,196
Maternity status					
Pregnant	13.3	6.5	0.0	19.8	682
Breastfeeding	15.2	2.0	0.0	17.2	2,530
Neither	15.3	2.0	0.2	17.5	3,925
Residence					
Urban	13.9	2.9	0.2	17.1	1,199
Rural	15.3	2.3	0.1	17.7	5,938
Province					
Kigali	14.7	4.2	0.2	19.1	642
South	15.1	2.9	0.1	18.1	1,901
West	15.5	1.3	0.0	16.9	1,727
North	12.7	1.3	0.0	14.0	1,228
East	16.6	3.2	0.2	19.9	1,638
Education					
No education	17.2	3.2	0.2	20.7	1,599
Primary	14.8	2.1	0.1	17.1	4,730
Secondary and higher	12.3	2.5	0.1	14.9	808
Wealth quintile					
Lowest	16.0	2.7	0.0	18.7	1,085
Second	16.0	2.1	0.1	18.3	1,931
Middle	13.4	2.5	0.2	16.0	1,340
Fourth	16.9	2.3	0.1	19.3	1,288
Highest	13.3	2.6	0.1	16.0	1,492
Total	**15.1**	**2.4**	**0.1**	**17.6**	**7,137**

Note: Prevalence is adjusted for correct altitude and for smoking status if known using formulas in CDC, 1998.

DISTRICT TABLES

Appendix D

Table D.1 Hand washing

Percentage of households in which the place most often used for washing hands was observed, and among households in which the place for hand washing was observed, percent distribution by availability of water, soap and other cleansing agents, by district, Rwanda 2010

District	Percentage of households where place for washing hands was observed	Number of households
Nyarugenge	13.6	331
Gasabo	7.6	581
Kicukiro	9.6	372
Nyanza	11.8	373
Gisagara	35.8	428
Nyaruguru	5.2	334
Huye	6.5	414
Nyamagabe	9.4	428
Ruhango	2.0	386
Muhanga	10.7	364
Kamonyi	1.4	410
Karongi	2.6	404
Rutsiro	5.9	392
Rubavu	0.7	445
Nyabihu	6.6	368
Ngororero	2.0	452
Rusizi	3.9	455
Nyamasheke	8.4	453
Rulindo	6.6	355
Gakenke	11.4	466
Musanze	5.6	444
Burera	19.9	400
Gicumbi	3.6	455
Rwamagana	6.7	380
Nyagatare	6.8	493
Gatsibo	39.2	505
Kayonza	31.4	371
Kirehe	14.9	412
Ngoma	18.2	437
Bugesera	2.4	435

Table D.2. Birth registration of children under age five

Percentage of de jure children under five years of age whose births are registered with the civil authorities, by district, Rwanda 2010

District	Children whose births are registered			
	Percentage who had a birth certificate	Percentage who did not have birth certificate	Percentage registered	Number of children
Nyarugenge	2.3	51.7	54.0	199
Gasabo	5.9	54.9	60.8	396
Kicukiro	7.8	50.6	58.4	231
Nyanza	9.5	55.8	65.3	240
Gisagara	5.5	51.1	56.7	341
Nyaruguru	7.6	61.4	69.0	274
Huye	2.1	69.0	71.1	296
Nyamagabe	7.6	43.1	50.8	298
Ruhango	9.2	56.6	65.8	253
Muhanga	20.8	54.2	75.0	212
Kamonyi	5.6	69.9	75.5	271
Karongi	11.6	60.8	72.4	269
Rutsiro	0.5	42.8	43.4	309
Rubavu	1.4	50.1	51.5	339
Nyabihu	6.4	52.8	59.2	286
Ngororero	19.4	39.4	58.8	339
Rusizi	6.4	64.0	70.4	354
Nyamasheke	12.5	58.4	70.9	343
Rulindo	5.6	81.5	87.1	193
Gakenke	3.1	78.8	81.9	331
Musanze	4.0	67.1	71.1	298
Burera	2.7	66.0	68.7	258
Gicumbi	22.1	66.0	88.0	305
Rwamagana	12.9	58.7	71.5	271
Nyagatare	0.7	50.6	51.2	432
Gatsibo	2.2	45.3	47.6	395
Kayonza	2.2	67.4	69.6	254
Kirehe	3.8	48.7	52.5	298
Ngoma	2.7	43.6	46.4	331
Bugesera	1.6	57.2	58.8	354

Table D.3 Children's living arrangements and orphanhood

Percent distribution of de jure children under age 18 by living arrangements and survival status of parents, the percentage of children not living with a biological parent, and the percentage of children with one or both parents dead, by district, Rwanda 2010

		Living with mother but not with father		Living with father but not with mother		Not living with either parent								
District	Living with both parents	Father alive	Father dead	Mother alive	Mother dead	Both alive	Only father alive	Only mother alive	Both dead	Missing information on father/ mother	Total	Percentage not living with a biological parent	Percentage with one or both parents dead[1]	Number of children
Nyarugenge	59.6	17.6	5.2	1.7	1.5	5.8	1.7	2.9	2.1	1.9	100.0	12.5	13.7	1,767
Gasabo	60.5	18.0	4.5	1.1	1.5	6.0	1.7	2.5	2.1	2.1	100.0	12.2	12.3	1,082
Kicukiro	58.0	16.9	6.4	2.6	1.5	5.4	1.7	3.7	2.2	1.6	100.0	13.0	15.9	686
Nyanza	55.1	18.4	8.0	1.3	0.5	8.0	1.6	2.6	2.5	2.1	100.0	14.7	15.1	779
Gisagara	53.6	22.4	8.9	2.1	0.5	6.7	1.3	1.5	1.5	1.4	100.0	11.0	14.1	950
Nyaruguru	60.7	13.9	5.4	1.1	1.1	12.1	0.6	1.0	2.1	1.9	100.0	15.8	10.5	876
Huye	50.4	23.4	8.9	1.0	1.0	7.5	1.4	2.0	2.4	2.0	100.0	13.2	15.8	917
Nyamagabe	59.1	18.6	7.6	0.3	1.0	8.6	1.5	1.6	0.7	1.0	100.0	12.4	12.6	993
Ruhango	54.4	21.8	5.8	2.1	0.3	9.8	0.9	0.8	2.8	1.3	100.0	14.3	10.8	843
Muhanga	53.2	17.4	8.9	1.1	1.7	9.2	2.1	2.6	1.5	2.4	100.0	15.3	16.9	706
Kamonyi	61.1	13.8	7.4	1.3	2.1	8.1	0.8	2.4	1.7	1.3	100.0	13.0	14.5	893
Karongi	59.0	18.0	7.8	0.9	1.5	7.5	1.1	1.0	2.1	1.3	100.0	11.7	13.4	920
Rutsiro	65.8	14.3	8.0	1.3	0.5	5.5	0.8	1.3	1.7	0.8	100.0	9.3	12.3	1,032
Rubavu	64.4	9.1	8.8	0.9	1.9	6.6	1.2	2.4	3.6	1.1	100.0	13.8	18.0	1,107
Nyabihu	63.5	11.6	10.2	1.5	0.9	5.9	0.8	2.3	2.5	0.9	100.0	11.4	16.6	935
Ngororero	58.8	16.5	10.8	1.4	0.9	6.6	1.9	2.2	0.7	0.2	100.0	11.3	16.5	1,045
Rusizi	65.9	14.0	6.5	0.6	1.5	6.9	0.8	1.3	2.0	0.5	100.0	11.0	12.1	1,134
Nyamasheke	63.4	16.0	5.8	0.7	0.5	9.2	1.0	1.7	1.2	0.5	100.0	13.1	10.2	1,050
Rulindo	60.0	15.9	6.5	0.8	1.4	8.4	1.7	1.4	2.1	1.7	100.0	13.7	13.4	747
Gakenke	61.8	15.4	5.3	0.6	0.2	9.9	1.2	2.1	1.6	1.9	100.0	14.8	10.7	1,004
Musanze	62.9	13.0	9.9	0.7	1.4	7.0	1.6	1.3	1.6	0.7	100.0	11.4	15.7	987
Burera	65.6	12.5	6.4	0.7	0.7	9.5	0.9	1.3	1.8	0.5	100.0	13.6	11.2	909
Gicumbi	69.8	10.8	5.8	1.0	0.5	7.3	1.8	1.0	1.3	0.7	100.0	11.4	10.6	1,209
Rwamagana	55.6	18.8	6.6	2.7	0.9	8.4	2.1	2.9	1.5	0.5	100.0	14.9	14.1	795
Nyagatare	68.1	9.7	8.7	1.4	0.4	8.6	0.3	1.0	1.0	0.9	100.0	10.9	11.3	1,316
Gatsibo	60.0	13.8	9.3	2.7	1.4	7.2	0.8	2.1	1.6	1.0	100.0	11.7	15.3	1,224
Kayonza	58.1	18.1	7.8	1.4	1.5	7.8	1.1	1.7	1.7	0.8	100.0	12.3	13.8	865
Kirehe	65.3	11.9	7.7	1.3	0.8	6.0	1.1	2.7	1.5	1.8	100.0	11.3	13.7	979
Ngoma	62.0	16.2	5.7	2.1	1.9	6.8	1.3	1.6	1.3	1.1	100.0	11.1	12.2	899
Bugesera	63.0	17.0	5.0	1.6	1.7	7.4	0.2	1.5	1.9	0.8	100.0	11.0	10.2	983

Note: Table is based on de jure members, i.e., usual residents.
[1] Includes children with father dead, mother dead, both dead, and one parent dead but missing information on survival status of the other parent.

Table D.4.1 Educational attainment of the household population: Female

Percent distribution of the de facto household populations age six and over by highest level of schooling attended or completed and median years completed, by district, Rwanda 2010

District	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Don't know/ missing	Total	Number	Median years completed
Nyarugenge	9.4	46.5	13.2	17.5	7.6	5.5	0.1	100.0	560	4.6
Gasabo	11.9	44.6	13.0	14.7	8.8	7.0	0.0	100.0	1,040	4.6
Kicukiro	9.5	52.8	3.8	22.5	5.7	5.6	0.1	100.0	681	4.4
Nyanza	18.4	64.7	9.0	6.5	1.0	0.3	0.0	100.0	659	2.3
Gisagara	22.5	63.7	6.3	5.2	1.3	0.4	0.6	100.0	781	1.8
Nyaruguru	26.1	60.3	6.6	5.5	1.2	0.2	0.1	100.0	665	1.6
Huye	19.1	58.9	13.2	7.6	1.2	0.0	0.0	100.0	765	2.5
Nyamagabe	26.5	62.3	3.6	6.3	0.5	0.3	0.5	100.0	832	1.7
Ruhango	15.4	62.9	12.7	8.2	0.6	0.0	0.1	100.0	715	2.9
Muhanga	19.6	59.0	12.5	6.2	1.9	0.4	0.5	100.0	650	2.7
Kamonyi	18.9	58.6	13.1	8.1	0.6	0.1	0.6	100.0	773	3.0
Karongi	25.3	55.7	11.7	6.4	0.5	0.1	0.3	100.0	804	2.1
Rutsiro	27.5	57.0	9.4	5.2	0.7	0.0	0.1	100.0	789	1.7
Rubavu	29.7	56.8	4.1	5.9	1.7	1.8	0.0	100.0	878	1.2
Nyabihu	22.6	62.9	6.4	6.8	1.0	0.2	0.1	100.0	761	1.7
Ngororero	27.7	61.6	5.1	3.8	0.6	0.7	0.6	100.0	878	1.5
Rusizi	21.2	65.2	6.3	5.8	0.8	0.6	0.0	100.0	928	2.5
Nyamasheke	24.6	56.3	12.8	4.6	0.8	0.9	0.0	100.0	942	2.5
Rulindo	21.0	57.4	15.1	6.1	0.3	0.0	0.0	100.0	718	2.9
Gakenke	21.8	57.1	13.6	6.9	0.4	0.1	0.0	100.0	912	2.4
Musanze	21.4	58.7	10.2	7.1	2.0	0.5	0.1	100.0	854	2.4
Burera	29.6	57.5	5.5	5.2	1.4	0.6	0.3	100.0	787	1.0
Gicumbi	24.2	59.0	11.1	4.5	1.1	0.0	0.1	100.0	968	1.9
Rwamagana	18.5	50.5	15.0	10.5	4.4	0.9	0.3	100.0	713	3.4
Nyagatare	24.0	65.1	6.5	4.4	0.0	0.0	0.0	100.0	953	1.2
Gatsibo	24.2	57.9	10.4	5.7	1.5	0.4	0.0	100.0	976	2.2
Kayonza	23.1	57.1	10.6	7.9	0.8	0.5	0.0	100.0	735	2.3
Kirehe	26.2	63.6	4.7	4.3	0.8	0.2	0.1	100.0	775	1.3
Ngoma	21.9	65.2	7.6	5.0	0.1	0.0	0.2	100.0	728	2.2
Bugesera	22.2	63.8	6.1	6.0	1.7	0.0	0.2	100.0	792	2.1

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

Table D.4.2 Educational attainment of the household population: Men

Percent distribution of the de facto household populations age six and over by highest level of schooling attended or completed and median years completed, by district, Rwanda 2010

District	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Don't know/ missing	Total	Number	Median years completed
Nyarugenge	7.5	42.2	17.5	18.0	7.1	7.5	0.2	100.0	576	5.2
Gasabo	7.4	48.8	13.8	18.0	6.0	5.9	0.0	100.0	1,000	4.6
Kicukiro	4.6	58.0	4.3	17.3	7.7	8.1	0.0	100.0	621	4.4
Nyanza	13.8	67.2	10.4	6.3	1.1	0.9	0.3	100.0	591	2.5
Gisagara	18.9	69.1	5.8	4.9	0.6	0.3	0.4	100.0	680	1.5
Nyaruguru	23.4	62.8	6.6	5.4	0.9	0.3	0.5	100.0	577	1.6
Huye	15.9	62.1	10.3	8.8	2.6	0.1	0.2	100.0	618	2.5
Nyamagabe	16.9	69.8	3.9	6.8	1.3	0.8	0.5	100.0	682	2.1
Ruhango	15.6	62.4	12.3	7.5	1.9	0.3	0.0	100.0	617	2.5
Muhanga	17.7	59.8	10.8	9.2	0.8	0.8	0.9	100.0	535	2.5
Kamonyi	14.4	64.3	12.7	6.8	1.2	0.3	0.3	100.0	677	2.8
Karongi	19.8	57.7	12.2	7.8	1.9	0.5	0.2	100.0	656	2.3
Rutsiro	19.7	66.6	7.5	5.4	0.5	0.3	0.0	100.0	716	1.6
Rubavu	15.1	64.3	4.6	10.8	2.1	3.0	0.0	100.0	752	2.3
Nyabihu	13.5	65.1	8.4	8.9	2.8	1.3	0.0	100.0	564	2.3
Ngororero	19.4	66.8	6.6	5.0	1.3	0.4	0.4	100.0	649	2.1
Rusizi	14.7	67.4	5.3	7.3	2.5	2.8	0.0	100.0	856	2.7
Nyamasheke	18.7	62.5	9.4	7.7	1.1	0.5	0.0	100.0	696	2.6
Rulindo	16.8	60.9	15.2	6.1	1.0	0.0	0.0	100.0	567	2.7
Gakenke	18.7	60.2	12.6	7.3	0.6	0.5	0.0	100.0	714	2.6
Musanze	9.1	64.1	10.7	12.8	1.5	1.7	0.2	100.0	731	3.0
Burera	17.2	64.0	8.2	6.5	1.6	2.4	0.2	100.0	631	2.1
Gicumbi	16.0	60.7	13.0	7.8	1.3	1.1	0.1	100.0	826	2.4
Rwamagana	12.2	59.4	15.7	8.4	2.3	2.0	0.0	100.0	612	3.1
Nyagatare	15.0	66.2	10.0	7.7	0.9	0.1	0.0	100.0	931	2.0
Gatsibo	16.2	61.5	13.2	6.5	1.9	0.7	0.0	100.0	831	2.5
Kayonza	18.1	60.3	10.2	9.1	1.0	1.3	0.0	100.0	636	2.5
Kirehe	17.5	69.1	6.0	6.3	1.1	0.1	0.0	100.0	682	2.0
Ngoma	18.4	67.8	8.3	4.7	0.7	0.2	0.0	100.0	679	2.1
Bugesera	17.4	63.7	6.7	9.5	1.5	1.0	0.2	100.0	707	2.3

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

Table D.5 School attendance ratios

Net attendance ratios (NAR) and gross attendance ratios (GAR) for the de facto household population by sex and level of schooling; and the Gender Parity Index (GPI), by district, Rwanda 2010

District	Net attendance ratio[1]				Gross attendance ratio[2]			
	Male	Female	Total	Gender Parity Index[3]	Male	Female	Total	Gender Parity Index[3]
PRIMARY SCHOOL								
Nyarugenge	87.7	92.8	89.9	1.06	123.2	138.4	129.8	1.12
Gasabo	91.0	92.3	91.6	1.01	130.9	137.8	133.8	1.05
Kicukiro	95.7	93.4	94.6	0.98	148.0	138.7	143.4	0.94
Nyanza	83.2	91.5	87.3	1.10	149.9	153.8	151.8	1.03
Gisagara	84.4	91.3	87.5	1.08	136.5	151.5	143.2	1.11
Nyaruguru	81.4	87.7	84.6	1.08	152.1	149.6	150.8	0.98
Huye	81.8	86.2	84.1	1.05	147.6	136.5	141.8	0.92
Nyamagabe	85.1	85.9	85.5	1.01	138.1	168.7	152.0	1.22
Ruhango	85.4	89.2	87.1	1.04	136.8	158.5	146.7	1.16
Muhanga	89.3	95.0	92.3	1.06	133.2	141.0	137.3	1.06
Kamonyi	89.0	85.2	87.3	0.96	142.9	147.7	145.2	1.03
Karongi	85.8	92.3	89.1	1.07	140.6	159.7	150.2	1.14
Rutsiro	80.1	75.8	78.2	0.95	124.9	130.9	127.7	1.05
Rubavu	79.1	81.4	80.3	1.03	129.4	123.2	126.2	0.95
Nyabihu	87.2	86.0	86.6	0.99	141.1	137.2	139.0	0.97
Ngororero	84.8	84.1	84.4	0.99	142.4	136.5	139.3	0.96
Rusizi	90.5	88.4	89.4	0.98	144.5	139.1	141.8	0.96
Nyamasheke	87.4	91.1	89.2	1.04	146.8	171.4	158.8	1.17
Rulindo	83.5	88.5	86.1	1.06	138.3	149.4	144.0	1.08
Gakenke	93.4	96.7	95.2	1.03	132.9	143.9	138.8	1.08
Musanze	93.5	87.7	90.8	0.94	156.8	156.2	156.5	1.00
Burera	90.4	86.0	88.1	0.95	156.5	141.1	148.6	0.90
Gicumbi	90.7	95.2	93.1	1.05	139.0	152.7	146.2	1.10
Rwamagana	86.7	93.5	90.0	1.08	148.8	159.1	153.8	1.07
Nyagatare	87.8	88.3	88.1	1.01	140.0	138.7	139.4	0.99
Gatsibo	79.6	85.4	82.5	1.07	143.0	147.1	145.1	1.03
Kayonza	84.6	91.3	87.9	1.08	133.2	152.4	142.5	1.14
Kirehe	81.3	84.7	82.9	1.04	142.3	138.4	140.4	0.97
Ngoma	87.2	89.5	88.2	1.03	141.2	146.8	143.7	1.04
Bugesera	82.8	81.7	82.2	0.99	150.4	136.5	143.0	0.91
SECONDARY SCHOOL								
Nyarugenge	27.8	23.6	25.3	0.85	62.5	40.6	49.6	0.65
Gasabo	21.9	24.3	23.2	1.11	49.8	48.6	49.1	0.98
Kicukiro	28.5	36.6	33.1	1.28	56.6	69.3	63.8	1.23
Nyanza	8.6	17.3	12.6	2.02	20.5	24.9	22.6	1.21
Gisagara	10.4	8.7	9.6	0.84	17.6	17.0	17.3	0.97
Nyaruguru	12.1	13.5	12.8	1.11	19.7	20.9	20.3	1.06
Huye	17.3	21.2	19.0	1.23	28.5	32.6	30.3	1.14
Nyamagabe	15.9	10.7	13.0	0.67	24.7	18.5	21.3	0.75
Ruhango	16.4	22.4	19.5	1.36	30.6	34.5	32.6	1.13
Muhanga	17.6	18.4	18.0	1.05	36.0	25.0	30.6	0.70
Kamonyi	7.1	17.6	12.5	2.48	17.6	25.5	21.7	1.45
Karongi	10.1	10.9	10.5	1.09	22.8	22.2	22.5	0.98
Rutsiro	7.1	14.6	11.0	2.06	19.1	22.4	20.8	1.17
Rubavu	23.0	15.8	19.6	0.69	34.1	24.1	29.4	0.71
Nyabihu	16.4	19.8	18.3	1.20	30.0	27.7	28.7	0.92
Ngororero	10.1	12.1	11.2	1.20	16.0	14.6	15.3	0.91
Rusizi	21.8	16.0	18.9	0.73	33.5	25.1	29.4	0.75
Nyamasheke	13.3	12.6	12.9	0.95	29.1	20.6	24.3	0.71
Rulindo	11.5	17.3	14.7	1.50	17.0	20.8	19.1	1.23
Gakenke	17.6	18.3	18.0	1.04	31.8	29.5	30.6	0.93
Musanze	16.4	17.8	17.1	1.08	42.1	28.8	35.1	0.68
Burera	10.1	10.4	10.3	1.03	18.4	22.8	20.6	1.24
Gicumbi	16.4	11.1	13.7	0.68	28.0	17.9	22.8	0.64
Rwamagana	11.6	19.9	16.1	1.72	21.8	36.8	30.0	1.69
Nyagatare	12.0	10.4	11.3	0.87	21.5	15.0	18.6	0.70
Gatsibo	9.0	10.2	9.7	1.13	22.3	15.4	18.7	0.69
Kayonza	17.5	16.0	16.7	0.92	30.4	25.3	27.6	0.83
Kirehe	11.1	7.9	9.6	0.71	22.3	13.9	18.3	0.63
Ngoma	10.3	11.0	10.7	1.07	19.6	17.8	18.7	0.91
Bugesera	14.3	9.8	12.2	0.69	24.4	20.7	22.7	0.85

[1] The NAR for primary school is the percentage of the primary-school-age (7-12 years) population that is attending primary school. The NAR for secondary school is the percentage of the secondary-school age (13-18 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 NAR(GAR) for females to the NAR(GAR) for males. The Gender Parity Index for secondary school is the ratio of the secondary school NAR(GAR) for females to the NAR(GAR) for males.

Table D.6 Child Labor

Percentage of children 5-14 years old who worked in the week prior to survey for someone who is not a member of this household, who fetched water or collected firewood for household use or did any other family work, helped with household chores such as shopping, cleaning, washing clothes, cooking, or caring for children or sick people, according to the number of hours, by district, Rwanda 2010

	Worked for someone who is not member of the household						Fetched water or collect fire wood for household use				Did any other family work				Help with household chores				Total				
	Paid, less than 4 hours per day	Paid 4+ hours per day	Unpaid less than 4 hours per day	Unpaid 4+ hours per day	Worked, hours missing	Total	Less than 4 hours per day	4+ hours per day	Worked, hours missing	Total	Less than 4 hours per day	4+ hours per day	Worked, hours missing	Total	Less than 4 hours per day	4+ hours per day	Worked, hours missing	Total	Less than 4 hours per day	4+ hours per day	Worked, hours missing	Total	Number of children
Nyarugenge	0.2	0.0	0.5	0.0	0.0	0.7	50.2	1.6	0.3	52.1	1.1	0.2	0.0	1.3	52.3	1.4	0.0	53.7	59.1	9.1	0.0	68.2	285
Gasabo	0.9	0.2	0.3	0.0	0.0	1.4	57.3	2.9	0.0	60.1	3.6	0.5	0.0	4.1	52.6	4.6	0.0	57.2	57.6	16.9	0.0	74.5	575
Kicukiro	0.4	0.0	2.5	0.0	0.0	2.9	43.2	2.8	0.0	46.0	0.2	0.0	0.3	0.5	53.0	3.6	0.0	56.6	56.9	9.6	0.3	66.8	357
Nyanza	1.7	0.0	13.1	0.0	0.6	15.4	91.7	0.8	0.0	92.5	18.4	0.4	0.0	18.7	66.0	0.7	0.2	66.9	82.3	13.9	0.0	96.2	442
Gisagara	1.0	0.4	5.3	0.8	5.1	12.6	85.4	6.2	0.0	91.5	4.9	0.8	0.0	5.7	58.1	9.4	0.2	67.7	56.3	38.1	0.4	94.9	517
Nyaruguru	3.1	0.4	13.1	0.3	2.8	19.7	81.2	7.2	0.0	88.4	6.7	0.2	0.2	7.1	64.0	6.2	0.0	70.2	69.8	21.7	0.2	91.6	488
Huye	1.3	0.4	16.3	0.6	0.7	19.3	84.1	6.0	0.0	90.1	3.7	0.6	0.0	4.3	64.4	7.2	0.0	71.6	60.5	31.3	0.8	92.6	520
Nyamagabe	4.4	0.2	3.6	0.2	3.2	11.7	74.7	14.8	0.0	89.5	13.6	1.6	0.0	15.2	51.4	10.9	0.0	62.3	53.3	38.1	0.4	91.7	573
Ruhango	0.2	0.2	10.4	0.0	0.0	10.7	94.8	0.8	0.0	95.5	19.3	0.0	0.0	19.3	64.9	0.0	0.0	64.9	79.1	17.2	0.0	96.3	493
Muhanga	7.6	0.2	9.6	0.5	2.9	20.8	84.4	3.6	0.0	88.0	9.5	0.9	0.0	10.4	49.8	4.6	0.0	54.4	69.6	21.3	0.2	91.2	417
Kamonyi	1.1	0.0	4.4	0.2	1.0	6.7	89.6	1.8	0.0	91.4	6.8	0.6	0.0	7.4	59.2	0.8	0.0	60.0	77.7	14.8	0.0	92.5	517
Karongi	1.1	0.3	3.9	0.4	0.6	6.2	79.7	8.2	0.0	87.9	4.3	1.0	0.2	5.4	58.7	6.3	0.2	65.1	50.9	37.8	0.7	89.3	538
Rutsiro	1.6	0.2	1.9	0.1	0.0	3.8	82.1	6.5	0.1	88.7	8.4	0.0	0.0	8.4	56.2	2.9	0.0	59.1	68.3	21.6	0.0	89.9	589
Rubavu	1.4	0.2	2.8	0.2	0.0	4.6	75.3	3.8	0.0	79.2	16.2	0.0	0.0	16.2	61.4	2.6	0.0	64.1	57.8	26.6	0.2	84.6	618
Nyabihu	1.6	0.4	4.6	0.3	0.0	7.0	79.1	5.0	0.7	84.8	13.4	0.7	0.0	14.1	56.5	3.5	0.2	60.2	62.1	25.5	0.3	87.9	543
Ngororero	2.6	0.2	2.9	0.0	1.0	6.8	77.1	12.0	0.4	89.5	9.8	4.0	0.0	13.8	56.2	5.4	0.0	61.6	55.3	34.8	0.4	90.6	574
Rusizi	1.5	0.0	5.2	0.0	0.0	6.7	75.2	4.7	0.0	79.9	8.6	1.0	0.0	9.6	55.9	2.5	0.0	58.5	62.0	23.6	0.2	85.8	630
Nyamasheke	1.6	0.2	7.6	0.2	1.5	11.0	84.0	2.0	0.0	86.0	15.7	1.4	0.0	17.1	60.4	3.6	0.0	64.0	63.2	26.0	0.2	89.4	571
Rulindo	0.6	0.0	11.0	0.0	0.7	12.4	69.1	19.4	0.0	88.5	8.9	0.4	0.0	9.3	64.0	22.6	0.0	86.6	40.0	53.1	1.2	94.2	430
Gakenke	1.8	0.8	1.1	0.0	0.0	3.7	83.0	5.3	0.0	88.3	7.7	1.7	0.0	9.4	52.6	10.4	0.0	63.0	59.0	31.8	0.2	90.9	582
Musanze	2.5	0.2	6.0	0.0	0.2	8.9	76.1	1.9	1.0	79.0	5.5	0.6	0.0	6.1	44.3	1.6	0.8	46.7	71.5	10.3	0.2	82.0	548
Burera	1.3	0.9	5.7	0.4	0.9	9.3	72.7	4.8	0.0	77.5	13.7	2.3	0.0	15.9	48.4	2.9	0.4	51.8	65.8	20.6	0.8	87.1	547
Gicumbi	0.7	0.4	5.1	0.0	0.0	6.2	77.4	8.2	0.0	85.6	8.9	0.7	0.0	9.5	72.0	8.3	0.0	80.3	45.8	44.3	0.7	90.7	764
Rwamagana	0.2	0.0	5.7	0.5	0.6	7.1	73.8	5.0	1.1	79.8	11.5	1.2	0.0	12.7	63.3	7.9	0.0	71.2	45.3	41.5	0.3	87.0	423
Nyagatare	1.0	0.2	3.0	0.2	0.2	4.5	69.8	3.2	0.0	73.0	10.0	2.1	0.0	12.1	52.0	2.8	0.0	54.7	55.5	24.8	0.0	80.3	764
Gatsibo	0.6	0.0	1.5	0.0	0.0	2.1	75.1	9.5	0.0	84.6	3.5	0.6	0.4	4.4	66.7	6.0	0.0	72.6	61.2	28.5	0.0	89.8	660
Kayonza	1.8	0.5	0.7	0.0	0.7	3.7	73.6	7.5	0.0	81.1	4.5	1.7	0.0	6.2	58.4	5.5	0.0	63.8	63.3	21.3	0.2	84.8	507
Kirehe	2.5	0.2	4.6	0.1	2.7	10.2	73.0	5.7	0.0	78.7	5.0	2.2	0.0	7.2	40.1	5.5	0.0	45.6	60.2	23.4	0.0	83.6	583
Ngoma	1.4	0.0	2.2	0.0	0.5	4.1	81.9	5.1	0.0	87.0	5.8	0.8	0.0	6.6	61.9	1.4	0.0	63.3	69.6	19.1	0.0	88.7	470
Bugesera	0.6	0.0	3.6	0.0	0.0	4.2	74.3	4.1	0.0	78.5	4.6	0.9	0.0	5.5	61.9	12.5	0.0	74.4	53.8	33.2	0.0	86.9	504

Table D.7 Annual outpatient visits and inpatient admissions for de facto population

Average number of annual outpatient visits and inpatient admissions to health facilities for women and men, by district, Rwanda 2010

	Women			Men		
District	Outpatient visits (per capita)	Inpatient admissions (per 1,000 population)	De facto population	Outpatient visits (per capita)	Inpatient admissions (per 1,000 population)	De facto population
Nyarugenge	1.7	72	667.2	1.5	29.5	701
Gasabo	2.7	127	1,254.8	2.2	34.3	1,256
Kicukiro	1.9	108	820.6	1.6	34.4	756
Nyanza	1.4	80	798.5	1.1	34.0	723
Gisagara	3.2	96	974.1	2.7	41.3	870
Nyaruguru	2.6	106	816.5	2.4	61.4	745
Huye	3.9	146	948.0	3.9	49.7	799
Nyamagabe	1.5	72	1,020.8	1.3	45.3	853
Ruhango	1.2	97	871.1	0.9	45.9	765
Muhanga	1.6	65	761.9	1.8	46.1	664
Kamonyi	1.1	65	935.8	0.8	24.3	855
Karongi	1.1	71	960.6	0.9	59.8	810
Rutsiro	1.1	95	952.0	0.7	45.7	921
Rubavu	1.1	99	1,077.8	0.9	31.7	957
Nyabihu	1.8	154	917.2	1.9	69.3	753
Ngororero	1.6	160	1,084.7	1.1	41.8	861
Rusizi	2.9	186	1,137.5	2.1	99.7	1,051
Nyamasheke	2.1	141	1,146.2	1.6	56.5	893
Rulindo	1.6	69	843.7	1.1	29.2	677
Gakenke	2.9	75	1,109.8	2.0	70.5	906
Musanze	0.9	71	1,029.4	0.7	32.5	917
Burera	1.2	111	933.7	1.1	70.7	790
Gicumbi	1.6	82	1,152.7	1.2	66.3	1,015
Rwamagana	1.2	85	866.8	1.0	31.7	784
Nyagatare	1.4	64	1,224.5	1.2	29.2	1,190
Gatsibo	1.3	88	1,208.6	1.0	27.6	1,075
Kayonza	1.9	73	883.1	1.4	43.1	782
Kirehe	1.6	96	940.2	1.3	48.8	870
Ngoma	1.6	114	915.9	1.1	40.0	870
Bugesera	2.2	117	1,010.0	1.4	67.2	921

Table D.8 Annual per capita expenditure (in US $) on outpatient visits and inpatient admissions for de facto population

Average annual per capita expenditure for outpatient visits and inpatient admissions for women and men, by district, Rwanda 2010

	Women				Men			
District	Per capita expenditure for outpatient	Per capita expenditure for inpatient	Total per capita expenditure	De facto population	Per capita expenditure for outpatient	Per capita expenditure for inpatient	Total per capita expenditure	De facto population
Nyarugenge	11.25	3.11	14.36	667	13.46	0.95	14.41	701
Gasabo	14.55	4.41	18.96	1,255	16.22	0.61	16.84	1,256
Kicukiro	9.63	3.26	12.89	821	9.23	0.73	9.96	756
Nyanza	1.62	0.37	1.99	799	3.14	0.45	3.59	723
Gisagara	3.60	0.32	3.92	974	3.28	0.26	3.54	870
Nyaruguru	1.35	0.18	1.53	816	2.79	2.96	5.75	745
Huye	2.47	0.77	3.25	948	3.01	0.48	3.49	799
Nyamagabe	1.58	0.21	1.79	1,021	1.35	0.30	1.65	853
Ruhango	2.51	0.42	2.94	871	2.11	0.55	2.66	765
Muhanga	2.86	0.54	3.40	762	3.19	0.36	3.55	664
Kamonyi	1.47	0.66	2.14	936	1.73	0.19	1.93	855
Karongi	1.17	0.32	1.48	961	0.97	0.39	1.36	810
Rutsiro	1.00	0.23	1.23	952	0.91	0.46	1.37	921
Rubavu	2.20	0.62	2.82	1,078	2.22	0.91	3.14	957
Nyabihu	2.15	0.62	2.77	917	3.16	0.99	4.15	753
Ngororero	2.03	0.89	2.91	1,085	3.28	0.46	3.73	861
Rusizi	4.18	0.49	4.67	1,137	3.29	0.51	3.80	1,051
Nyamasheke	3.23	0.86	4.09	1,146	3.72	0.10	3.82	893
Rulindo	1.39	0.53	1.93	844	1.62	0.14	1.76	677
Gakenke	2.65	0.27	2.92	1,110	1.64	0.33	1.97	906
Musanze	0.88	0.35	1.23	1,029	1.32	0.17	1.50	917
Burera	1.44	0.40	1.83	934	1.63	0.30	1.93	790
Gicumbi	1.37	0.28	1.65	1,153	1.49	0.42	1.91	1,015
Rwamagana	8.27	0.36	8.63	867	7.44	3.52	10.96	784
Nyagatare	2.43	0.36	2.79	1,225	2.03	0.21	2.25	1,190
Gatsibo	1.65	0.71	2.35	1,209	1.73	0.19	1.92	1,075
Kayonza	4.59	0.23	4.82	883	2.66	0.17	2.83	782
Kirehe	1.89	0.48	2.37	940	5.86	0.54	6.40	870
Ngoma	2.58	0.72	3.30	916	2.23	0.27	2.50	870
Bugesera	3.57	0.69	4.26	1,010	4.57	0.26	4.83	921

Table D.9 Health insurance

Percentage of households in which at least one member is covered by health insurance, and percentage of households with specific types of health insurance, by district, Rwanda 2010

District	Percent of households with at least one member covered by health insurance	Number of households	Type of insurance				Number of households with at least one member covered by health insurance
			Mutual	RAMA	MMI	Private	
Nyarugenge	77.7	331	95.0	9.8	0.5	2.4	257
Gasabo	69.0	581	92.4	14.1	2.4	4.5	401
Kicukiro	70.5	372	87.7	14.4	4.4	4.7	263
Nyanza	76.3	373	98.4	2.8	0.0	0.0	284
Gisagara	73.0	428	99.4	2.5	0.3	0.0	312
Nyaruguru	87.5	334	98.8	2.2	0.3	0.0	293
Huye	78.0	414	97.5	2.0	0.0	0.0	323
Nyamagabe	75.8	428	98.7	2.2	0.0	0.0	324
Ruhango	64.7	386	97.6	0.7	1.3	0.0	250
Muhanga	91.9	364	99.0	3.0	0.0	0.1	334
Kamonyi	73.1	410	97.5	1.7	0.0	0.0	299
Karongi	93.4	404	99.5	2.4	0.3	0.0	377
Rutsiro	78.1	392	98.7	1.5	0.6	0.0	306
Rubavu	69.8	445	98.4	4.7	0.6	0.0	311
Nyabihu	72.3	368	95.9	4.8	1.4	0.4	266
Ngororero	81.4	452	98.4	4.0	0.0	0.0	368
Rusizi	92.2	455	99.7	1.7	0.0	0.0	419
Nyamasheke	90.1	453	99.0	2.7	0.0	0.0	408
Rulindo	64.1	355	98.1	1.2	0.0	0.0	227
Gakenke	89.5	466	98.8	1.6	0.9	0.0	417
Musanze	87.5	444	97.9	2.4	0.3	0.3	389
Burera	93.2	400	97.2	4.9	0.6	0.3	373
Gicumbi	90.0	455	99.2	2.1	0.3	0.0	410
Rwamagana	68.9	380	95.8	6.5	1.1	0.3	262
Nyagatare	65.3	493	99.4	0.7	0.0	0.0	322
Gatsibo	59.4	505	95.7	3.9	0.4	0.4	300
Kayonza	84.1	371	97.6	3.0	1.2	0.0	312
Kirehe	80.9	412	98.8	2.5	0.0	0.0	333
Ngoma	78.9	437	99.4	1.0	0.6	0.0	344
Bugesera	62.6	435	96.3	4.9	0.0	0.0	272

Table D.10 Health insurance

Percentage of respondents covered by health insurance, and percent distribution of respondents with specific types of health insurance, by district, Rwanda 2010

District	Percentage of respondents covered by health insurance	Number of respondents	Type of insurance						Number of respondents covered by health insurance
			Mutual	RAMA	MMI	Private	Don't know/ missing	Total	
				WOMEN					
Nyarugenge	71.8	399	90.5	6.8	0.2	1.4	1.1	100.0	287
Gasabo	63.7	728	80.7	11.3	1.4	4.5	2.2	100.0	464
Kicukiro	63.3	469	80.4	9.2	2.7	4.9	2.8	100.0	297
Nyanza	65.8	356	96.4	2.2	0.0	0.0	1.4	100.0	234
Gisagara	68.9	444	96.6	2.2	0.3	0.0	0.9	100.0	306
Nyaruguru	77.1	361	96.4	3.0	0.3	0.0	0.3	100.0	278
Huye	72.4	421	96.4	1.8	0.0	0.0	1.8	100.0	305
Nyamagabe	65.1	442	97.5	1.8	0.0	0.0	0.8	100.0	288
Ruhango	61.0	397	97.6	0.4	0.8	0.0	1.2	100.0	242
Muhanga	88.4	354	97.4	2.5	0.0	0.1	0.0	100.0	312
Kamonyi	65.1	438	96.7	1.1	0.0	0.0	2.2	100.0	285
Karongi	90.3	422	98.1	1.3	0.3	0.0	0.3	100.0	381
Rutsiro	70.4	437	97.2	1.6	0.6	0.0	0.6	100.0	308
Rubavu	61.9	481	94.2	4.6	0.3	0.0	1.0	100.0	298
Nyabihu	57.7	415	94.6	3.0	0.5	0.0	1.8	100.0	239
Ngororero	76.6	521	96.0	3.7	0.0	0.0	0.3	100.0	399
Rusizi	88.3	491	98.1	1.9	0.0	0.0	0.0	100.0	433
Nyamasheke	84.8	538	96.5	2.0	0.0	0.0	1.5	100.0	457
Rulindo	54.0	404	98.8	0.3	0.0	0.0	0.8	100.0	218
Gakenke	87.4	495	97.8	1.0	0.9	0.0	0.3	100.0	433
Musanze	85.1	497	96.2	1.6	0.3	0.0	1.9	100.0	423
Burera	89.3	408	94.1	4.7	0.9	0.3	0.0	100.0	365
Gicumbi	83.6	474	98.3	1.4	0.3	0.0	0.0	100.0	396
Rwamagana	61.1	424	92.6	6.0	1.1	0.3	0.0	100.0	259
Nyagatare	58.9	536	99.3	0.3	0.0	0.0	0.3	100.0	315
Gatsibo	53.5	567	94.8	3.1	0.4	0.0	1.7	100.0	303
Kayonza	79.9	405	96.2	2.1	1.4	0.0	0.3	100.0	323
Kirehe	78.9	428	97.9	1.8	0.0	0.0	0.3	100.0	338
Ngoma	73.4	427	99.3	0.4	0.3	0.0	0.0	100.0	314
Bugesera	52.8	493	94.0	4.8	0.0	0.0	1.2	100.0	260
				MEN					
Nyarugenge	65.1	200	89.9	6.7	0.5	1.7	1.2	100.0	130
Gasabo	54.3	362	86.2	6.6	1.7	3.3	2.2	100.0	197
Kicukiro	61.3	227	76.2	14.6	2.7	2.4	4.1	100.0	139
Nyanza	56.9	168	91.0	5.4	0.0	0.0	3.7	100.0	96
Gisagara	64.3	213	97.9	1.4	0.7	0.0	0.0	100.0	137
Nyaruguru	67.6	169	99.2	0.0	0.8	0.0	0.0	100.0	114
Huye	68.4	182	98.5	0.8	0.0	0.0	0.7	100.0	124
Nyamagabe	61.4	200	99.2	0.8	0.0	0.0	0.0	100.0	123
Ruhango	59.1	178	97.6	1.6	0.0	0.0	0.8	100.0	105
Muhanga	83.6	145	98.5	1.5	0.0	0.0	0.0	100.0	121
Kamonyi	58.4	189	98.9	1.1	0.0	0.0	0.0	100.0	111
Karongi	92.5	193	97.7	0.6	0.6	0.0	1.1	100.0	179
Rutsiro	69.1	214	97.6	1.2	0.0	0.0	1.3	100.0	148
Rubavu	53.0	233	97.5	2.5	0.0	0.0	0.0	100.0	123
Nyabihu	62.2	169	91.5	2.9	0.9	2.9	1.8	100.0	105
Ngororero	77.3	185	95.7	4.3	0.0	0.0	0.0	100.0	143
Rusizi	81.7	288	98.5	1.0	0.0	0.0	0.5	100.0	236
Nyamasheke	83.3	205	98.0	1.1	0.0	0.0	0.8	100.0	171
Rulindo	52.3	178	98.9	1.1	0.0	0.0	0.0	100.0	93
Gakenke	79.9	205	98.7	1.3	0.0	0.0	0.0	100.0	164
Musanze	89.6	220	95.9	3.0	0.0	0.6	0.6	100.0	197
Burera	85.3	172	97.0	3.0	0.0	0.0	0.0	100.0	147
Gicumbi	80.6	239	98.4	1.1	0.6	0.0	0.0	100.0	192
Rwamagana	51.1	206	94.6	5.4	0.0	0.0	0.0	100.0	105
Nyagatare	53.6	274	100.0	0.0	0.0	0.0	0.0	100.0	147
Gatsibo	51.9	264	94.4	2.8	0.0	0.8	2.0	100.0	137
Kayonza	75.8	194	96.8	2.7	0.5	0.0	0.0	100.0	147
Kirehe	64.7	199	97.5	1.7	0.0	0.0	0.8	100.0	129
Ngoma	66.0	218	98.3	1.7	0.0	0.0	0.0	100.0	144
Bugesera	48.7	239	93.9	4.2	0.0	0.0	1.9	100.0	116

Table D.11.1 Educational attainment: Women

Percent distribution of women age 15-49 by highest level of schooling attended or completed, and median years completed, by district, Rwanda 2010

District	Highest level of schooling						Total	Median years completed	Number of women
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Nyarugenge	6.7	39.2	11.2	23.9	10.3	8.7	100.0	5.7	1,197
Gasabo	7.5	36.1	15.5	19.8	11.8	9.3	100.0	5.7	728
Kicukiro	5.6	43.9	4.4	30.3	8.1	7.7	100.0	5.7	469
Nyanza	11.0	62.7	11.6	12.2	1.9	0.6	100.0	3.7	356
Gisagara	17.6	62.8	7.6	9.4	1.9	0.6	100.0	3.2	444
Nyaruguru	20.3	56.2	11.1	10.2	1.8	0.4	100.0	3.2	361
Huye	9.7	53.0	21.1	14.0	2.1	0.0	100.0	4.5	421
Nyamagabe	17.0	64.5	6.5	10.8	0.9	0.2	100.0	3.4	442
Ruhango	10.3	56.4	18.1	14.0	1.1	0.0	100.0	4.3	397
Muhanga	11.1	54.4	21.8	9.1	2.8	0.7	100.0	4.2	354
Kamonyi	10.0	57.6	17.9	13.2	0.7	0.6	100.0	4.6	438
Karongi	17.5	49.9	19.0	12.7	0.7	0.2	100.0	3.9	422
Rutsiro	23.2	51.4	14.5	9.6	1.4	0.0	100.0	3.2	437
Rubavu	29.2	48.5	6.6	10.3	2.7	2.7	100.0	2.4	481
Nyabihu	18.1	57.5	10.4	11.4	2.2	0.4	100.0	3.4	415
Ngororero	21.5	62.5	7.4	6.2	1.3	1.1	100.0	2.8	521
Rusizi	14.3	62.1	11.4	9.5	1.2	1.5	100.0	3.8	491
Nyamasheke	15.6	54.2	19.4	8.1	1.4	1.3	100.0	4.0	538
Rulindo	10.7	56.7	22.5	9.5	0.6	0.0	100.0	4.1	404
Gakenke	14.2	50.9	21.8	12.2	0.7	0.2	100.0	4.3	495
Musanze	16.3	54.5	13.7	11.5	3.1	0.9	100.0	3.6	497
Burera	22.3	56.2	9.6	8.1	2.7	1.1	100.0	2.5	408
Gicumbi	18.2	51.9	18.8	9.3	1.9	0.0	100.0	3.9	474
Rwamagana	10.8	42.4	20.9	17.3	7.1	1.6	100.0	5.2	424
Nyagatare	22.1	59.8	10.4	7.6	0.0	0.0	100.0	2.3	536
Gatsibo	17.6	53.4	17.3	8.6	2.5	0.6	100.0	3.6	567
Kayonza	17.4	49.7	16.4	14.0	1.5	0.9	100.0	4.2	405
Kirehe	19.8	64.6	6.3	7.2	1.6	0.4	100.0	2.6	428
Ngoma	14.1	66.8	10.9	8.1	0.2	0.0	100.0	3.2	427
Bugesera	16.6	62.7	8.4	10.2	2.3	0.0	100.0	3.4	493

Table D.11.2 Educational attainment: Men

Percent distribution of men age 15-49 by highest level of schooling attended or completed, and median years completed, by district, Rwanda 2010

District	Highest level of schooling						Total	Median years completed	Number of men
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Nyarugenge	3.6	40.3	11.2	27.9	9.7	7.4	100.0	5.9	589
Gasabo	3.3	37.5	14.5	28.5	9.8	6.3	100.0	5.9	362
Kicukiro	4.0	44.8	5.7	26.8	9.6	9.1	100.0	5.9	227
Nyanza	11.8	58.9	13.1	10.9	3.3	1.9	100.0	3.5	168
Gisagara	18.1	60.9	10.4	8.7	0.9	0.9	100.0	3.0	213
Nyaruguru	15.3	60.1	12.0	12.0	0.0	0.5	100.0	3.1	169
Huye	8.1	57.7	15.3	15.7	3.1	0.0	100.0	3.9	182
Nyamagabe	10.3	71.8	3.7	11.2	2.1	1.0	100.0	3.9	200
Ruhango	7.0	58.0	17.5	13.8	2.8	0.9	100.0	4.0	178
Muhanga	12.6	58.9	16.8	9.9	1.8	0.0	100.0	3.8	145
Kamonyi	12.2	57.2	17.8	9.8	2.4	0.5	100.0	3.9	189
Karongi	20.9	44.8	19.1	12.4	2.2	0.6	100.0	3.9	193
Rutsiro	20.3	59.4	12.4	7.4	0.0	0.5	100.0	3.0	214
Rubavu	11.1	58.9	4.8	19.0	3.5	2.6	100.0	3.7	233
Nyabihu	12.7	54.3	7.0	20.8	3.7	1.6	100.0	4.2	169
Ngororero	16.1	59.4	10.3	8.7	3.4	2.1	100.0	3.0	185
Rusizi	12.9	60.0	6.2	12.2	3.7	4.9	100.0	4.1	288
Nyamasheke	11.3	60.2	12.6	13.9	1.6	0.5	100.0	3.8	205
Rulindo	12.4	48.2	24.8	13.0	1.7	0.0	100.0	4.4	178
Gakenke	13.6	50.5	20.9	13.3	0.6	1.1	100.0	4.0	205
Musanze	6.0	53.8	14.1	20.6	3.8	1.6	100.0	4.2	220
Burera	15.0	53.4	13.0	11.7	2.5	4.4	100.0	3.7	172
Gicumbi	11.5	48.9	20.1	14.9	3.2	1.4	100.0	4.5	239
Rwamagana	10.2	51.8	21.4	12.4	1.9	2.3	100.0	4.5	206
Nyagatare	14.4	61.7	12.5	11.3	0.0	0.0	100.0	3.2	274
Gatsibo	13.6	51.6	21.4	9.6	3.3	0.5	100.0	3.9	264
Kayonza	11.8	56.7	10.5	17.4	1.0	2.6	100.0	3.8	194
Kirehe	11.1	70.3	9.7	7.8	1.1	0.0	100.0	3.3	199
Ngoma	14.3	65.1	9.2	8.9	2.0	0.5	100.0	3.4	218
Bugesera	17.0	47.8	13.9	17.6	2.9	0.8	100.0	3.9	239

Table D.12.1 Literacy: Women

Percent distribution of women age 15-49 by level of schooling attended and level of literacy, and percentage literate, by district, Rwanda 2010

		No schooling or primary school								
District	Secondary school or higher	Can read a whole sentence	Can read part of a sentence	Cannot read at all	No card with required language	Blind/ visually impaired	Missing	Total	Percentage literate[1]	Number of women
Nyarugenge	43.0	41.6	5.6	9.6	0.0	0.2	0.0	100.0	90.2	1,197
Gasabo	40.9	41.6	6.7	10.7	0.0	0.2	0.0	100.0	89.1	728
Kicukiro	46.1	41.8	4.1	7.8	0.0	0.1	0.1	100.0	92.0	469
Nyanza	14.7	58.9	7.5	18.9	0.0	0.0	0.0	100.0	81.1	356
Gisagara	11.9	49.0	11.1	27.1	0.0	0.9	0.0	100.0	72.0	444
Nyaruguru	12.4	50.3	9.9	26.6	0.0	0.8	0.0	100.0	72.6	361
Huye	16.1	58.4	6.2	18.8	0.0	0.5	0.0	100.0	80.7	421
Nyamagabe	12.0	51.5	8.5	26.5	0.3	0.5	0.7	100.0	72.1	442
Ruhango	15.2	58.4	9.4	17.0	0.0	0.0	0.0	100.0	83.0	397
Muhanga	12.7	62.9	7.1	17.1	0.0	0.0	0.2	100.0	82.6	354
Kamonyi	14.5	62.7	6.1	16.7	0.0	0.0	0.0	100.0	83.3	438
Karongi	13.7	55.0	9.8	21.4	0.0	0.0	0.0	100.0	78.6	422
Rutsiro	10.9	51.0	11.0	27.0	0.0	0.0	0.0	100.0	73.0	437
Rubavu	15.7	37.4	10.2	36.8	0.0	0.0	0.0	100.0	63.2	481
Nyabihu	13.9	53.5	5.9	26.4	0.0	0.2	0.0	100.0	73.3	415
Ngororero	8.5	48.3	7.4	35.6	0.0	0.0	0.2	100.0	64.3	521
Rusizi	12.2	52.3	12.0	23.4	0.0	0.2	0.0	100.0	76.4	491
Nyamasheke	10.8	58.9	11.1	18.9	0.0	0.0	0.3	100.0	80.9	538
Rulindo	10.1	67.0	6.7	15.7	0.0	0.2	0.4	100.0	83.7	404
Gakenke	13.1	47.9	15.2	22.9	0.0	0.6	0.3	100.0	76.2	495
Musanze	15.5	56.3	7.9	19.8	0.0	0.2	0.2	100.0	79.7	497
Burera	11.9	44.0	5.9	38.3	0.0	0.0	0.0	100.0	61.7	408
Gicumbi	11.2	57.1	7.7	23.9	0.0	0.0	0.2	100.0	75.9	474
Rwamagana	25.9	53.2	7.6	13.3	0.0	0.0	0.0	100.0	86.7	424
Nyagatare	7.6	49.8	6.8	35.7	0.0	0.0	0.0	100.0	64.3	536
Gatsibo	11.8	56.2	10.4	21.6	0.0	0.0	0.0	100.0	78.4	567
Kayonza	16.5	54.3	7.7	20.8	0.0	0.7	0.0	100.0	78.4	405
Kirehe	9.3	51.3	8.8	30.1	0.0	0.2	0.2	100.0	69.4	428
Ngoma	8.3	53.2	6.7	30.9	0.0	1.0	0.0	100.0	68.1	427
Bugesera	12.4	50.3	12.5	24.0	0.0	0.8	0.0	100.0	75.3	493

Table D.12.2 Literacy: Men

Percent distribution of men age 15-49 by level of schooling attended and level of literacy, and percentage literate, by district, Rwanda 2010

		No schooling or primary school								
District	Secondary school or higher	Can read a whole sentence	Can read part of a sentence	Cannot read at all	No card with required language	Blind/ visually impaired	Missing	Total	Percentage literate[1]	Number of men
Nyarugenge	45.0	43.4	3.8	7.4	0.0	0.1	0.3	100.0	92.2	589
Gasabo	44.6	46.0	2.8	6.6	0.0	0.0	0.0	100.0	93.4	362
Kicukiro	45.5	39.2	5.4	8.7	0.0	0.4	0.8	100.0	90.2	227
Nyanza	16.2	55.5	5.1	23.3	0.0	0.0	0.0	100.0	76.7	168
Gisagara	10.5	36.6	27.9	25.0	0.0	0.0	0.0	100.0	75.0	213
Nyaruguru	12.5	58.1	6.7	22.7	0.0	0.0	0.0	100.0	77.3	169
Huye	18.8	52.9	9.1	18.7	0.0	0.5	0.0	100.0	80.8	182
Nyamagabe	14.2	58.1	7.2	19.0	0.0	1.6	0.0	100.0	79.5	200
Ruhango	17.5	58.0	8.2	16.2	0.0	0.0	0.0	100.0	83.8	178
Muhanga	11.7	51.2	15.3	20.5	0.0	0.7	0.6	100.0	78.2	145
Kamonyi	12.8	51.9	13.6	21.6	0.0	0.0	0.0	100.0	78.4	189
Karongi	15.2	55.6	5.1	22.9	0.0	1.2	0.0	100.0	75.9	193
Rutsiro	7.9	51.0	10.7	30.0	0.0	0.4	0.0	100.0	69.6	214
Rubavu	25.1	50.7	3.5	20.7	0.0	0.0	0.0	100.0	79.3	233
Nyabihu	26.1	49.9	10.5	12.5	0.0	0.5	0.5	100.0	86.4	169
Ngororero	14.2	52.9	8.9	24.0	0.0	0.0	0.0	100.0	76.0	185
Rusizi	20.8	54.4	7.2	16.3	0.0	0.7	0.4	100.0	82.5	288
Nyamasheke	15.9	56.3	7.2	20.6	0.0	0.0	0.0	100.0	79.4	205
Rulindo	14.6	59.8	7.2	17.3	0.0	0.5	0.5	100.0	81.7	178
Gakenke	15.0	59.5	9.2	16.3	0.0	0.0	0.0	100.0	83.7	205
Musanze	26.1	57.5	5.0	11.4	0.0	0.0	0.0	100.0	88.6	220
Burera	18.5	56.5	2.9	22.0	0.0	0.0	0.0	100.0	78.0	172
Gicumbi	19.5	48.7	9.2	21.7	0.0	1.0	0.0	100.0	77.3	239
Rwamagana	16.5	53.8	11.9	17.8	0.0	0.0	0.0	100.0	82.2	206
Nyagatare	11.3	58.6	5.2	23.9	0.5	0.0	0.4	100.0	75.2	274
Gatsibo	13.4	60.4	4.2	21.5	0.0	0.5	0.0	100.0	78.0	264
Kayonza	21.0	52.3	4.8	21.9	0.0	0.0	0.0	100.0	78.1	194
Kirehe	8.9	61.4	6.2	23.6	0.0	0.0	0.0	100.0	76.4	199
Ngoma	11.4	50.4	9.8	27.5	0.0	0.0	1.0	100.0	71.5	218
Bugesera	21.3	37.9	19.4	21.4	0.0	0.0	0.0	100.0	78.6	239

Table D.13.1 Exposure to mass media: Women

Percentage of women age 15-49 who are exposed to specific media on a weekly basis, by district, Rwanda 2010

District	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	Accesses all three media at least once a week	Accesses none of the three media at least once a week	Number of women
Nyarugenge	9.7	52.6	82.3	7.7	13.0	399
Gasabo	8.0	52.0	83.1	6.4	11.0	728
Kicukiro	10.0	47.3	82.1	7.1	11.6	469
Nyanza	1.7	3.8	73.4	0.7	26.3	356
Gisagara	5.4	1.1	62.5	0.0	36.4	444
Nyaruguru	1.4	6.1	67.9	0.4	31.0	361
Huye	1.4	5.6	69.2	0.9	30.1	421
Nyamagabe	2.7	0.0	55.6	0.0	43.9	442
Ruhango	0.7	0.8	67.1	0.0	32.2	397
Muhanga	2.1	6.4	65.8	0.4	33.9	354
Kamonyi	2.1	3.2	70.7	0.7	29.1	438
Karongi	1.2	1.8	63.0	0.3	35.7	422
Rutsiro	1.9	1.6	67.5	0.2	31.9	437
Rubavu	2.6	7.7	50.4	1.3	48.7	481
Nyabihu	6.3	2.2	48.0	0.9	51.0	415
Ngororero	2.0	3.4	48.6	0.0	50.7	521
Rusizi	0.7	10.4	57.4	0.2	41.2	491
Nyamasheke	1.5	5.6	52.7	0.5	46.2	538
Rulindo	1.1	3.3	82.8	0.2	16.5	404
Gakenke	4.4	1.9	73.5	0.7	26.0	495
Musanze	5.0	5.9	73.7	0.7	25.0	497
Burera	4.3	8.6	72.8	2.3	26.9	408
Gicumbi	2.1	0.9	77.2	0.0	22.1	474
Rwamagana	1.8	10.1	61.7	1.3	35.7	424
Nyagatare	0.4	1.1	73.2	0.0	26.3	536
Gatsibo	6.0	3.5	79.8	0.5	19.2	567
Kayonza	6.9	7.9	77.3	2.2	22.7	405
Kirehe	3.8	2.0	63.4	0.0	36.1	428
Ngoma	0.7	1.2	66.0	0.0	33.2	427
Bugesera	1.9	1.8	71.0	0.2	28.4	493

Table D.13.2 Exposure to mass media: Men

Percentage of men age 15-49 who are exposed to specific media on a weekly basis, by district, Rwanda 2010

District	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	Accesses all three media at least once a week	Accesses none of the three media at least once a week	Number of men
Nyarugenge	20.2	76.8	97.5	19.4	1.8	200
Gasabo	15.5	59.9	94.7	13.3	2.9	362
Kicukiro	24.7	71.1	94.3	22.0	3.4	227
Nyanza	3.5	16.1	87.1	0.7	12.3	168
Gisagara	15.4	8.3	77.9	2.8	21.5	213
Nyaruguru	3.6	20.7	85.9	2.2	12.6	169
Huye	3.2	27.5	91.6	2.3	7.3	182
Nyamagabe	3.0	7.5	71.2	0.0	26.7	200
Ruhango	0.9	4.0	87.1	0.4	12.9	178
Muhanga	4.1	23.3	96.4	1.6	3.4	145
Kamonyi	3.3	12.4	91.5	1.5	8.5	189
Karongi	1.2	14.5	70.7	0.0	27.1	193
Rutsiro	1.5	15.9	74.2	1.5	23.3	214
Rubavu	7.1	44.5	82.9	5.3	11.7	233
Nyabihu	8.5	31.6	95.1	8.0	4.3	169
Ngororero	3.6	9.4	89.7	3.0	9.3	185
Rusizi	6.8	27.1	83.2	3.8	15.3	288
Nyamasheke	3.7	10.3	83.6	0.7	16.4	205
Rulindo	7.1	6.0	89.3	1.1	10.3	178
Gakenke	4.6	7.1	87.2	0.6	12.8	205
Musanze	14.1	36.3	95.3	9.3	3.9	220
Burera	14.4	23.4	89.3	6.0	9.6	172
Gicumbi	8.7	8.2	87.1	1.9	11.5	239
Rwamagana	3.9	25.7	97.4	2.1	2.6	206
Nyagatare	0.8	0.8	76.9	0.0	23.1	274
Gatsibo	6.4	24.6	85.1	5.0	14.4	264
Kayonza	7.8	29.0	96.5	3.8	3.1	194
Kirehe	0.6	3.2	69.9	0.6	30.1	199
Ngoma	5.1	12.3	94.7	2.5	5.3	218
Bugesera	11.1	23.9	92.0	4.1	6.4	239

Table D.14.1 Employment status: Women

Percent distribution of women age 15-49 by employment status, by district, Rwanda 2010

District	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			
Nyarugenge	55.9	3.4	40.7	100.0	399
Gasabo	61.4	26.1	12.5	100.0	728
Kicukiro	65.6	16.6	17.8	100.0	469
Nyanza	80.5	7.8	11.7	100.0	356
Gisagara	68.9	20.9	10.1	100.0	444
Nyaruguru	88.1	10.5	1.4	100.0	361
Huye	92.9	5.5	1.6	100.0	421
Nyamagabe	70.9	8.3	20.8	100.0	442
Ruhango	87.0	1.7	11.3	100.0	397
Muhanga	76.5	1.4	22.1	100.0	354
Kamonyi	81.4	1.4	17.2	100.0	438
Karongi	89.1	0.0	10.9	100.0	422
Rutsiro	84.5	5.8	9.7	100.0	437
Rubavu	57.8	6.3	35.9	100.0	481
Nyabihu	88.5	3.4	8.1	100.0	415
Ngororero	73.2	16.1	10.7	100.0	521
Rusizi	38.2	4.4	57.3	100.0	491
Nyamasheke	78.8	1.8	19.3	100.0	538
Rulindo	29.0	51.5	19.5	100.0	404
Gakenke	58.6	21.6	19.8	100.0	495
Musanze	86.0	12.3	1.7	100.0	497
Burera	96.5	1.0	2.5	100.0	408
Gicumbi	29.6	49.9	20.4	100.0	474
Rwamagana	80.1	1.8	18.2	100.0	424
Nyagatare	86.6	2.6	10.8	100.0	536
Gatsibo	83.8	4.2	12.0	100.0	567
Kayonza	56.1	2.7	41.2	100.0	405
Kirehe	79.4	4.7	15.9	100.0	428
Ngoma	72.6	21.2	6.2	100.0	427
Bugesera	88.6	9.7	1.7	100.0	493

Table D.14.2 Employment status: Men

Percent distribution of men age 15-49 by employment status, by district, Rwanda 2010

District	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	Total	Number of men
Nyarugenge	79.0	5.3	15.6	100.0	200
Gasabo	91.7	6.4	1.9	100.0	362
Kicukiro	79.9	16.1	3.9	100.0	227
Nyanza	86.9	1.2	11.9	100.0	168
Gisagara	99.6	0.0	0.4	100.0	213
Nyaruguru	96.2	2.5	1.3	100.0	169
Huye	94.1	4.8	1.0	100.0	182
Nyamagabe	90.5	2.1	7.4	100.0	200
Ruhango	86.5	0.0	13.5	100.0	178
Muhanga	93.7	0.0	6.3	100.0	145
Kamonyi	93.1	3.5	3.5	100.0	189
Karongi	91.4	0.0	8.6	100.0	193
Rutsiro	90.8	0.8	8.3	100.0	214
Rubavu	97.7	1.3	1.0	100.0	233
Nyabihu	97.6	1.7	0.7	100.0	169
Ngororero	96.7	1.3	2.0	100.0	185
Rusizi	98.2	0.4	1.5	100.0	288
Nyamasheke	85.4	0.6	14.0	100.0	205
Rulindo	81.8	0.0	18.2	100.0	178
Gakenke	98.3	0.6	1.1	100.0	205
Musanze	98.7	0.4	1.0	100.0	220
Burera	98.2	0.7	1.1	100.0	172
Gicumbi	79.9	0.0	20.1	100.0	239
Rwamagana	92.7	1.4	6.0	100.0	206
Nyagatare	84.8	0.0	15.2	100.0	274
Gatsibo	78.8	0.5	20.8	100.0	264
Kayonza	80.7	0.0	19.3	100.0	194
Kirehe	89.6	0.0	10.4	100.0	199
Ngoma	91.1	0.0	8.9	100.0	218
Bugesera	99.1	0.0	0.9	100.0	239

Table D.15.1 Occupation: Women

Percent distribution of women age 15-49 employed in the 12 months preceding the survey by occupation, by district, Rwanda 2010

District	Professional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Domestic service	Agriculture	Missing	Total	Number of women
Nyarugenge	7.7	3.9	41.5	7.4	2.7	21.3	15.5	0.0	100.0	237
Gasabo	9.1	2.6	19.5	5.7	14.0	16.6	32.3	0.2	100.0	637
Kicukiro	6.4	4.3	24.6	7.4	25.1	16.5	14.6	1.2	100.0	385
Nyanza	1.0	0.0	5.4	1.6	7.3	1.3	83.4	0.0	100.0	314
Gisagara	1.9	0.2	3.9	1.8	13.4	1.0	77.8	0.0	100.0	399
Nyaruguru	1.6	0.2	1.6	0.8	18.9	1.6	75.1	0.3	100.0	356
Huye	1.5	0.0	5.0	1.5	10.9	1.3	79.6	0.2	100.0	415
Nyamagabe	1.2	0.0	3.3	2.1	23.5	0.0	70.0	0.0	100.0	350
Ruhango	0.8	0.0	0.8	2.9	5.5	0.6	89.5	0.0	100.0	352
Muhanga	3.2	0.4	5.7	3.2	5.7	2.1	79.2	0.5	100.0	275
Kamonyi	1.1	0.0	2.7	4.0	3.6	1.5	87.3	0.0	100.0	363
Karongi	1.1	0.0	0.8	0.7	9.0	0.3	87.8	0.3	100.0	376
Rutsiro	1.4	0.0	0.9	0.2	5.2	0.0	92.1	0.3	100.0	395
Rubavu	0.7	0.0	29.2	2.6	1.1	1.4	65.0	0.0	100.0	308
Nyabihu	0.8	0.0	4.4	1.7	3.6	0.3	89.3	0.0	100.0	381
Ngororero	1.5	0.0	3.1	1.2	6.9	0.0	86.7	0.5	100.0	466
Rusizi	3.9	0.6	29.6	2.7	2.6	1.8	58.9	0.0	100.0	209
Nyamasheke	0.9	0.2	2.3	0.5	6.4	0.0	89.0	0.6	100.0	434
Rulindo	0.2	0.0	1.2	2.1	0.6	0.6	95.3	0.0	100.0	325
Gakenke	1.7	0.0	3.8	2.0	3.5	0.5	88.5	0.0	100.0	397
Musanze	2.4	0.2	7.8	4.3	12.5	1.1	71.6	0.0	100.0	488
Burera	2.8	0.0	3.4	2.0	18.0	1.1	72.7	0.0	100.0	398
Gicumbi	1.2	0.0	1.7	0.3	3.7	0.0	92.6	0.5	100.0	377
Rwamagana	5.1	0.5	7.2	2.9	0.2	3.2	80.7	0.2	100.0	347
Nyagatare	0.0	0.0	3.2	0.7	0.0	0.0	95.9	0.2	100.0	478
Gatsibo	0.9	0.0	2.7	2.2	0.2	0.9	93.0	0.0	100.0	499
Kayonza	2.0	0.0	4.2	2.4	5.6	0.4	85.1	0.3	100.0	238
Kirehe	1.8	0.6	2.6	2.8	1.1	0.0	91.2	0.0	100.0	360
Ngoma	0.3	0.0	2.0	1.3	4.8	0.5	91.1	0.0	100.0	401
Bugesera	0.9	0.2	2.7	0.8	13.6	1.0	80.7	0.0	100.0	485

Table D.15.2 Occupation: Men

Percent distribution of men age 15-49 employed in the 12 months preceding the survey by occupation, by district, Rwanda 2010

District	Professional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Domestic service	Agriculture	Missing	Total	Number of men
Nyarugenge	13.1	2.5	33.5	28.3	8.7	6.8	6.2	1.0	100.0	169
Gasabo	3.4	2.7	14.9	29.4	19.3	8.1	21.9	0.2	100.0	355
Kicukiro	10.7	3.3	13.1	27.8	19.8	10.4	12.7	2.3	100.0	218
Nyanza	4.0	0.0	6.3	7.9	2.3	1.9	77.6	0.0	100.0	148
Gisagara	2.7	0.0	3.9	4.2	22.0	0.4	66.7	0.0	100.0	212
Nyaruguru	2.0	0.0	5.8	4.8	15.3	4.3	67.2	0.6	100.0	167
Huye	2.2	0.5	2.9	6.6	4.8	14.7	68.4	0.0	100.0	180
Nyamagabe	1.7	0.0	8.0	12.2	18.1	0.0	60.0	0.0	100.0	186
Ruhango	1.7	0.0	2.9	9.6	1.8	1.2	82.7	0.0	100.0	154
Muhanga	0.0	0.0	5.7	10.1	14.8	0.8	67.4	1.2	100.0	135
Kamonyi	2.6	0.0	2.6	10.4	3.1	2.9	78.4	0.0	100.0	183
Karongi	1.6	0.6	1.8	3.0	13.1	3.6	76.3	0.0	100.0	177
Rutsiro	1.9	0.0	2.4	10.5	8.3	0.0	76.4	0.4	100.0	197
Rubavu	2.8	0.5	6.6	4.0	30.5	2.7	53.0	0.0	100.0	231
Nyabihu	3.6	0.0	5.6	12.9	15.2	1.5	61.3	0.0	100.0	168
Ngororero	1.6	0.0	10.4	7.6	17.3	0.6	62.5	0.0	100.0	182
Rusizi	5.4	1.2	8.5	14.4	20.4	2.6	47.6	0.0	100.0	284
Nyamasheke	0.6	0.0	9.4	9.4	10.1	0.0	70.6	0.0	100.0	176
Rulindo	1.4	0.0	3.8	5.8	7.1	0.0	81.9	0.0	100.0	146
Gakenke	2.2	0.6	3.6	5.2	16.8	0.0	71.1	0.6	100.0	203
Musanze	3.3	1.1	8.4	25.3	15.5	1.0	45.4	0.0	100.0	217
Burera	5.0	0.7	3.1	8.5	21.4	0.7	60.6	0.0	100.0	170
Gicumbi	1.7	0.0	5.3	2.9	15.2	0.0	74.8	0.0	100.0	191
Rwamagana	4.8	0.0	14.4	17.8	6.4	4.9	51.6	0.0	100.0	194
Nyagatare	0.9	0.0	3.4	3.5	1.0	0.5	90.7	0.0	100.0	232
Gatsibo	1.8	0.0	2.4	11.0	1.7	0.6	82.0	0.6	100.0	209
Kayonza	0.5	0.0	3.3	6.6	7.1	0.0	82.5	0.0	100.0	156
Kirehe	1.8	0.0	1.1	2.8	9.0	0.0	85.2	0.0	100.0	178
Ngoma	1.7	0.0	7.0	6.1	8.0	1.8	75.4	0.0	100.0	199
Bugesera	3.3	0.0	2.1	5.6	19.0	0.0	69.9	0.0	100.0	236

Table D.16.1 Use of tobacco: Women

Percentage of women age 15-49 who smoke cigarettes or a pipe or use other tobacco products, by district, Rwanda 2010

District	Uses tobacco			Does not use tobacco	Number of women
	Cigarettes	Pipe	Other tobacco		
Nyarugenge	1.0	0.0	2.1	96.9	399
Gasabo	0.7	0.3	1.9	97.2	728
Kicukiro	0.5	0.0	0.3	99.1	469
Nyanza	0.3	0.0	1.8	97.9	356
Gisagara	0.7	0.0	14.8	84.5	444
Nyaruguru	0.7	0.2	4.0	95.7	361
Huye	1.2	0.0	8.0	91.1	421
Nyamagabe	0.2	0.0	1.2	98.8	442
Ruhango	0.2	0.0	2.7	97.3	397
Muhanga	1.2	0.3	2.5	96.1	354
Kamonyi	0.2	0.0	2.0	97.8	438
Karongi	0.0	0.4	0.2	99.6	422
Rutsiro	0.2	0.6	0.7	98.7	437
Rubavu	0.0	0.0	0.0	100.0	481
Nyabihu	0.3	0.7	0.9	98.4	415
Ngororero	0.0	0.4	0.6	99.2	521
Rusizi	0.0	0.0	1.5	98.5	491
Nyamasheke	0.0	0.0	1.0	99.0	538
Rulindo	0.6	1.5	2.4	95.9	404
Gakenke	0.0	2.4	3.4	94.3	495
Musanze	0.6	0.9	2.0	96.7	497
Burera	0.0	4.0	0.5	95.5	408
Gicumbi	0.5	3.2	2.6	95.3	474
Rwamagana	0.5	0.2	1.1	98.2	424
Nyagatare	0.0	0.9	6.1	93.2	536
Gatsibo	0.4	1.1	3.7	95.0	567
Kayonza	0.5	0.7	2.2	96.8	405
Kirehe	0.5	0.4	4.6	95.0	428
Ngoma	0.0	0.5	4.6	94.8	427
Bugesera	0.0	0.5	3.5	96.0	493

Table D.16.2 Use of tobacco: Men

Percentage of men age 15-49 who smoke cigarettes or a pipe or use other tobacco products, by district, Rwanda 2010

District	Uses tobacco			Does not use tobacco	Number of men
	Cigarettes	Pipe	Other tobacco		
Nyarugenge	17.0	0.0	1.8	83.0	200
Gasabo	12.0	0.6	2.4	86.2	362
Kicukiro	12.1	0.0	1.7	87.0	227
Nyanza	14.1	0.0	6.7	83.9	168
Gisagara	19.4	0.0	16.7	71.2	213
Nyaruguru	11.8	0.9	11.3	81.3	169
Huye	21.7	1.0	13.0	68.5	182
Nyamagabe	10.7	0.0	6.7	86.3	200
Ruhango	11.1	0.0	7.5	82.4	178
Muhanga	15.2	1.3	3.1	81.6	145
Kamonyi	21.1	0.6	12.6	73.0	189
Karongi	7.7	0.0	2.0	90.9	193
Rutsiro	6.9	0.5	3.8	91.0	214
Rubavu	6.3	0.9	1.4	92.4	233
Nyabihu	11.3	0.0	2.6	87.6	169
Ngororero	14.1	0.7	7.8	82.8	185
Rusizi	5.0	0.3	2.2	93.1	288
Nyamasheke	8.4	0.7	4.1	90.9	205
Rulindo	10.4	6.3	9.3	84.3	178
Gakenke	12.5	0.5	6.2	83.2	205
Musanze	13.7	0.0	3.5	83.9	220
Burera	9.8	0.5	5.5	85.8	172
Gicumbi	6.6	6.1	9.4	84.9	239
Rwamagana	18.2	0.4	6.5	78.6	206
Nyagatare	12.1	1.5	8.0	82.1	274
Gatsibo	11.3	1.3	10.8	78.0	264
Kayonza	11.4	3.6	4.3	82.4	194
Kirehe	9.2	1.0	6.2	84.6	199
Ngoma	12.7	0.5	3.9	84.8	218
Bugesera	12.6	0.0	5.7	83.8	239

Table D.17 Current marital status

Percent distribution of women and men age 15-49 by current marital status, by district, Rwanda 2010

District	Marital status						Total	Percentage of respondents currently in union	Number of respondents
	Never married	Married	Living together	Divorced	Separated	Widowed			
				WOMEN					
Nyarugenge	46.6	21.2	23.6	4.6	0.2	3.9	100.0	44.8	399
Gasabo	44.2	34.2	12.1	5.5	0.4	3.7	100.0	46.2	728
Kicukiro	45.1	25.6	19.3	4.8	0.5	4.7	100.0	44.9	469
Nyanza	35.1	35.2	14.6	6.3	1.9	6.9	100.0	49.9	356
Gisagara	35.3	32.4	12.8	12.1	0.5	7.0	100.0	45.2	444
Nyaruguru	35.7	37.4	17.7	2.7	1.7	4.7	100.0	55.1	361
Huye	38.0	40.0	11.8	1.5	0.7	7.8	100.0	51.9	421
Nyamagabe	40.6	36.3	13.0	4.8	0.3	5.0	100.0	49.3	442
Ruhango	39.2	35.1	13.7	5.3	1.9	4.7	100.0	48.8	397
Muhanga	39.5	44.6	7.0	3.4	0.4	5.1	100.0	51.5	354
Kamonyi	40.2	40.4	11.0	3.0	0.0	5.5	100.0	51.4	438
Karongi	36.5	45.1	9.6	3.5	0.8	4.4	100.0	54.8	422
Rutsiro	38.9	39.1	13.9	3.4	1.1	3.5	100.0	53.1	437
Rubavu	38.0	19.1	30.7	3.1	0.9	8.2	100.0	49.8	481
Nyabihu	35.8	32.9	19.5	3.0	0.7	8.0	100.0	52.4	415
Ngororero	36.9	38.9	12.9	2.9	1.1	7.3	100.0	51.8	521
Rusizi	41.6	24.8	24.3	5.0	0.2	4.1	100.0	49.1	491
Nyamasheke	47.8	40.6	4.6	1.3	1.7	4.0	100.0	45.2	538
Rulindo	47.3	39.6	5.6	3.1	0.0	4.4	100.0	45.1	404
Gakenke	38.3	45.3	4.9	5.6	0.8	5.2	100.0	50.2	495
Musanze	40.7	31.6	17.7	3.5	0.4	6.0	100.0	49.4	497
Burera	35.8	37.3	16.2	4.5	1.2	5.0	100.0	53.5	408
Gicumbi	35.5	45.0	9.2	3.5	0.5	6.2	100.0	54.2	474
Rwamagana	41.6	34.1	12.8	3.4	2.8	5.2	100.0	47.0	424
Nyagatare	23.7	35.3	27.0	7.1	0.2	6.6	100.0	62.4	536
Gatsibo	37.3	33.0	17.5	4.5	0.8	6.8	100.0	50.5	567
Kayonza	38.1	32.4	16.3	6.4	1.1	5.7	100.0	48.7	405
Kirehe	35.2	35.0	20.1	4.6	0.6	4.5	100.0	55.1	428
Ngoma	33.2	32.3	21.2	7.1	0.8	5.4	100.0	53.5	427
Bugesera	35.6	32.0	18.6	9.4	0.4	4.0	100.0	50.6	493
				MEN					
Nyarugenge	50.5	22.7	21.9	3.3	1.3	0.3	100.0	44.6	200
Gasabo	52.3	30.4	15.7	1.2	0.0	0.4	100.0	46.1	362
Kicukiro	54.9	28.7	14.6	0.6	0.6	0.6	100.0	43.3	227
Nyanza	48.6	31.5	16.8	0.8	1.2	1.1	100.0	48.3	168
Gisagara	45.3	43.3	9.2	0.0	0.9	1.4	100.0	52.4	213
Nyaruguru	45.1	38.6	15.8	0.0	0.5	0.0	100.0	54.4	169
Huye	47.1	39.1	11.0	0.5	1.1	1.1	100.0	50.1	182
Nyamagabe	46.2	43.3	9.3	0.0	0.0	1.2	100.0	52.6	200
Ruhango	52.7	31.7	10.2	3.8	1.5	0.0	100.0	41.9	178
Muhanga	42.6	49.5	6.5	0.0	0.0	1.4	100.0	56.1	145
Kamonyi	39.5	51.9	6.5	0.4	1.1	0.5	100.0	58.4	189
Karongi	45.6	48.4	5.0	0.0	0.0	1.1	100.0	53.3	193
Rutsiro	47.4	42.9	9.3	0.5	0.0	0.0	100.0	52.2	214
Rubavu	47.7	34.2	14.7	0.9	0.0	2.5	100.0	48.9	233
Nyabihu	41.9	39.9	16.1	0.0	1.6	0.5	100.0	56.0	169
Ngororero	32.6	47.3	17.0	0.6	1.3	1.2	100.0	64.3	185
Rusizi	53.5	36.4	9.1	0.3	0.0	0.7	100.0	45.5	288
Nyamasheke	43.1	48.7	7.2	0.4	0.7	0.0	100.0	55.9	205
Rulindo	47.9	46.6	4.0	1.0	0.0	0.5	100.0	50.7	178
Gakenke	42.9	50.3	5.1	1.1	0.0	0.6	100.0	55.3	205
Musanze	46.9	36.6	13.4	1.6	0.0	1.5	100.0	50.0	220
Burera	39.6	50.0	10.0	0.0	0.0	0.5	100.0	59.9	172
Gicumbi	46.2	42.8	9.2	0.4	1.0	0.5	100.0	52.0	239
Rwamagana	49.5	29.6	16.1	2.4	0.9	1.5	100.0	45.7	206
Nyagatare	36.0	40.0	20.6	2.9	0.0	0.4	100.0	60.7	274
Gatsibo	44.6	33.2	19.1	1.7	0.5	1.0	100.0	52.2	264
Kayonza	45.6	29.8	19.9	3.1	0.0	1.6	100.0	49.6	194
Kirehe	42.5	34.0	19.0	3.1	1.0	0.5	100.0	52.9	199
Ngoma	37.3	32.2	23.9	3.0	0.5	3.0	100.0	56.1	218

Table D.18 Number of women's co-wives

Percent distribution of currently married women age 15-49 by number of co-wives, by district, Rwanda 2010

District	Number of co-wives				Total	Number of women
	0	1	2+	Missing		
Nyarugenge	96.0	4.0	0.0	0.0	100.0	179
Gasabo	93.9	5.5	0.2	0.4	100.0	337
Kicukiro	98.7	0.9	0.3	0.0	100.0	211
Nyanza	93.5	5.4	1.0	0.0	100.0	177
Gisagara	90.1	7.9	1.1	0.9	100.0	201
Nyaruguru	89.1	8.9	0.5	1.6	100.0	199
Huye	90.5	7.2	1.8	0.4	100.0	218
Nyamagabe	86.9	11.3	1.3	0.4	100.0	218
Ruhango	95.1	3.4	1.5	0.0	100.0	194
Muhanga	93.2	5.6	0.6	0.5	100.0	182
Kamonyi	92.2	6.9	0.9	0.0	100.0	225
Karongi	89.4	9.0	1.2	0.4	100.0	231
Rutsiro	89.2	9.1	0.8	0.9	100.0	232
Rubavu	89.3	8.9	1.8	0.0	100.0	239
Nyabihu	88.9	9.3	1.8	0.0	100.0	217
Ngororero	87.7	7.8	2.8	1.7	100.0	270
Rusizi	91.6	5.6	1.3	1.5	100.0	241
Nyamasheke	90.0	8.1	1.4	0.5	100.0	244
Rulindo	90.7	6.4	1.4	1.5	100.0	182
Gakenke	95.7	3.0	0.0	1.4	100.0	248
Musanze	91.3	6.9	1.3	0.4	100.0	245
Burera	93.2	5.9	0.9	0.0	100.0	218
Gicumbi	92.8	6.4	0.9	0.0	100.0	257
Rwamagana	86.4	9.3	3.8	0.4	100.0	199
Nyagatare	85.8	13.1	1.1	0.0	100.0	334
Gatsibo	93.1	5.3	1.6	0.0	100.0	287
Kayonza	89.0	8.2	2.3	0.5	100.0	197
Kirehe	89.3	9.9	0.9	0.0	100.0	236
Ngoma	96.0	2.6	1.4	0.0	100.0	228
Bugesera	92.3	6.8	0.5	0.4	100.0	249

Table D.19 Number of men's wives

Percent distribution of currently married men age 15-49 by number of wives, by district, Rwanda 2010

District	Number of wives		Total	Number of men
	1	2+		
Nyarugenge	99.2	0.8	100.0	89
Gasabo	97.9	2.1	100.0	167
Kicukiro	99.3	0.7	100.0	98
Nyanza	98.9	1.1	100.0	81
Gisagara	97.2	2.8	100.0	112
Nyaruguru	97.2	2.8	100.0	92
Huye	99.0	1.0	100.0	91
Nyamagabe	96.0	4.0	100.0	105
Ruhango	100.0	0.0	100.0	74
Muhanga	100.0	0.0	100.0	81
Kamonyi	98.2	1.8	100.0	111
Karongi	98.1	1.9	100.0	103
Rutsiro	91.3	8.7	100.0	112
Rubavu	95.7	4.3	100.0	114
Nyabihu	91.5	8.5	100.0	95
Ngororero	96.9	3.1	100.0	119
Rusizi	99.1	0.9	100.0	131
Nyamasheke	96.8	3.2	100.0	115
Rulindo	99.0	1.0	100.0	90
Gakenke	100.0	0.0	100.0	114
Musanze	97.9	2.1	100.0	110
Burera	100.0	0.0	100.0	103
Gicumbi	98.3	1.7	100.0	124
Rwamagana	98.0	2.0	100.0	94
Nyagatare	91.4	8.6	100.0	166
Gatsibo	97.6	2.4	100.0	138
Kayonza	97.9	2.1	100.0	96
Kirehe	98.0	2.0	100.0	105
Ngoma	98.1	1.9	100.0	123
Bugesera	96.2	3.8	100.0	134

Table D.20 Median age at first marriage

Median age at first marriage among women age 25-49, and median age at first marriage among men age 25-59, by district, Rwanda 2010

District	Women age 25-49	Men age 25-59
Nyarugenge	23.2	a
Gasabo	23.7	a
Kicukiro	22.7	a
Nyanza	22.4	a
Gisagara	22.1	24.9
Nyaruguru	21.2	24.7
Huye	23.0	24.9
Nyamagabe	21.3	24.3
Ruhango	22.7	a
Muhanga	22.5	a
Kamonyi	23.5	a
Karongi	22.2	a
Rutsiro	20.5	23.0
Rubavu	20.2	23.0
Nyabihu	20.5	23.5
Ngororero	21.0	23.3
Rusizi	22.1	a
Nyamasheke	21.8	24.8
Rulindo	21.7	24.6
Gakenke	20.8	24.1
Musanze	20.8	23.5
Burera	20.4	22.1
Gicumbi	20.7	24.5
Rwamagana	22.1	a
Nyagatare	19.3	22.6
Gatsibo	20.2	24.7
Kayonza	20.7	a
Kirehe	20.2	23.9
Ngoma	19.9	23.9
Bugesera	20.5	23.5

Table D.21 Median age at first intercourse

Median age at first sexual intercourse among women age 20-49 and age 25-49, and median age at first sexual intercourse among men age 20-54[59] and age 25-54[59], according to background characteristics, Rwanda 2010

	Women age	Men age
District	25-49	25-59
Nyarugenge	20.4	20.9
Gasabo	22.0	21.3
Kicukiro	21.2	21.3
Nyanza	21.6	23.8
Gisagara	21.5	23.8
Nyaruguru	20.9	22.1
Huye	21.8	22.8
Nyamagabe	20.9	22.5
Ruhango	21.6	21.3
Muhanga	21.6	22.2
Kamonyi	22.3	21.0
Karongi	21.5	22.3
Rutsiro	20.3	21.2
Rubavu	19.9	21.5
Nyabihu	20.2	21.0
Ngororero	20.8	21.3
Rusizi	21.7	22.8
Nyamasheke	21.1	22.4
Rulindo	21.1	20.7
Gakenke	20.6	22.1
Musanze	20.5	21.9
Burera	20.1	21.8
Gicumbi	20.1	21.5
Rwamagana	21.4	20.3
Nyagatare	19.2	20.8
Gatsibo	19.8	20.2
Kayonza	20.3	21.8
Kirehe	20.0	20.9
Ngoma	19.4	20.5
Bugesera	20.1	22.2

Table D.22.1 Recent sexual activity: Women

Percent distribution of women age 15-49 by timing of last sexual intercourse, by district, Rwanda 2010

District	Timing of last sexual intercourse				Never had sexual intercourse	Total	Number of women
	Within the past 4 weeks	Within 1 year	One or more years	Missing			
Nyarugenge	45.8	8.5	13.5	0.0	32.2	100.0	399
Gasabo	43.2	8.0	18.8	0.2	29.9	100.0	728
Kicukiro	41.0	12.0	15.8	0.1	31.0	100.0	469
Nyanza	45.8	10.6	15.0	0.0	28.6	100.0	356
Gisagara	42.4	10.6	21.7	0.0	25.4	100.0	444
Nyaruguru	50.0	8.3	11.4	0.0	30.3	100.0	361
Huye	43.4	10.6	20.6	0.0	25.4	100.0	421
Nyamagabe	45.6	5.6	12.3	0.3	36.2	100.0	442
Ruhango	43.1	9.1	16.7	0.0	31.1	100.0	397
Muhanga	51.4	8.2	14.3	0.0	26.1	100.0	354
Kamonyi	48.3	5.6	14.2	0.0	31.9	100.0	438
Karongi	46.7	9.5	13.4	0.0	30.5	100.0	422
Rutsiro	52.2	6.6	11.1	0.0	30.1	100.0	437
Rubavu	49.5	7.9	13.0	0.0	29.6	100.0	481
Nyabihu	48.8	8.4	12.1	0.2	30.5	100.0	415
Ngororero	46.3	9.3	14.1	0.2	30.1	100.0	521
Rusizi	47.8	5.8	12.5	0.0	33.9	100.0	491
Nyamasheke	43.6	4.8	12.0	0.0	39.6	100.0	538
Rulindo	42.0	8.1	14.7	0.0	35.1	100.0	404
Gakenke	48.2	8.6	11.9	0.0	31.3	100.0	495
Musanze	47.7	5.9	11.7	0.0	34.7	100.0	497
Burera	48.5	8.8	13.2	0.0	29.4	100.0	408
Gicumbi	51.7	8.7	11.5	0.0	28.1	100.0	474
Rwamagana	44.6	10.6	14.2	0.0	30.5	100.0	424
Nyagatare	58.3	9.4	11.9	0.0	20.3	100.0	536
Gatsibo	48.9	7.6	14.9	0.0	28.5	100.0	567
Kayonza	47.1	7.5	15.3	0.0	30.1	100.0	405
Kirehe	49.5	6.1	15.6	0.0	28.7	100.0	428
Ngoma	54.2	8.5	15.6	0.0	21.7	100.0	427
Bugesera	50.1	7.2	15.5	0.0	27.3	100.0	493

Table D.22.2 Recent sexual activity: Men

Percent distribution of men age 15-49 by timing of last sexual intercourse, by district, Rwanda 2010

District	Timing of last sexual intercourse				Never had sexual intercourse	Total	Number of men
	Within the past 4 weeks	Within 1 year	One or more years	Missing			
Nyarugenge	46.1	15.5	17.5	0.0	20.9	100.0	200
Gasabo	44.8	15.7	16.1	0.7	22.7	100.0	362
Kicukiro	43.6	14.3	12.5	0.3	29.4	100.0	227
Nyanza	48.4	9.5	18.1	0.0	24.1	100.0	168
Gisagara	52.4	5.6	6.8	0.0	35.1	100.0	213
Nyaruguru	52.0	6.4	7.8	0.0	33.8	100.0	169
Huye	47.0	9.5	11.1	0.0	32.4	100.0	182
Nyamagabe	46.8	9.4	8.5	0.0	35.4	100.0	200
Ruhango	45.0	9.0	17.2	0.0	28.8	100.0	178
Muhanga	50.5	12.8	10.7	0.0	26.1	100.0	145
Kamonyi	55.6	9.8	7.7	0.5	26.4	100.0	189
Karongi	48.7	6.7	12.3	0.0	32.3	100.0	193
Rutsiro	52.1	5.0	9.5	0.0	33.3	100.0	214
Rubavu	49.4	8.2	12.8	0.0	29.7	100.0	233
Nyabihu	52.4	10.0	11.3	0.0	26.3	100.0	169
Ngororero	62.7	4.7	8.8	0.0	23.8	100.0	185
Rusizi	44.9	5.6	16.1	0.0	33.4	100.0	288
Nyamasheke	55.6	5.7	12.8	0.0	25.8	100.0	205
Rulindo	50.0	4.7	13.1	0.0	32.2	100.0	178
Gakenke	54.2	10.4	12.4	0.6	22.4	100.0	205
Musanze	52.0	6.3	19.8	0.0	21.9	100.0	220
Burera	57.7	7.1	10.6	0.0	24.6	100.0	172
Gicumbi	51.0	5.2	14.5	0.0	29.3	100.0	239
Rwamagana	46.4	12.2	22.5	0.0	18.8	100.0	206
Nyagatare	55.1	12.5	8.1	0.0	24.4	100.0	274
Gatsibo	52.7	7.6	13.4	0.0	26.3	100.0	264
Kayonza	46.6	9.8	16.2	0.0	27.5	100.0	194
Kirehe	49.6	9.6	15.0	0.0	25.8	100.0	199
Ngoma	55.2	9.9	12.5	0.0	22.4	100.0	218
Bugesera	52.9	8.4	9.1	0.0	29.6	100.0	239

Table D.23 Fertility by district

Total fertility rate for the three years preceding the survey, percentage of women age 15-49 currently pregnant, and mean number of children ever born to women age 40-49 years, by district, Rwanda 2010

District	Total fertility rate	Percentage women age 15-49 currently pregnant	Mean number of children ever born to women age 40-49
Nyarugenge	2.9	7.6	5.0
Gasabo	3.8	7.6	5.3
Kicukiro	3.4	6.4	4.8
Nyanza	4.8	7.9	5.2
Gisagara	4.8	6.8	5.2
Nyaruguru	5.4	5.9	5.5
Huye	4.7	8.3	5.3
Nyamagabe	5.1	5.1	6.2
Ruhango	4.1	4.0	5.3
Muhanga	3.8	6.8	4.8
Kamonyi	4.1	4.7	4.8
Karongi	4.6	5.8	5.5
Rutsiro	5.2	6.8	6.6
Rubavu	5.3	7.3	6.5
Nyabihu	4.9	6.4	6.5
Ngororero	4.6	7.1	6.6
Rusizi	5.1	11.0	6.8
Nyamasheke	5.0	6.7	6.4
Rulindo	3.3	6.3	5.5
Gakenke	4.7	6.5	6.3
Musanze	4.6	5.7	6.6
Burera	3.6	7.9	6.5
Gicumbi	4.1	6.4	5.9
Rwamagana	4.6	7.9	5.1
Nyagatare	5.1	8.7	6.9
Gatsibo	4.9	7.2	5.6
Kayonza	5.1	4.4	6.5
Kirehe	4.7	6.0	6.8
Ngoma	5.0	8.0	6.3
Bugesera	5.0	10.8	6.6

Table D.24 Birth intervals

Percent distribution of non-first births in the five years preceding the survey by number of months since preceding birth, and median number of months since preceding birth, by district, Rwanda 2010

	Months since preceding birth								
District	7-17	18-23	24-35	36-47	48-59	60+	Total	Number of non-first births	Median number of months since preceding birth
Nyarugenge	9.9	15.9	27.6	17.6	9.9	19.0	100.0	126	34.2
Gasabo	11.8	12.5	32.4	19.6	11.5	12.2	100.0	279	33.4
Kicukiro	17.4	12.8	29.8	15.9	6.4	17.8	100.0	155	32.5
Nyanza	6.7	13.6	36.8	21.6	9.0	12.3	100.0	185	33.3
Gisagara	4.3	10.0	48.8	20.8	6.7	9.4	100.0	267	31.7
Nyaruguru	4.9	15.9	41.5	23.5	8.1	6.0	100.0	219	31.2
Huye	5.5	15.3	38.1	22.2	8.2	10.8	100.0	222	32.1
Nyamagabe	6.0	12.7	37.7	24.4	9.5	9.7	100.0	223	33.4
Ruhango	5.7	12.6	31.0	24.9	12.9	12.9	100.0	165	36.6
Muhanga	8.0	13.0	27.2	19.2	15.6	17.0	100.0	147	37.2
Kamonyi	6.8	10.3	39.3	20.1	9.6	13.9	100.0	206	32.7
Karongi	5.4	9.8	45.2	24.6	6.5	8.5	100.0	202	33.6
Rutsiro	6.3	8.1	46.9	22.3	9.7	6.7	100.0	247	33.0
Rubavu	6.4	12.3	47.2	18.1	8.2	7.8	100.0	253	31.9
Nyabihu	5.7	9.7	43.9	26.0	9.1	5.6	100.0	244	33.1
Ngororero	6.6	14.0	33.1	24.3	13.4	8.5	100.0	256	34.5
Rusizi	8.6	15.4	44.7	17.7	6.9	6.7	100.0	268	29.8
Nyamasheke	7.3	11.8	44.3	16.7	10.5	9.4	100.0	259	31.2
Rulindo	5.7	8.1	39.5	20.8	11.2	14.6	100.0	141	35.1
Gakenke	5.5	11.0	45.8	22.3	7.1	8.3	100.0	261	32.3
Musanze	8.4	13.2	34.0	22.0	11.6	10.7	100.0	228	33.5
Burera	4.1	13.3	51.5	19.3	8.3	3.5	100.0	205	31.6
Gicumbi	4.8	13.0	36.3	24.2	11.8	9.9	100.0	246	33.7
Rwamagana	10.6	16.4	32.9	15.2	8.4	16.5	100.0	202	32.1
Nyagatare	8.0	14.4	35.6	27.0	7.4	7.6	100.0	337	32.5
Gatsibo	6.6	14.8	35.2	21.0	11.8	10.6	100.0	312	33.6
Kayonza	11.5	10.3	35.9	20.4	11.7	10.3	100.0	207	33.5
Kirehe	8.7	12.2	37.0	21.7	10.0	10.3	100.0	235	33.4
Ngoma	10.7	10.7	39.3	17.3	12.1	10.1	100.0	243	32.1
Bugesera	5.0	14.6	42.3	24.1	8.4	5.7	100.0	288	32.8

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. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table D.25 Median duration of amenorrhea, postpartum abstinence and postpartum insusceptibility

Median number of months of postpartum amenorrhea, postpartum abstinence, and postpartum insusceptibility following births in the three years preceding the survey, by district, Rwanda 2010

District	Postpartum amenorrhea	Postpartum abstinence	Postpartum insusceptibility[1]
Nyarugenge	6.6	1.1	7.3
Gasabo	7.7	0.7	8.6
Kicukiro	7.3	1.3	7.7
Nyanza	6.8	1.7	10.6
Gisagara	11.7	1.2	16.6
Nyaruguru	14.1	0.5	14.2
Huye	12.0	0.5	14.2
Nyamagabe	15.4	0.5	15.4
Ruhango	9.4	0.5	9.4
Muhanga	4.0	0.6	4.9
Kamonyi	10.0	0.6	10.4
Karongi	14.8	0.4	15.8
Rutsiro	12.6	0.4	12.9
Rubavu	13.2	0.6	14.0
Nyabihu	10.5	1.2	16.5
Ngororero	12.5	0.5	13.9
Rusizi	9.7	0.6	10.3
Nyamasheke	9.5	0.6	10.2
Rulindo	11.0	0.6	11.7
Gakenke	9.1	1.7	9.1
Musanze	10.2	0.5	11.8
Burera	11.8	1.2	11.8
Gicumbi	7.9	0.5	10.7
Rwamagana	9.6	1.2	9.6
Nyagatare	7.7	1.4	8.0
Gatsibo	11.2	1.1	13.7
Kayonza	10.1	0.7	10.7
Kirehe	10.2	1.2	10.2
Ngoma	10.2	0.5	10.2
Bugesera	12.0	1.1	12.0

Note: Medians are based on the status at the time of the survey (current status)

[1] Includes births for which mothers are either still amenorrheic or still abstaining (or both) following birth

Table D.26 Median age at first birth

Median age at first birth among women age 25-49 years, by district, Rwanda 2010

District	Women age 25-49
Nyarugenge	23.1
Gasabo	24.1
Kicukiro	23.2
Nyanza	23.2
Gisagara	23.2
Nyaruguru	22.0
Huye	23.3
Nyamagabe	22.5
Ruhango	23.7
Muhanga	23.1
Kamonyi	24.3
Karongi	23.1
Rutsiro	21.7
Rubavu	21.6
Nyabihu	21.7
Ngororero	22.0
Rusizi	23.1
Nyamasheke	22.7
Rulindo	22.5
Gakenke	21.9
Musanze	22.1
Burera	21.6
Gicumbi	21.4
Rwamagana	22.8
Nyagatare	20.8
Gatsibo	21.3
Kayonza	21.8
Kirehe	21.5
Ngoma	21.0
Bugesera	22.1

Table D.27 Teenage pregnancy and motherhood

Percentage of women age 15-19 who have had a live birth or who are pregnant with their first child, and percentage who have begun childbearing, by district, Rwanda 2010

District	Percentage of women age 15-19 who:		Percentage who have begun childbearing	Number of women
	Have had a live birth	Are pregnant with first child		
Nyarugenge	6.2	1.5	7.7	92
Gasabo	6.9	1.3	8.2	137
Kicukiro	3.4	0.0	3.4	103
Nyanza	2.4	1.3	3.7	73
Gisagara	6.6	1.2	7.8	83
Nyaruguru	3.1	0.9	4.0	85
Huye	4.6	2.6	7.2	74
Nyamagabe	4.3	0.0	4.3	101
Ruhango	2.0	0.0	2.0	82
Muhanga	4.4	2.9	7.3	66
Kamonyi	2.7	1.2	3.9	78
Karongi	2.2	1.2	3.4	84
Rutsiro	2.4	0.9	3.3	99
Rubavu	6.9	2.6	9.4	123
Nyabihu	3.0	1.6	4.5	89
Ngororero	4.8	0.0	4.8	121
Rusizi	5.3	1.0	6.3	107
Nyamasheke	4.1	0.8	4.9	140
Rulindo	5.2	0.0	5.2	100
Gakenke	4.9	2.3	7.2	101
Musanze	5.9	1.0	6.9	125
Burera	5.2	2.6	7.8	82
Gicumbi	1.2	0.0	1.2	95
Rwamagana	5.1	1.2	6.2	96
Nyagatare	4.9	2.6	7.4	91
Gatsibo	5.2	0.0	5.2	140
Kayonza	4.6	0.0	4.6	97
Kirehe	6.4	3.3	9.8	90
Ngoma	8.3	3.0	11.3	80
Bugesera	6.7	4.9	11.6	114

Table D.28.1 Desire to limit childbearing: Women

Percentage of currently married women age 15-49 who want no more children, by number of living children, by district, Rwanda 2010

District	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Nyarugenge	7.0	6.1	39.0	60.6	83.7	91.6	86.5	44.8
Gasabo	0.0	9.7	38.6	69.1	81.6	90.0	90.6	50.8
Kicukiro	0.0	2.9	33.8	62.2	90.2	93.1	92.8	48.5
Nyanza	0.0	5.2	43.0	71.5	78.2	95.9	100.0	61.0
Gisagara	0.0	0.0	26.4	46.8	67.0	100.0	95.4	48.4
Nyaruguru	0.0	2.5	8.2	37.6	64.5	75.7	90.9	45.3
Huye	0.0	0.0	20.2	54.1	78.5	93.4	94.7	55.0
Nyamagabe	0.0	3.5	25.3	63.9	93.2	78.2	95.3	57.8
Ruhango	0.0	0.0	36.2	74.2	84.9	100.0	95.8	61.3
Muhanga	0.0	2.8	45.0	77.8	93.4	100.0	94.4	57.9
Kamonyi	0.0	3.7	33.3	74.9	91.3	92.7	100.0	57.0
Karongi	0.0	2.4	19.4	71.5	86.8	97.0	97.6	58.1
Rutsiro	0.0	4.1	30.4	67.8	74.0	78.3	91.3	59.8
Rubavu	0.0	2.0	13.3	37.6	60.5	76.4	90.9	45.2
Nyabihu	0.0	2.2	18.6	35.5	71.2	83.9	97.2	46.0
Ngororero	0.0	7.3	25.7	60.2	61.9	79.1	87.6	47.5
Rusizi	0.0	0.0	3.9	30.2	64.5	62.5	91.0	42.2
Nyamasheke	0.0	3.0	7.8	38.2	46.6	83.8	87.3	43.3
Rulindo	0.0	2.4	24.4	48.4	81.9	100.0	88.6	51.6
Gakenke	18.9	0.0	9.1	67.2	75.5	88.9	88.6	50.1
Musanze	0.0	5.6	31.4	51.9	76.0	82.7	93.2	49.1
Burera	0.0	0.0	17.8	31.7	77.9	81.5	77.2	44.9
Gicumbi	0.0	11.5	20.1	64.8	79.9	88.7	94.3	64.0
Rwamagana	0.0	0.0	52.5	81.0	80.1	100.0	100.0	63.9
Nyagatare	0.0	0.0	34.4	52.3	85.6	91.4	92.9	56.7
Gatsibo	0.0	2.9	27.4	56.0	85.1	86.9	97.8	58.4
Kayonza	0.0	13.8	34.7	62.9	71.9	88.7	93.7	60.1
Kirehe	0.0	4.5	14.2	55.4	84.1	96.2	97.7	54.9
Ngoma	11.7	0.0	32.6	53.8	82.9	96.2	96.8	53.3
Bugesera	0.0	3.0	20.8	60.6	80.8	89.8	93.5	51.5

Note: Women who have been sterilised are considered to want no more children.
[1] The number of living children includes the current pregnancy.

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Table D.28.2 Desire to limit childbearing: Men

Percentage of currently married men age 15-49 who want no more children, by number of living children, by district, Rwanda 2010

District	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Nyarugenge	0.0	3.8	21.2	73.7	100.0	100.0	94.1	51.1
Gasabo	0.0	12.7	58.1	58.3	93.1	93.3	91.5	56.0
Kicukiro	0.0	7.8	35.7	66.1	88.9	100.0	77.4	49.0
Nyanza	0.0	7.9	0.0	72.1	71.1	91.1	92.9	55.3
Gisagara	0.0	20.6	37.1	67.2	77.9	84.5	100.0	65.4
Nyaruguru	0.0	0.0	32.6	73.3	67.1	100.0	86.4	55.1
Huye	na	0.0	32.8	52.9	83.9	85.7	93.4	58.6
Nyamagabe	0.0	9.1	28.1	87.9	82.8	100.0	96.8	67.7
Ruhango	0.0	7.5	33.5	91.3	83.6	100.0	93.5	67.9
Muhanga	0.0	0.0	11.8	48.1	100.0	100.0	100.0	53.9
Kamonyi	0.0	0.0	12.2	54.6	95.2	100.0	87.9	56.6
Karongi	0.0	6.4	32.9	80.6	90.5	100.0	100.0	66.0
Rutsiro	0.0	9.8	44.6	71.2	72.9	84.2	93.7	72.2
Rubavu	0.0	0.0	27.6	49.0	85.3	80.0	89.6	56.7
Nyabihu	0.0	11.1	45.5	70.5	70.6	92.7	77.2	61.6
Ngororero	0.0	10.5	31.2	69.8	59.2	80.6	100.0	55.7
Rusizi	0.0	0.0	10.7	24.8	68.4	81.9	90.5	54.0
Nyamasheke	0.0	8.1	27.7	50.0	74.2	86.7	69.2	51.3
Rulindo	na	0.0	31.4	63.8	77.1	90.6	100.0	61.0
Gakenke	0.0	11.7	46.9	68.2	84.1	100.0	100.0	63.5
Musanze	0.0	10.8	53.4	51.8	84.1	90.9	91.9	64.7
Burera	0.0	0.0	20.5	53.4	90.5	100.0	97.2	66.0
Gicumbi	0.0	9.3	31.5	57.7	86.1	100.0	100.0	69.7
Rwamagana	0.0	8.9	31.8	67.5	100.0	100.0	100.0	65.2
Nyagatare	0.0	4.8	28.9	67.6	81.5	100.0	90.8	61.7
Gatsibo	na	0.0	41.9	90.1	82.6	73.4	96.2	66.7
Kayonza	20.6	0.0	35.4	36.1	88.0	70.2	92.0	56.3
Kirehe	0.0	5.0	32.8	78.3	94.3	100.0	100.0	62.5
Ngoma	0.0	11.7	34.7	73.8	89.0	90.2	95.3	62.0
Bugesera	0.0	3.6	35.7	68.0	100.0	87.6	92.6	59.3

Note: Men who have been sterilised or who state in response to the question about desire for children that their wife has been sterilised are considered to want no more children.
[1] The number of living children includes one additional child if respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

Table D.29 Mean ideal number of children

Mean ideal number of children for all women age 15-49, by district, Rwanda 2010

District	Mean	Number of women[1]
Nyarugenge	3.2	396
Gasabo	2.9	724
Kicukiro	3.1	467
Nyanza	3.3	350
Gisagara	3.4	407
Nyaruguru	3.8	357
Huye	3.6	417
Nyamagabe	3.0	442
Ruhango	3.1	395
Muhanga	2.8	354
Kamonyi	2.8	432
Karongi	3.1	421
Rutsiro	3.1	436
Rubavu	3.7	480
Nyabihu	3.5	411
Ngororero	3.3	521
Rusizi	3.8	488
Nyamasheke	3.7	515
Rulindo	2.8	402
Gakenke	3.1	488
Musanze	3.1	496
Burera	4.0	403
Gicumbi	3.1	472
Rwamagana	2.9	423
Nyagatare	3.9	535
Gatsibo	3.2	566
Kayonza	3.3	400
Kirehe	3.5	426
Ngoma	3.6	422
Bugesera	3.2	476

[1] Number of women who gave a numeric response

Table D.30 Wanted fertility rates

Total wanted fertility rates and total fertility rates for the three years preceding the survey, by district, Rwanda 2010

District	Total wanted fertility rates	Total fertility rate
Nyarugenge	2.3	2.9
Gasabo	2.6	3.8
Kicukiro	2.6	3.4
Nyanza	3.4	4.8
Gisagara	3.5	4.8
Nyaruguru	3.8	5.4
Huye	3.6	4.7
Nyamagabe	3.3	5.1
Ruhango	2.7	4.1
Muhanga	2.8	3.8
Kamonyi	3.0	4.1
Karongi	3.3	4.6
Rutsiro	3.5	5.2
Rubavu	3.6	5.3
Nyabihu	3.3	4.9
Ngororero	3.2	4.6
Rusizi	3.5	5.1
Nyamasheke	3.5	5.0
Rulindo	2.5	3.3
Gakenke	2.9	4.7
Musanze	2.8	4.6
Burera	2.7	3.6
Gicumbi	2.4	4.1
Rwamagana	3.3	4.6
Nyagatare	3.9	5.1
Gatsibo	3.0	4.9
Kayonza	3.4	5.1
Kirehe	3.1	4.7
Ngoma	3.8	5.0
Bugesera	3.2	5.0

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 5.2.

Table D.31 Knowledge of contraceptive methods

Percentage of currently married women and currently married men age 15-49 who have heard of at least one contraceptive method and who have heard of at least one modern method, by district, Rwanda 2010

	Women			Men		
District	Heard of any method	Heard of any modern method[1]	Number	Heard of any method	Heard of any modern method[1]	Number
Nyarugenge	100.0	100.0	178.7	100.0	100.0	89
Gasabo	100.0	100.0	336.8	100.0	100.0	167
Kicukiro	100.0	100.0	210.6	100.0	100.0	98
Nyanza	100.0	100.0	177.5	100.0	100.0	81
Gisagara	100.0	100.0	200.6	100.0	100.0	112
Nyaruguru	100.0	100.0	198.8	100.0	100.0	92
Huye	100.0	100.0	218.5	100.0	100.0	91
Nyamagabe	100.0	99.6	218.3	100.0	100.0	105
Ruhango	100.0	100.0	193.6	100.0	100.0	74
Muhanga	100.0	100.0	182.2	100.0	100.0	81
Kamonyi	100.0	100.0	224.9	100.0	100.0	111
Karongi	100.0	100.0	231.2	100.0	100.0	103
Rutsiro	100.0	100.0	231.9	98.4	98.4	112
Rubavu	100.0	100.0	239.4	100.0	100.0	114
Nyabihu	100.0	100.0	217.4	100.0	100.0	95
Ngororero	100.0	100.0	270.0	100.0	99.1	119
Rusizi	100.0	100.0	241.1	100.0	100.0	131
Nyamasheke	100.0	100.0	243.6	100.0	100.0	115
Rulindo	100.0	100.0	182.4	100.0	100.0	90
Gakenke	100.0	100.0	248.3	100.0	100.0	114
Musanze	100.0	100.0	245.4	100.0	100.0	110
Burera	100.0	100.0	218.4	99.0	99.0	103
Gicumbi	100.0	100.0	256.9	100.0	100.0	124
Rwamagana	100.0	100.0	199.0	100.0	100.0	94
Nyagatare	99.4	99.4	334.3	100.0	100.0	166
Gatsibo	99.6	99.6	286.7	100.0	100.0	138
Kayonza	100.0	100.0	197.0	100.0	100.0	96
Kirehe	100.0	100.0	235.8	100.0	100.0	105
Ngoma	98.9	98.5	228.5	100.0	100.0	123
Bugesera	100.0	100.0	249.2	100.0	100.0	134

[1] Female sterilisation, male sterilisation, pill, IUD, injectables, implants, male condom, female condom, diaphragm, foam or jelly, lactational amenorrhoea method (LAM), and emergency contraception

Table D.32 Current use of contraception

Percent distribution of currently married women age 15-49 by contraceptive method currently used, by district, Rwanda 2010

			Modern method											Traditional method					
District	Any method	Any modern method	Female sterilization	Male sterilization	Pill	IUD	Injectables	Implants	Male condom	Diaprhagm	LAM	Standard Days Method	Any traditional method	Rhythm	Withdrawal	Other	Not currently using	Total	Number of women
Nyarugenge	54.3	52.3	1.5	0.0	9.7	3.6	24.4	6.4	5.6	0.0	0.0	1.2	2.0	0.3	1.6	0.0	45.7	100.0	179
Gasabo	51.5	45.2	3.1	0.0	8.2	1.9	20.7	4.8	4.7	0.0	0.0	1.7	6.3	2.7	3.0	0.6	48.5	100.0	337
Kicukiro	56.5	47.3	1.5	0.0	6.9	2.7	18.4	7.4	5.1	0.0	0.3	5.1	9.2	4.9	4.3	0.0	43.5	100.0	211
Nyanza	53.7	48.1	0.0	0.0	8.4	0.6	27.5	8.2	2.2	0.0	0.5	0.6	5.6	0.4	5.1	0.0	46.3	100.0	177
Gisagara	51.4	43.7	0.5	0.0	3.5	0.0	25.0	7.1	3.5	0.0	3.7	0.5	7.6	4.1	3.6	0.0	48.6	100.0	201
Nyaruguru	49.6	42.0	0.8	0.0	5.2	0.0	28.1	6.1	1.8	0.0	0.0	0.0	7.7	2.5	4.7	0.5	50.4	100.0	199
Huye	43.5	41.1	1.0	0.0	7.0	0.6	23.0	6.6	2.5	0.0	0.0	0.4	2.4	0.9	1.5	0.0	56.5	100.0	218
Nyamagabe	46.9	39.4	0.0	0.0	6.3	0.0	24.4	6.4	1.0	0.0	0.0	1.4	7.5	4.3	3.3	0.0	53.1	100.0	218
Ruhango	54.8	52.3	1.3	0.0	13.0	0.4	25.0	9.2	2.0	0.0	0.0	1.4	2.6	1.0	1.6	0.0	45.2	100.0	194
Muhanga	76.6	62.0	0.7	0.0	8.4	0.6	32.9	14.5	3.2	0.0	0.9	0.8	14.6	5.5	9.1	0.0	23.4	100.0	182
Kamonyi	67.6	59.5	0.4	0.0	8.3	1.3	35.5	9.5	4.1	0.0	0.0	0.4	8.1	0.9	7.2	0.0	32.4	100.0	225
Karongi	47.2	40.4	1.4	0.0	9.8	0.5	18.5	7.6	2.2	0.0	0.0	0.4	6.8	2.5	4.3	0.0	52.8	100.0	231
Rutsiro	50.7	41.4	1.1	0.0	3.2	0.0	25.4	6.9	3.9	0.0	0.0	1.0	9.3	3.3	5.9	0.0	49.3	100.0	232
Rubavu	29.6	29.2	0.4	0.0	0.4	0.5	21.5	5.3	0.6	0.0	0.0	0.5	0.4	0.4	0.0	0.0	70.4	100.0	239
Nyabihu	51.5	41.3	0.5	0.4	4.3	0.0	23.8	11.6	0.8	0.0	0.0	0.0	10.1	5.4	4.8	0.0	48.5	100.0	217
Ngororero	54.7	44.6	0.4	0.0	10.6	0.0	19.4	3.7	2.7	0.0	7.3	0.4	10.0	5.9	3.8	0.4	45.3	100.0	270
Rusizi	31.0	23.4	0.9	0.0	4.6	0.5	11.8	0.4	4.7	0.0	0.0	0.5	7.7	4.1	3.6	0.0	69.0	100.0	241
Nyamasheke	34.4	27.9	3.4	0.0	1.7	0.0	15.3	3.8	2.9	0.0	0.4	0.4	6.5	3.9	2.6	0.0	65.6	100.0	244
Rulindo	53.1	49.4	0.0	0.5	9.2	0.0	34.9	3.0	1.8	0.0	0.0	0.0	3.7	1.3	2.4	0.0	46.9	100.0	182
Gakenke	61.1	55.9	0.0	0.0	11.5	0.0	36.7	4.5	2.7	0.0	0.0	0.5	5.2	4.2	0.9	0.0	38.9	100.0	248
Musanze	54.6	50.6	0.4	0.0	3.7	0.0	40.6	4.1	1.8	0.0	0.0	0.0	4.0	3.1	0.9	0.0	45.4	100.0	245
Burera	48.6	45.1	0.0	0.0	4.2	0.5	36.0	2.5	1.9	0.0	0.0	0.0	3.5	1.3	2.2	0.0	51.4	100.0	218
Gicumbi	64.9	57.5	0.9	0.5	11.0	0.4	31.7	7.6	4.3	0.0	0.0	1.0	7.4	4.4	3.0	0.0	35.1	100.0	257
Rwamagana	55.8	50.1	2.0	0.0	7.1	0.4	28.6	7.7	3.4	0.0	0.4	0.5	5.7	3.4	2.3	0.0	44.2	100.0	199
Nyagatare	49.8	43.2	0.3	0.0	7.2	0.0	24.8	8.9	2.0	0.0	0.0	0.0	6.6	2.4	4.1	0.0	50.2	100.0	334
Gatsibo	53.5	49.7	0.4	0.0	9.1	0.0	28.6	7.8	3.3	0.0	0.0	0.4	3.8	1.3	2.5	0.0	46.5	100.0	287
Kayonza	53.9	48.1	0.8	0.0	7.6	0.0	30.8	4.4	4.6	0.0	0.0	0.0	5.7	2.8	2.9	0.0	46.1	100.0	197
Kirehe	51.6	42.8	0.0	0.0	2.7	0.0	32.5	4.9	2.4	0.4	0.0	0.0	8.7	4.3	4.4	0.0	48.4	100.0	236
Ngoma	53.7	45.8	0.5	0.0	6.5	0.0	26.9	9.4	2.6	0.0	0.0	0.0	7.8	2.4	5.4	0.0	46.3	100.0	228
Bugesera	49.8	43.1	0.0	0.0	14.2	0.4	22.4	2.0	2.9	0.0	0.8	0.3	6.7	2.5	4.3	0.0	50.2	100.0	249

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

Table D.33 Need and demand for family planning among currently married women

Percentage of currently married women age 15-49 with unmet need for family planning, percentage with met need for family planning, the total demand for family planning, and the percentage of the demand for contraception that is satisfied, by district, Rwanda 2010

	Unmet need for family planning[1]			Met need for family planning (currently using)[2]			Total demand for family planning					
District	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total	Percentage of demand satisfied	Percentage of demand satisfied by modern methods	Number of women
Nyarugenge	8.7	5.7	14.4	28.6	25.6	54.3	39.0	32.4	71.4	79.9	73.2	179
Gasabo	8.0	8.8	16.8	24.2	27.2	51.5	33.9	36.9	70.7	76.3	63.9	337
Kicukiro	5.7	7.0	12.7	25.7	30.8	56.5	32.9	38.1	70.9	82.1	66.6	211
Nyanza	8.4	11.9	20.3	18.4	35.3	53.7	26.8	47.7	74.4	72.7	64.6	177
Gisagara	8.4	6.9	15.3	24.4	27.0	51.4	34.9	34.9	69.8	78.1	62.7	201
Nyaruguru	10.8	6.6	17.4	23.5	26.2	49.6	35.7	32.8	68.5	74.5	61.3	199
Huye	7.8	10.0	17.8	19.1	24.3	43.5	30.2	34.3	64.5	72.3	63.7	218
Nyamagabe	12.5	10.5	23.0	18.0	28.9	46.9	30.9	40.3	71.2	67.7	55.3	218
Ruhango	6.3	10.5	16.8	18.9	35.9	54.8	26.8	48.2	75.1	77.7	69.6	194
Muhanga	1.8	4.8	6.6	32.1	44.6	76.6	35.6	51.0	86.6	92.4	71.6	182
Kamonyi	4.0	7.3	11.3	29.5	38.1	67.6	35.0	46.7	81.6	86.2	72.9	225
Karongi	13.4	4.7	18.2	17.5	29.7	47.2	32.0	34.9	66.8	72.8	60.5	231
Rutsiro	8.8	12.1	20.9	18.6	32.1	50.7	27.4	44.6	72.0	71.0	57.6	232
Rubavu	18.3	13.4	31.8	16.8	12.8	29.6	35.7	26.7	62.3	49.1	46.9	239
Nyabihu	14.6	9.3	23.8	28.0	23.4	51.5	44.0	33.6	77.6	69.3	53.3	217
Ngororero	9.0	8.0	17.0	28.2	26.4	54.7	39.7	34.4	74.1	77.1	60.2	270
Rusizi	19.6	10.9	30.5	14.8	16.2	31.0	36.3	28.4	64.7	52.9	36.1	241
Nyamasheke	19.0	13.9	32.9	17.1	17.2	34.4	37.0	31.1	68.2	51.8	40.9	244
Rulindo	6.9	11.3	18.2	25.5	27.6	53.1	32.4	39.3	71.8	74.6	68.8	182
Gakenke	8.0	6.4	14.3	29.0	32.0	61.1	39.2	39.3	78.5	81.7	71.3	248
Musanze	9.3	4.9	14.2	27.4	27.1	54.6	37.2	32.8	70.0	79.8	72.2	245
Burera	9.8	6.9	16.7	22.5	26.1	48.6	32.8	33.5	66.3	74.7	68.1	218
Gicumbi	5.1	10.4	15.5	21.4	43.5	64.9	27.8	53.9	81.7	81.0	70.4	257
Rwamagana	8.7	8.4	17.0	21.4	34.3	55.8	31.0	44.2	75.1	77.3	66.6	199
Nyagatare	11.7	11.5	23.2	20.0	29.9	49.8	32.4	41.4	73.7	68.6	58.6	334
Gatsibo	7.3	10.8	18.1	21.0	32.5	53.5	28.3	43.8	72.1	74.9	69.0	287
Kayonza	10.6	9.4	19.9	19.8	34.0	53.9	31.3	43.4	74.7	73.3	64.5	197
Kirehe	11.1	15.6	26.7	27.4	24.2	51.6	39.7	40.2	80.0	66.7	53.6	236
Ngoma	6.0	8.2	14.1	20.4	33.2	53.7	28.8	41.4	70.2	79.9	65.3	228
Bugesera	8.1	8.5	16.6	23.1	26.7	49.8	33.8	35.7	69.5	76.1	62.0	249

[1] Unmet need for spacing: Includes women who are fecund and not using family planning and who say they want to wait two or more years for their next birth, or who say they are unsure whether they want another child, or who want another child but are unsure when to have the child. In addition, unmet need for spacing includes pregnant women whose current pregnancy was mistimed, or whose last pregnancy was unwanted but who now say they want more children. Unmet need for spacing also includes amenorrhoeic women whose last birth was mistimed, or whose last birth was unwanted but who now say they want more children.
Unmet need for limiting: Includes women who are fecund and not using family planning and who say they do not want another child. In addition, unmet need for limiting includes pregnant women whose current pregnancy was unwanted but who now say they do not want more children or who are undecided whether they want another child. Unmet need for limiting also includes amenorrhoeic women whose last birth was unwanted but who now say they do not want more children or who are undecided whether they want another child.
[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.

Table D.34 Exposure to family planning messages

Percentage of women and men age 15-49 who heard or saw a family planning message on radio, television or in a newspaper in the past few months, by district, Rwanda 2010

	Women					Men				
District	Radio	Television	Newspaper/ magazine	None of these three media sources	Number of women	Radio	Television	Newspaper/ magazine	None of these three media sources	Number of men
Nyarugenge	67.3	19.9	9.2	31.1	399	86.9	40.3	22.7	12.1	200
Gasabo	74.7	30.6	9.1	20.8	728	83.1	34.8	20.4	12.5	362
Kicukiro	58.5	25.8	10.0	37.7	469	90.5	49.3	22.1	7.8	227
Nyanza	68.4	4.5	4.5	31.1	356	83.9	5.8	8.9	16.1	168
Gisagara	78.7	1.4	2.0	20.8	444	88.1	5.8	12.9	11.4	213
Nyaruguru	66.1	3.5	3.1	33.6	361	82.3	8.4	8.5	16.4	169
Huye	67.6	2.6	2.4	31.6	421	88.1	15.2	18.2	10.3	182
Nyamagabe	47.3	0.9	3.5	52.7	442	87.5	3.8	3.5	12.5	200
Ruhango	59.1	2.2	2.4	40.7	397	86.1	1.9	1.9	13.9	178
Muhanga	68.4	2.7	1.9	31.5	354	91.4	14.2	10.4	7.9	145
Kamonyi	51.3	1.1	2.8	48.4	438	93.9	12.6	15.8	6.1	189
Karongi	53.5	1.2	1.4	46.5	422	67.4	6.5	2.8	32.6	193
Rutsiro	64.7	0.9	2.6	35.3	437	73.8	5.8	1.3	26.2	214
Rubavu	64.0	8.2	2.7	36.0	481	87.4	15.6	9.0	12.6	233
Nyabihu	63.7	2.0	8.5	35.4	415	85.8	5.5	12.3	13.6	169
Ngororero	63.2	1.7	4.5	36.4	521	81.4	2.0	4.9	18.6	185
Rusizi	52.3	6.7	5.1	47.5	491	82.2	10.2	11.5	16.6	288
Nyamasheke	63.4	2.3	2.8	36.4	538	82.8	7.2	13.0	17.2	205
Rulindo	64.6	0.9	3.3	35.4	404	85.3	3.6	6.8	14.7	178
Gakenke	71.8	3.5	10.1	27.2	495	84.2	7.3	12.7	15.2	205
Musanze	69.6	5.1	3.7	29.5	497	86.7	15.3	33.8	11.3	220
Burera	68.4	1.6	5.5	31.4	408	84.8	4.2	22.1	13.5	172
Gicumbi	62.5	1.0	1.4	37.5	474	83.9	3.7	13.1	15.6	239
Rwamagana	79.8	7.0	2.7	19.0	424	83.2	15.2	7.6	16.8	206
Nyagatare	61.1	0.2	1.8	38.9	536	75.1	4.0	5.0	24.9	274
Gatsibo	85.6	1.8	3.4	14.2	567	78.7	1.4	2.3	21.3	264
Kayonza	69.9	3.9	3.8	29.4	405	67.9	7.9	7.2	31.4	194
Kirehe	55.5	0.2	2.3	44.3	428	73.5	2.9	5.7	26.5	199
Ngoma	63.3	1.7	4.5	36.7	427	86.6	12.1	14.7	12.8	218
Bugesera	82.4	2.7	2.5	17.6	493	96.3	20.3	19.8	3.1	239

Table D.35 Contact of nonusers with family planning providers

Among women age 15-49 who are not using contraception, the percentage who during the last 12 months were visited by a fieldworker who discussed family planning, the percentage who visited a health facility and discussed family planning, the percentage who visited a health facility but did not discuss family planning, and the percentage who neither discussed family planning with a fieldworker nor at a health facility, by district, Rwanda 2010

District	Percentage of women who were visited by fieldworker who discussed family planning	Percentage of women who visited a health facility in the past 12 months and who:		Percentage of women who neither discussed family planning with fieldworker nor at a health facility	Number of women
		Discussed family planning	Did not discuss family planning		
Nyarugenge	3.1	17.8	18.4	81.2	292
Gasabo	6.8	14.2	41.4	81.7	542
Kicukiro	7.0	10.4	50.0	84.3	338
Nyanza	19.6	23.8	19.5	66.9	251
Gisagara	11.5	15.4	34.4	77.0	320
Nyaruguru	19.7	16.7	34.6	70.8	251
Huye	12.8	20.7	43.5	72.1	308
Nyamagabe	14.7	12.1	25.5	78.3	334
Ruhango	10.9	28.8	22.0	69.1	284
Muhanga	11.3	18.6	28.0	77.6	185
Kamonyi	7.4	21.6	32.9	75.0	276
Karongi	13.7	18.2	26.5	74.2	300
Rutsiro	19.0	27.9	33.7	67.7	312
Rubavu	12.6	18.6	36.4	75.8	400
Nyabihu	22.7	31.9	16.7	57.4	293
Ngororero	8.9	17.5	13.8	78.2	361
Rusizi	12.1	17.7	32.9	76.4	410
Nyamasheke	16.6	34.5	24.0	60.2	445
Rulindo	27.9	20.2	24.3	61.1	299
Gakenke	27.5	21.9	33.9	64.3	334
Musanze	17.1	17.8	30.5	74.2	358
Burera	17.9	18.5	36.4	71.3	295
Gicumbi	18.7	12.8	19.6	72.7	286
Rwamagana	14.0	27.2	15.1	68.7	296
Nyagatare	16.5	28.1	27.2	66.0	355
Gatsibo	19.7	15.9	11.6	76.9	403
Kayonza	18.6	12.9	23.6	77.2	286
Kirehe	13.9	22.8	31.1	71.9	302
Ngoma	11.4	25.6	27.3	70.0	289
Bugesera	16.6	21.8	36.7	69.3	355

Table D.36 Youth who could get a male condom

Among youth age 15-24, the percentage who could get a male condom, by district, Rwanda 2010

	Women		Men	
District	Yes	Number	Yes	Number
Nyarugenge	60.7	195	93.8	67
Gasabo	76.9	308	87.9	126
Kicukiro	66.3	211	94.7	93
Nyanza	59.7	135	93.8	70
Gisagara	53.4	163	72.5	82
Nyaruguru	46.9	157	66.7	76
Huye	59.9	145	84.6	78
Nyamagabe	38.8	195	86.6	81
Ruhango	66.2	155	97.2	76
Muhanga	60.5	131	83.4	53
Kamonyi	60.9	145	75.4	55
Karongi	53.5	154	67.8	83
Rutsiro	52.0	189	71.0	95
Rubavu	37.7	235	80.9	124
Nyabihu	52.9	175	75.6	70
Ngororero	36.1	221	73.4	65
Rusizi	41.9	204	77.1	124
Nyamasheke	50.9	249	85.9	84
Rulindo	83.2	175	88.2	77
Gakenke	71.4	209	87.7	85
Musanze	56.4	221	79.5	98
Burera	58.6	163	70.8	66
Gicumbi	67.8	170	88.4	114
Rwamagana	77.0	175	95.7	83
Nyagatare	60.8	195	87.9	115
Gatsibo	67.6	240	94.9	120
Kayonza	63.5	161	93.4	73
Kirehe	57.7	178	85.0	90
Ngoma	60.7	176	95.0	91
Bugesera	75.8	198	94.3	94

Table D.37 Early childhood mortality rates

Neonatal, post-neonatal, infant, child, and under-five mortality rates for the 10-year period preceding the survey, by district, Rwanda 2010

District	Neonatal mortality (NN)	Post-neonatal mortality (PNN)[1]	Infant mortality (1q0)	Child mortality (4q1)	Under-five mortality (5q0)
Nyarugenge	11	20	31	20	51
Gasabo	30	36	66	29	93
Kicukiro	14	42	56	24	79
Nyanza	35	30	65	31	94
Gisagara	27	43	70	67	133
Nyaruguru	46	29	74	33	105
Huye	39	34	73	36	106
Nyamagabe	34	20	54	36	88
Ruhango	21	18	39	27	65
Muhanga	33	15	48	35	81
Kamonyi	15	30	45	39	82
Karongi	19	31	50	19	68
Rutsiro	25	22	47	29	75
Rubavu	27	27	54	44	96
Nyabihu	40	39	79	53	128
Ngororero	26	18	45	36	79
Rusizi	28	31	59	27	84
Nyamasheke	21	39	60	30	88
Rulindo	36	25	60	36	94
Gakenke	42	25	67	31	96
Musanze	52	31	83	52	131
Burera	39	37	76	37	110
Gicumbi	26	43	68	38	104
Rwamagana	25	20	45	44	87
Nyagatare	19	28	47	80	123
Gatsibo	15	36	50	66	113
Kayonza	31	35	66	68	129
Kirehe	37	40	77	53	126
Ngoma	35	58	93	67	154
Bugesera	36	32	68	72	135

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

Table D.38 Antenatal care

Percent distribution of women age 15-49 who had a live birth in the five years preceding the survey by antenatal care (ANC) provider during pregnancy for the most recent birth and the percentage receiving antenatal care from a skilled provider for the most recent birth, by district, Rwanda 2010

	Antenatal care provider									
District	Doctor	Nurse/ medical assistant	Midwife	Traditional birth attendant	Other	No one	Missing	Total	Percentage receiving antenatal care from a skilled provider[1]	Number of women
Nyarugenge	4.8	94.2	0.0	0.0	0.0	0.9	0.0	100.0	99.1	151
Gasabo	7.4	91.7	0.0	0.0	0.0	0.9	0.0	100.0	99.1	302
Kicukiro	10.7	87.7	0.3	0.0	0.0	0.8	0.6	100.0	98.7	181
Nyanza	2.9	95.9	0.7	0.0	0.0	0.5	0.0	100.0	99.5	168
Gisagara	2.6	94.1	0.0	0.0	0.0	3.4	0.0	100.0	96.6	228
Nyaruguru	2.4	95.4	0.0	0.0	0.0	1.9	0.4	100.0	97.7	187
Huye	1.5	97.6	0.0	0.0	0.0	1.0	0.0	100.0	99.0	214
Nyamagabe	13.8	85.0	0.0	0.0	0.0	1.1	0.0	100.0	98.9	199
Ruhango	0.0	96.1	0.0	0.0	0.0	3.9	0.0	100.0	96.1	171
Muhanga	9.7	85.7	0.6	0.0	0.0	4.0	0.0	100.0	96.0	167
Kamonyi	2.6	94.7	0.0	0.0	0.0	2.7	0.0	100.0	97.3	198
Karongi	3.4	93.4	0.0	0.0	0.0	1.6	1.6	100.0	96.8	193
Rutsiro	0.0	98.9	0.0	0.0	0.0	1.1	0.0	100.0	98.9	218
Rubavu	0.5	96.7	0.0	0.0	0.0	2.8	0.0	100.0	97.2	228
Nyabihu	0.9	95.8	0.0	0.0	0.0	3.3	0.0	100.0	96.7	209
Ngororero	21.8	74.4	0.0	0.0	0.0	3.1	0.6	100.0	96.3	246
Rusizi	2.4	97.6	0.0	0.0	0.0	0.0	0.0	100.0	100.0	226
Nyamasheke	6.2	93.3	0.0	0.0	0.0	0.6	0.0	100.0	99.4	225
Rulindo	0.0	98.9	0.0	0.0	0.0	1.1	0.0	100.0	98.9	158
Gakenke	3.6	92.9	1.6	0.0	0.0	1.4	0.5	100.0	98.1	240
Musanze	0.5	96.5	0.0	0.0	0.0	2.5	0.5	100.0	97.1	221
Burera	0.5	97.3	0.0	0.0	0.0	2.3	0.0	100.0	97.7	182
Gicumbi	0.4	99.1	0.0	0.0	0.5	0.0	0.0	100.0	99.5	234
Rwamagana	0.4	98.0	0.0	0.0	0.0	1.1	0.5	100.0	98.4	192
Nyagatare	0.0	96.7	0.0	0.0	0.0	3.3	0.0	100.0	96.7	292
Gatsibo	0.0	98.8	0.0	0.0	0.0	1.2	0.0	100.0	98.8	281
Kayonza	14.8	83.0	0.0	0.0	0.0	2.2	0.0	100.0	97.8	176
Kirehe	3.5	94.9	0.0	0.0	0.0	1.6	0.0	100.0	98.4	223
Ngoma	1.1	97.2	0.4	0.0	0.0	1.3	0.0	100.0	98.7	231
Bugesera	0.5	96.3	0.6	0.4	0.0	2.3	0.0	100.0	97.4	263

Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation.
[1] Skilled provider includes doctor, nurse, medical assistance, and midwife.

Table D.39 Components of antenatal care

Among women age 15-49 with a live birth in the five years preceding the survey, the percentage who took iron tablets or syrup and drugs for intestinal parasites during the pregnancy of the most recent birth, and among women receiving antenatal care (ANC) for the most recent live birth in the five years preceding the survey, the percentage receiving specific antenatal services, by district, Rwanda 2010

	Among women with a live birth in the past five years, the percentage who during the pregnancy of their last birth:			Among women who received antenatal care for their most recent birth in the past five years, the percentage with selected services				
District	Took iron tablets or syrup	Took intestinal parasite drugs	Number of women with a live birth in the past five years	Informed of signs of pregnancy complications	Blood pressure measured	Urine sample taken	Blood sample taken	Number of women with ANC for their most recent birth
Nyarugenge	77.1	37.5	151	61.2	96.7	54.5	99.1	150
Gasabo	66.9	31.2	302	76.7	94.0	56.0	95.9	299
Kicukiro	76.1	33.0	181	78.2	95.4	71.1	94.1	180
Nyanza	80.9	34.9	168	76.6	92.6	20.0	95.4	167
Gisagara	66.6	30.5	228	72.0	92.0	24.1	82.6	221
Nyaruguru	78.9	23.8	187	71.2	78.3	32.3	90.3	183
Huye	81.2	36.9	214	71.0	90.6	37.5	86.2	212
Nyamagabe	72.0	38.4	199	78.3	93.8	31.7	92.4	197
Ruhango	82.8	22.0	171	82.3	92.0	32.6	92.4	165
Muhanga	68.7	30.2	167	89.4	92.3	47.8	95.7	160
Kamonyi	77.5	42.7	198	81.8	94.7	44.7	98.5	193
Karongi	76.3	43.8	193	82.0	97.3	58.8	94.6	190
Rutsiro	64.6	47.6	218	66.6	86.5	29.7	89.4	216
Rubavu	74.1	45.3	228	59.7	89.8	34.2	89.0	222
Nyabihu	76.0	37.1	209	67.0	61.9	21.1	86.0	202
Ngororero	48.6	21.7	246	54.4	51.9	19.7	74.1	238
Rusizi	84.0	47.0	226	51.5	85.7	38.2	95.0	226
Nyamasheke	82.4	56.0	225	75.5	90.9	36.4	94.2	223
Rulindo	81.6	50.3	158	78.9	86.3	26.8	92.3	156
Gakenke	78.5	40.7	240	79.0	92.3	28.9	74.4	236
Musanze	70.9	42.1	221	67.0	87.2	39.4	93.0	215
Burera	85.2	52.3	182	74.0	90.9	26.9	89.1	178
Gicumbi	75.3	42.1	234	73.6	89.2	37.4	89.9	234
Rwamagana	77.7	48.9	192	82.1	98.4	30.1	97.2	190
Nyagatare	67.1	51.0	292	74.3	76.9	4.6	88.1	282
Gatsibo	76.7	38.5	281	87.4	85.8	8.6	95.5	277
Kayonza	73.6	35.4	176	64.9	80.6	27.8	94.7	172
Kirehe	66.4	56.4	223	61.4	80.5	6.3	86.7	220
Ngoma	60.2	30.1	231	60.0	68.3	11.6	92.2	228
Bugesera	61.6	25.0	263	75.1	76.0	12.3	90.4	257

Table D.40 Tetanus toxoid injections

Among mothers age 15-49 with a live birth in the five years preceding the survey, the percentage receiving two or more tetanus toxoid injections (TTI) during the pregnancy for the last live birth and the percentage whose last live birth was protected against neonatal tetanus, by district, Rwanda 2010

District	Percentage receiving two or more injections during last pregnancy	Percentage whose last birth was protected against neonatal tetanus[1]	Number of mothers
Nyarugenge	53.2	86.2	151
Gasabo	35.0	68.9	302
Kicukiro	26.6	69.4	181
Nyanza	36.9	80.0	168
Gisagara	36.7	79.4	228
Nyaruguru	25.8	69.8	187
Huye	36.1	78.3	214
Nyamagabe	27.5	70.0	199
Ruhango	40.0	88.0	171
Muhanga	59.9	85.2	167
Kamonyi	44.6	86.4	198
Karongi	35.3	72.4	193
Rutsiro	40.6	81.6	218
Rubavu	44.2	83.5	228
Nyabihu	36.4	68.5	209
Ngororero	32.9	64.0	246
Rusizi	25.4	78.9	226
Nyamasheke	31.9	83.0	225
Rulindo	32.1	89.4	158
Gakenke	27.7	68.7	240
Musanze	35.3	83.6	221
Burera	22.4	76.0	182
Gicumbi	29.2	88.1	234
Rwamagana	25.9	74.6	192
Nyagatare	41.9	87.2	292
Gatsibo	19.6	82.2	281
Kayonza	32.1	82.1	176
Kirehe	33.4	85.7	223
Ngoma	45.3	78.9	231
Bugesera	21.3	74.9	263

[1] Includes mothers with two injections during the pregnancy of her last birth, or two or more injections (the last within 3 years of the last live birth), or three or more injections (the last within 5 years of the last birth), or four or more injections (the last within ten years of the last live birth), or five or more injections prior to the last birth.

Table D.41 Place of delivery

Percent distribution of live births in the five years preceding the survey by place of delivery and percentage delivered in a health facility, by district, Rwanda 2010

District	Health facility		Home	Other	Missing	Total	Percentage delivered in a health facility	Number of births
	Public sector	Private sector						
Nyarugenge	80.3	7.4	11.3	1.1	0.0	100.0	87.6	208
Gasabo	73.3	5.9	19.4	1.3	0.0	100.0	79.2	424
Kicukiro	80.9	4.7	14.2	0.2	0.0	100.0	85.6	240
Nyanza	63.3	4.4	30.8	1.5	0.0	100.0	67.7	238
Gisagara	62.5	0.0	33.4	2.3	1.8	100.0	62.5	347
Nyaruguru	59.4	0.6	36.0	4.0	0.0	100.0	60.0	278
Huye	71.0	0.7	22.2	5.7	0.3	100.0	71.7	299
Nyamagabe	49.2	0.0	47.9	2.8	0.0	100.0	49.2	297
Ruhango	74.8	3.5	21.3	0.4	0.0	100.0	78.3	228
Muhanga	75.5	0.7	22.4	1.4	0.0	100.0	76.2	209
Kamonyi	73.9	0.0	25.8	0.3	0.0	100.0	73.9	273
Karongi	56.6	0.8	40.4	2.2	0.0	100.0	57.4	274
Rutsiro	70.3	0.0	28.9	0.8	0.0	100.0	70.3	320
Rubavu	64.7	0.0	32.1	3.1	0.0	100.0	64.7	335
Nyabihu	60.7	0.3	38.5	0.5	0.0	100.0	61.0	307
Ngororero	59.0	0.3	38.7	1.3	0.6	100.0	59.3	346
Rusizi	90.3	0.0	8.2	1.4	0.0	100.0	90.3	356
Nyamasheke	86.6	0.0	10.1	3.4	0.0	100.0	86.6	344
Rulindo	63.0	0.4	34.1	2.5	0.0	100.0	63.4	205
Gakenke	58.4	0.0	38.9	2.4	0.3	100.0	58.4	343
Musanze	64.0	0.4	32.2	2.4	1.1	100.0	64.3	313
Burera	63.5	1.2	33.0	1.9	0.4	100.0	64.7	267
Gicumbi	67.1	0.0	29.3	3.6	0.0	100.0	67.1	309
Rwamagana	82.8	1.1	14.5	1.6	0.0	100.0	83.9	278
Nyagatare	68.7	0.3	29.2	1.8	0.0	100.0	69.0	426
Gatsibo	63.0	0.9	35.8	0.3	0.0	100.0	63.9	396
Kayonza	68.4	0.0	29.8	1.8	0.0	100.0	68.4	260
Kirehe	58.0	0.0	40.2	1.6	0.3	100.0	58.0	308
Ngoma	65.9	0.0	30.7	3.1	0.3	100.0	65.9	325
Bugesera	65.7	0.4	33.9	0.0	0.0	100.0	66.1	383

Table D.42 Assistance during delivery

Percent distribution of live births in the five years preceding the survey by person providing assistance during delivery, percentage of birth assisted by a skilled provider and percentage delivered by caesarean-section, by district, Rwanda 2010

	Person providing assistance during delivery									Percentage delivered by a skilled provider[1]	Percentage delivered by C-section	Number of births
District	Doctor	Nurse/ medical assistant	Midwife	Other health worker	Traditional birth attendant	Relative/ other	No one	Don't know/ missing	Total			
Nyarugenge	24.9	61.4	0.6	0.4	0.4	7.9	3.4	1.0	100.0	86.9	19.3	208
Gasabo	16.5	62.9	0.2	1.3	1.6	8.6	8.2	0.6	100.0	79.7	16.0	424
Kicukiro	21.5	63.8	0.5	1.5	1.2	7.4	4.1	0.0	100.0	85.8	12.7	240
Nyanza	10.2	56.5	0.5	2.4	1.2	21.0	7.9	0.4	100.0	67.2	5.4	238
Gisagara	3.9	59.2	0.3	2.4	6.0	18.4	8.0	1.8	100.0	63.4	5.3	347
Nyaruguru	4.2	54.6	0.3	4.7	2.9	20.4	12.6	0.3	100.0	59.1	2.8	278
Huye	8.2	62.4	0.3	2.6	2.8	14.3	7.9	1.5	100.0	70.8	8.1	299
Nyamagabe	10.5	37.7	1.0	2.5	0.6	27.1	20.6	0.0	100.0	49.2	4.9	297
Ruhango	12.6	65.6	0.4	0.0	3.3	11.3	6.7	0.0	100.0	78.7	12.7	228
Muhanga	17.6	58.0	0.4	2.0	0.4	12.0	9.6	0.0	100.0	76.1	12.8	209
Kamonyi	10.8	62.6	0.0	1.0	4.5	16.3	4.3	0.4	100.0	73.4	7.2	273
Karongi	5.2	52.5	0.0	1.4	0.0	23.1	17.8	0.0	100.0	57.8	5.5	274
Rutsiro	6.9	63.0	0.0	0.8	0.8	17.1	11.4	0.0	100.0	69.9	8.7	320
Rubavu	3.6	61.5	0.0	2.6	2.7	19.0	10.6	0.0	100.0	65.1	3.6	335
Nyabihu	2.3	58.7	0.0	1.2	0.0	29.1	8.4	0.3	100.0	61.0	2.9	307
Ngororero	22.1	37.8	0.7	1.3	0.0	27.3	10.5	0.3	100.0	60.5	4.1	346
Rusizi	9.8	81.1	0.0	0.9	1.3	3.5	3.4	0.0	100.0	90.9	8.7	356
Nyamasheke	11.5	74.7	0.8	2.9	1.1	5.0	4.2	0.0	100.0	86.9	7.8	344
Rulindo	8.7	54.3	0.0	2.0	1.7	21.8	10.8	0.8	100.0	63.0	4.3	205
Gakenke	8.6	49.8	0.0	1.1	2.2	24.4	13.5	0.3	100.0	58.4	5.7	343
Musanze	4.1	60.6	0.6	0.3	0.0	17.4	16.1	0.8	100.0	65.3	3.6	313
Burera	5.5	58.8	0.8	2.6	0.7	27.7	3.6	0.4	100.0	65.1	4.6	267
Gicumbi	9.4	58.4	0.0	1.8	2.9	21.8	5.7	0.0	100.0	67.8	6.8	309
Rwamagana	9.4	74.3	0.7	2.4	1.3	7.5	4.4	0.0	100.0	84.3	11.5	278
Nyagatare	4.3	64.3	0.0	2.3	5.1	13.3	10.7	0.0	100.0	68.7	4.3	426
Gatsibo	7.7	56.2	0.0	1.8	3.0	10.9	20.5	0.0	100.0	63.9	5.7	396
Kayonza	23.8	45.4	0.0	5.2	4.9	10.8	10.0	0.0	100.0	69.2	6.0	260
Kirehe	5.2	52.4	0.4	4.5	6.1	13.9	17.3	0.3	100.0	58.0	3.2	308
Ngoma	11.9	54.3	1.1	5.5	9.1	7.9	10.2	0.0	100.0	67.3	8.5	325
Bugesera	5.9	58.2	0.3	2.0	3.1	19.8	9.8	0.8	100.0	64.4	5.9	383

Note: If the respondent mentioned more than one person attending during delivery, only the most qualified person is considered in this tabulation.
[1] Skilled provider includes doctor, nurse, medical assistance, and midwife.

Table D.43 Timing of first postnatal checkup

Among women age 15-49 giving birth in the two years preceding the survey, the percent distribution of the mother's first postnatal check-up for the last live birth by time after delivery, and the percentage of women with a live birth in the two years preceding the survey who received a postnatal checkup in the first two days after giving birth, by district, Rwanda 2010

	Time after delivery of mother's first postnatal checkup									
District	Less than 4 hours	4-23 hours	1-2 days	3-6 days	7-41 days	Don't know/ missing	No postnatal checkup[1]	Total	Percentage of women with a postnatal checkup in the first two days after birth	Number of women
Nyarugenge	15.7	8.1	3.5	1.6	2.5	0.0	68.7	100.0	27.2	75
Gasabo	7.6	1.9	3.1	0.0	0.9	3.9	82.6	100.0	12.6	140
Kicukiro	27.7	10.0	5.8	2.0	0.9	0.0	53.6	100.0	43.4	82
Nyanza	9.9	5.5	2.0	0.0	1.2	0.0	81.4	100.0	17.4	88
Gisagara	14.7	4.8	2.3	0.0	1.0	5.3	71.9	100.0	21.8	122
Nyaruguru	12.7	9.2	0.0	0.0	0.0	1.2	76.8	100.0	21.9	104
Huye	4.4	6.1	4.3	1.4	1.2	1.0	81.6	100.0	14.8	91
Nyamagabe	18.9	3.7	2.6	1.0	3.7	1.1	68.9	100.0	25.2	112
Ruhango	20.6	2.6	3.5	2.4	0.0	0.0	70.9	100.0	26.7	77
Muhanga	15.3	9.4	5.9	2.0	3.1	0.0	64.3	100.0	30.6	70
Kamonyi	21.2	7.4	5.7	0.0	1.2	0.0	64.7	100.0	34.2	93
Karongi	10.9	1.0	0.9	0.0	0.9	0.0	86.3	100.0	12.8	112
Rutsiro	6.6	4.2	1.9	0.9	0.8	0.0	85.6	100.0	12.8	112
Rubavu	2.9	0.0	1.8	1.1	0.0	0.0	94.2	100.0	4.7	137
Nyabihu	2.3	1.9	1.0	1.9	0.0	0.0	93.0	100.0	5.1	106
Ngororero	9.9	1.8	1.8	0.0	1.8	0.0	84.6	100.0	13.6	128
Rusizi	10.8	5.4	3.5	0.8	2.6	0.0	76.9	100.0	19.7	135
Nyamasheke	14.9	2.8	3.6	0.8	1.8	0.0	76.0	100.0	21.4	145
Rulindo	29.4	0.0	2.5	1.1	2.5	1.1	63.3	100.0	31.9	71
Gakenke	14.0	4.6	1.1	2.3	1.9	0.0	76.1	100.0	19.7	112
Musanze	7.4	0.9	0.9	0.0	1.1	0.0	89.7	100.0	9.1	116
Burera	10.0	1.3	5.8	2.7	0.0	0.0	80.3	100.0	17.0	81
Gicumbi	13.3	2.4	1.2	0.0	1.0	1.2	81.0	100.0	16.8	98
Rwamagana	6.6	0.0	1.0	0.0	0.0	0.0	92.4	100.0	7.6	94
Nyagatare	4.0	1.9	0.0	0.9	0.8	0.9	91.5	100.0	5.9	137
Gatsibo	3.8	0.0	3.3	0.9	0.0	0.0	91.9	100.0	7.1	141
Kayonza	11.2	4.0	4.4	0.0	0.0	0.0	80.5	100.0	19.5	95
Kirehe	4.9	0.0	1.9	0.0	2.0	0.0	91.3	100.0	6.8	98
Ngoma	19.1	3.7	3.6	2.8	1.0	0.0	69.9	100.0	26.3	119
Bugesera	15.3	2.6	5.1	0.8	2.1	0.0	74.1	100.0	23.0	117

[1] Includes women who received a checkup after 41 days

Table D.44 Type of provider of first postnatal checkup

Among women age 15-49 giving birth in the two years preceding the survey, the percent distribution by type of provider of the mother's first postnatal health check in the two days after the last live birth, by district, Rwanda 2010

District	Type of health provider of mother's first postnatal checkup			No postnatal checkup in the first two days after birth[1]	Total	Number of women
	Doctor/ nurse/ midwife	Auxiliary nurse/ midwife	community health worker			
Nyarugenge	27.2	0.0	0.0	72.8	100.0	75
Gasabo	12.6	0.0	0.0	87.4	100.0	140
Kicukiro	43.4	0.0	0.0	56.6	100.0	82
Nyanza	17.4	0.0	0.0	82.6	100.0	88
Gisagara	20.2	1.6	0.0	78.2	100.0	122
Nyaruguru	21.9	0.0	0.0	78.1	100.0	104
Huye	14.8	0.0	0.0	85.2	100.0	91
Nyamagabe	25.2	0.0	0.0	74.8	100.0	112
Ruhango	26.7	0.0	0.0	73.3	100.0	77
Muhanga	30.6	0.0	0.0	69.4	100.0	70
Kamonyi	34.2	0.0	0.0	65.8	100.0	93
Karongi	12.8	0.0	0.0	87.2	100.0	112
Rutsiro	12.8	0.0	0.0	87.2	100.0	112
Rubavu	4.7	0.0	0.0	95.3	100.0	137
Nyabihu	5.1	0.0	0.0	94.9	100.0	106
Ngororero	13.6	0.0	0.0	86.4	100.0	128
Rusizi	19.7	0.0	0.0	80.3	100.0	135
Nyamasheke	21.4	0.0	0.0	78.6	100.0	145
Rulindo	31.9	0.0	0.0	68.1	100.0	71
Gakenke	19.7	0.0	0.0	80.3	100.0	112
Musanze	9.1	0.0	0.0	90.9	100.0	116
Burera	15.8	1.3	0.0	83.0	100.0	81
Gicumbi	15.8	1.1	0.0	83.2	100.0	98
Rwamagana	7.6	0.0	0.0	92.4	100.0	94
Nyagatare	5.9	0.0	0.0	94.1	100.0	137
Gatsibo	7.1	0.0	0.0	92.9	100.0	141
Kayonza	19.5	0.0	0.0	80.5	100.0	95
Kirehe	6.8	0.0	0.0	93.2	100.0	98
Ngoma	25.5	0.0	0.8	73.7	100.0	119
Bugesera	21.1	1.8	0.0	77.0	100.0	117

[1] Includes women who received a checkup after 41 days

Table D.45 Timing of first postnatal checkup for the newborn

Percent distribution of last births in the two years preceding the survey by time after birth of first postnatal checkup, and the percentage of births with a postnatal checkup in the two days after birth, by district, Rwanda 2010

Background characteristic	Time after birth of newborn's first postnatal checkup								Percentage of births with a postnatal checkup in the first two days after birth	Number of births
	Less than 1 hour	1-3 hours	4-23 hours	1-2 days	3-6 days	Don't know/ missing	No postnatal checkup[1]	Total		
Nyarugenge	4.3	3.2	1.2	2.9	0.6	0.0	87.8	100.0	11.7	75
Gasabo	0.8	0.8	0.0	0.0	0.0	0.0	98.4	100.0	1.6	140
Kicukiro	5.4	4.3	2.5	4.0	0.9	0.0	82.8	100.0	16.2	82
Nyanza	0.0	2.3	3.2	0.0	0.0	0.0	94.5	100.0	5.5	88
Gisagara	0.0	0.9	1.7	0.0	0.0	1.6	95.8	100.0	2.6	122
Nyaruguru	0.9	0.8	0.8	0.0	0.0	0.0	97.5	100.0	2.5	104
Huye	1.0	2.0	2.4	0.0	1.4	0.0	93.2	100.0	5.5	91
Nyamagabe	0.0	2.9	0.0	0.0	0.0	0.0	97.1	100.0	2.9	112
Ruhango	5.1	2.2	0.0	0.0	0.0	0.0	92.7	100.0	7.3	77
Muhanga	5.6	3.7	1.1	4.3	1.4	0.0	83.9	100.0	14.7	70
Kamonyi	4.6	1.0	3.5	0.0	1.8	0.0	89.1	100.0	9.1	93
Karongi	0.0	0.9	0.0	0.8	0.0	0.0	98.4	100.0	1.6	112
Rutsiro	0.9	1.7	0.0	0.0	0.0	0.0	97.4	100.0	2.6	112
Rubavu	0.0	0.7	0.7	0.0	0.0	0.0	98.6	100.0	1.4	137
Nyabihu	1.1	0.0	0.0	0.0	0.0	0.0	98.9	100.0	1.1	106
Ngororero	0.0	1.7	0.0	1.7	0.0	0.0	96.6	100.0	3.4	128
Rusizi	0.0	2.5	0.0	1.6	0.0	0.0	95.9	100.0	4.1	135
Nyamasheke	1.9	1.6	0.0	0.6	0.0	0.0	95.9	100.0	4.1	145
Rulindo	17.3	9.6	0.0	0.0	1.1	1.1	70.7	100.0	27.0	71
Gakenke	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	112
Musanze	0.0	0.9	1.7	1.8	0.0	0.0	95.5	100.0	4.5	116
Burera	0.0	2.4	1.3	0.0	1.1	0.0	95.1	100.0	3.7	81
Gicumbi	2.2	1.1	0.0	2.2	0.0	0.0	94.5	100.0	5.5	98
Rwamagana	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	94
Nyagatare	0.0	0.6	0.0	1.4	0.0	0.0	98.0	100.0	2.0	137
Gatsibo	0.9	0.0	0.0	0.0	0.0	0.0	99.1	100.0	0.9	141
Kayonza	2.0	2.2	2.9	0.0	0.0	0.0	92.9	100.0	7.1	95
Kirehe	0.9	0.9	0.0	0.0	0.0	0.0	98.1	100.0	1.9	98
Ngoma	1.8	2.7	0.0	2.4	0.0	0.0	93.1	100.0	6.9	119
Bugesera	1.6	3.9	0.0	0.0	1.1	1.1	92.4	100.0	5.4	117

[1] Includes newborns who received a checkup after the first week days

Table D.46 Type of provider of first postnatal checkup for the newborn

Percent distribution of last births in the two years preceding the survey by type of provider of the newborn's first postnatal health check during the two days after the last live birth, by district, Rwanda 2010

District	Type of health provider of newborn's first postnatal checkup			No postnatal checkup in the first two days after birth	Total	Number of births
	Doctor/ nurse/ midwife	Auxiliary nurse/ midwife	Community health worker			
Nyarugenge	11.7	0.0	0.0	88.3	100.0	75
Gasabo	1.6	0.0	0.0	98.4	100.0	140
Kicukiro	16.2	0.0	0.0	83.8	100.0	82
Nyanza	5.5	0.0	0.0	94.5	100.0	88
Gisagara	1.7	0.9	0.0	97.4	100.0	122
Nyaruguru	2.5	0.0	0.0	97.5	100.0	104
Huye	5.5	0.0	0.0	94.5	100.0	91
Nyamagabe	2.9	0.0	0.0	97.1	100.0	112
Ruhango	7.3	0.0	0.0	92.7	100.0	77
Muhanga	14.7	0.0	0.0	85.3	100.0	70
Kamonyi	9.1	0.0	0.0	90.9	100.0	93
Karongi	1.6	0.0	0.0	98.4	100.0	112
Rutsiro	2.6	0.0	0.0	97.4	100.0	112
Rubavu	1.4	0.0	0.0	98.6	100.0	137
Nyabihu	1.1	0.0	0.0	98.9	100.0	106
Ngororero	3.4	0.0	0.0	96.6	100.0	128
Rusizi	4.1	0.0	0.0	95.9	100.0	135
Nyamasheke	4.1	0.0	0.0	95.9	100.0	145
Rulindo	27.0	0.0	0.0	73.0	100.0	71
Gakenke	0.0	0.0	0.0	100.0	100.0	112
Musanze	4.5	0.0	0.0	95.5	100.0	116
Burera	3.7	0.0	0.0	96.3	100.0	81
Gicumbi	5.5	0.0	0.0	94.5	100.0	98
Rwamagana	0.0	0.0	0.0	100.0	100.0	94
Nyagatare	2.0	0.0	0.0	98.0	100.0	137
Gatsibo	0.9	0.0	0.0	99.1	100.0	141
Kayonza	6.3	0.0	0.8	92.9	100.0	95
Kirehe	1.9	0.0	0.0	98.1	100.0	98
Ngoma	6.1	0.0	0.8	93.1	100.0	119
Bugesera	4.3	1.1	0.0	94.6	100.0	117

Table D.47 Problems in accessing health care

Percentage of women age 15-49 who reported that they have serious problems in accessing health care for themselves when they are sick, by type of problem, by district, Rwanda 2010

	Problems in accessing health care					
District	Getting permission to go for treatment	Getting money for treatment	Distance to health facility	Not wanting to go alone	At least one problem accessing health care	Number of women
Nyarugenge	3.4	29.2	7.5	6.8	33.8	399
Gasabo	4.4	37.7	17.2	11.9	45.3	728
Kicukiro	5.2	48.7	18.8	13.5	55.2	469
Nyanza	2.9	49.0	21.1	6.5	60.0	356
Gisagara	4.5	76.2	43.4	37.8	87.9	444
Nyaruguru	5.5	65.1	26.3	14.9	74.4	361
Huye	2.4	62.1	17.3	11.2	69.1	421
Nyamagabe	4.3	71.4	35.2	28.6	80.6	442
Ruhango	0.9	65.0	22.1	6.7	72.3	397
Muhanga	3.7	56.0	26.4	24.5	64.3	354
Kamonyi	2.0	66.0	49.5	21.4	78.5	438
Karongi	1.2	41.5	24.0	19.2	49.0	422
Rutsiro	2.0	37.4	17.2	11.2	43.3	437
Rubavu	0.0	68.4	27.4	4.4	70.9	481
Nyabihu	0.0	44.7	22.4	16.8	57.0	415
Ngororero	0.4	40.1	17.5	11.3	52.0	521
Rusizi	2.3	62.1	10.8	6.8	64.3	491
Nyamasheke	2.9	56.1	25.8	20.3	63.1	538
Rulindo	0.4	55.7	23.7	22.6	61.9	404
Gakenke	4.6	46.3	21.4	19.0	55.5	495
Musanze	3.4	41.3	17.4	8.3	46.5	497
Burera	4.8	37.8	21.8	25.3	53.0	408
Gicumbi	3.1	50.0	23.6	28.5	59.7	474
Rwamagana	0.5	44.5	7.2	6.2	45.1	424
Nyagatare	0.0	47.6	27.8	9.6	55.6	536
Gatsibo	1.7	64.7	45.1	13.2	78.9	567
Kayonza	2.5	46.2	38.0	17.8	62.5	405
Kirehe	1.6	47.5	32.8	12.6	56.8	428
Ngoma	4.7	57.3	41.3	28.3	67.9	427
Bugesera	1.8	79.5	53.0	50.0	83.9	493

Table D.48 Child's weight and size at birth

Percentage of live births in the five years preceding the survey with a reported birth weight; among live births in the five years preceding the survey with a reported birth weight, percent distribution by birth weight; percent distribution of all live births in the five years preceding the survey by mother's estimate of baby's size at birth, by district, Rwanda 2010

District	Percentage of all births with a reported birth weight[1]	Percent distribution of births with a reported birth weight[1]				Percent distribution of all live births by size of child at birth					
		Less than 2.5 kg	2.5 kg or more	Total	Number of births	Very small	Smaller than average	Average or larger	Don't know/ missing	Total	Number of births
Nyarugenge	88.3	7.5	92.5	100.0	183	1.5	17.2	81.3	0.0	100.0	208
Gasabo	77.5	6.4	93.6	100.0	329	2.5	14.9	82.6	0.0	100.0	424
Kicukiro	83.2	5.8	94.2	100.0	200	1.3	12.4	86.0	0.2	100.0	240
Nyanza	68.0	4.4	95.6	100.0	161	2.9	9.1	88.0	0.0	100.0	238
Gisagara	65.6	9.7	90.3	100.0	228	1.8	16.4	78.8	3.0	100.0	347
Nyaruguru	59.1	4.6	95.4	100.0	165	1.4	13.0	84.6	1.1	100.0	278
Huye	64.1	6.4	93.6	100.0	192	3.6	15.1	79.9	1.3	100.0	299
Nyamagabe	52.6	8.5	91.5	100.0	156	1.7	16.6	81.7	0.0	100.0	297
Ruhango	77.6	9.0	91.0	100.0	177	1.6	12.0	86.0	0.4	100.0	228
Muhanga	78.4	4.9	95.1	100.0	163	1.2	17.5	81.3	0.0	100.0	209
Kamonyi	72.7	10.7	89.3	100.0	199	1.8	24.0	74.2	0.0	100.0	273
Karongi	57.1	6.6	93.4	100.0	157	1.8	19.2	78.6	0.3	100.0	274
Rutsiro	63.2	3.1	96.9	100.0	202	2.3	12.8	84.9	0.0	100.0	320
Rubavu	63.4	4.3	95.7	100.0	213	1.0	9.8	89.2	0.0	100.0	335
Nyabihu	58.4	7.0	93.0	100.0	179	1.9	13.0	85.0	0.0	100.0	307
Ngororero	53.3	4.4	95.6	100.0	184	0.9	10.0	88.5	0.6	100.0	346
Rusizi	90.7	7.0	93.0	100.0	323	2.8	14.3	81.9	1.0	100.0	356
Nyamasheke	77.8	3.9	96.1	100.0	268	2.4	8.8	87.8	0.9	100.0	344
Rulindo	77.5	6.3	93.7	100.0	159	3.5	11.7	83.0	1.7	100.0	205
Gakenke	55.1	7.4	92.6	100.0	189	4.2	11.0	83.4	1.4	100.0	343
Musanze	69.6	5.9	94.1	100.0	218	3.1	12.2	84.4	0.4	100.0	313
Burera	55.9	4.8	95.2	100.0	149	2.7	9.8	87.2	0.4	100.0	267
Gicumbi	71.2	5.0	95.0	100.0	220	1.7	9.7	86.5	2.1	100.0	309
Rwamagana	80.0	4.9	95.1	100.0	223	2.0	15.4	80.6	1.9	100.0	278
Nyagatare	65.6	3.1	96.9	100.0	279	1.3	11.8	86.9	0.0	100.0	426
Gatsibo	62.9	7.9	92.1	100.0	249	4.1	8.5	87.4	0.0	100.0	396
Kayonza	68.2	5.4	94.6	100.0	177	4.6	8.7	86.7	0.0	100.0	260
Kirehe	59.7	6.3	93.7	100.0	184	2.8	13.9	83.0	0.3	100.0	308
Ngoma	66.6	7.4	92.6	100.0	216	3.7	13.2	83.1	0.0	100.0	325
Bugesera	66.2	8.3	91.7	100.0	253	1.0	12.8	85.8	0.3	100.0	383

[1] Based on either a written record or the mother's recall

Table D.49 Vaccinations

Percentage of children age 12-23[18-29] 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 district, Rwanda 2010

		Pentavalent			Polio[1]							Percentage with a vaccination card seen	Number of children
District	BCG	1	2	4	0	1	2	3	Measles	All basic vaccinations[2]	No vaccinations		
Nyarugenge	100.0	98.5	96.8	95.6	97.0	98.5	96.8	95.6	94.4	94.4	0.0	69.0	36
Gasabo	100.0	100.0	100.0	100.0	91.9	100.0	100.0	98.2	100.0	98.2	0.0	76.1	69
Kicukiro	98.5	98.5	98.5	98.5	96.7	98.5	98.5	94.7	98.5	94.7	1.5	86.1	38
Nyanza	100.0	100.0	100.0	100.0	79.5	100.0	100.0	100.0	100.0	100.0	0.0	90.8	51
Gisagara	98.1	98.1	96.3	94.3	74.1	98.1	98.1	90.6	93.0	85.4	1.9	85.5	61
Nyaruguru	98.1	96.4	96.4	94.7	91.9	98.1	98.1	87.0	98.1	85.2	1.9	72.1	51
Huye	(97.6)	(97.6)	(97.6)	(97.6)	(89.6)	(97.6)	(97.6)	(94.4)	(97.6)	(94.4)	(2.4)	(85.4)	34
Nyamagabe	100.0	100.0	100.0	98.2	98.2	100.0	100.0	96.3	98.2	96.3	0.0	84.6	54
Ruhango	(100.0)	(100.0)	(100.0)	(100.0)	(93.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(0.0)	(80.8)	40
Muhanga	(100.0)	(100.0)	(100.0)	(92.5)	(97.4)	(100.0)	(100.0)	(92.4)	(97.5)	(87.3)	(0.0)	(63.6)	41
Kamonyi	97.9	97.9	97.9	97.9	93.5	100.0	97.9	96.0	97.9	96.0	0.0	92.6	50
Karongi	98.4	98.4	98.4	96.9	81.9	98.4	98.4	93.9	98.4	93.9	1.6	88.6	61
Rutsiro	98.4	100.0	98.5	93.7	82.3	100.0	98.5	91.5	88.4	84.5	0.0	96.1	63
Rubavu	98.4	98.4	98.4	93.3	83.6	98.4	98.4	75.5	88.7	69.2	1.6	80.7	68
Nyabihu	(97.7)	(95.0)	(95.0)	(95.0)	(97.7)	(97.7)	(95.0)	(92.9)	(89.4)	(87.3)	(2.3)	(83.9)	44
Ngororero	94.5	94.3	90.5	88.5	88.8	98.1	96.2	88.2	80.8	76.8	1.9	79.3	56
Rusizi	100.0	100.0	98.3	95.1	100.0	98.3	98.3	72.1	95.2	69.1	0.0	73.8	70
Nyamasheke	100.0	100.0	100.0	98.2	94.6	100.0	98.2	94.3	95.4	89.6	0.0	79.2	65
Rulindo	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(97.6	(97.6)	(95.2	(0.0)	(92.9)	38
Gakenke	100.0	100.0	100.0	98.5	93.2	100.0	100.0)	96.4	96.1	91.1	0.0	80.5	66
Musanze	(100.0)	(100.0)	(100.0)	(100.0)	(95.5)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(0.0)	(93.7)	53
Burera	(100.0)	(100.0)	(100.0)	(97.7)	(93.1)	(100.0)	(100.0)	(95.2)	(94.8)	(87.7)	(0.0)	(81.5)	41
Gicumbi	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(95.7)	(98.2)	(93.8)	(0.0)	(87.9)	53
Rwamagana	100.0	97.7	97.7	97.7	100.0	97.7	97.7	97.7	93.1	93.1	0.0	74.6	49
Nyagatare	100.0	100.0	98.6	97.2	73.6	100.0	98.6	97.2	95.6	95.6	0.0	73.7	76
Gatsibo	100.0	98.4	96.6	96.6	72.8	98.4	96.6	94.8	96.6	94.8	0.0	87.9	69
Kayonza	100.0	100.0	100.0	100.0	96.7	100.0	100.0	96.3	98.4	94.7	0.0	89.1	54
Kirehe	(97.8)	(95.7)	(94.0)	(94.0)	(79.9)	(97.8)	(94.0)	(94.0)	(86.7)	(84.9)	(2.2)	(93.9)	46
Ngoma	98.0	98.0	98.0	94.3	82.8	100.0	96.5	92.7	89.7	86.4	0.0	56.9	59
Bugesera	100.0	100.0	100.0	100.0	92.5	100.0	100.0	100.0	96.8	96.8	0.0	90.3	61

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 tetravalent/pentavalent and polio vaccine (excluding polio vaccine given at birth)

Table D.50 Prevalence of symptoms of ARI, of fever, and of diarrhea

Among children under age five, the percentage who had symptoms of acute respiratory infection (ARI), the percentage who had fever, the percentage who had diarrhea, and the percentage who had diarrhea with blood in the two weeks preceding the survey, by district, Rwanda 2010

	Among children under age five				
District	Percentage with symptoms of ARI[1]	Percentage with fever	Percentage with any diarrhea	Percentage with diarrhea with blood	Number of children
Nyarugenge	2.6	16.3	10.1	1.4	201
Gasabo	5.1	16.5	11.0	1.1	401
Kicukiro	5.5	19.8	13.5	2.3	228
Nyanza	1.1	14.2	16.5	1.3	224
Gisagara	6.4	29.6	24.0	4.6	324
Nyaruguru	4.3	17.5	18.5	2.4	261
Huye	1.9	15.8	11.4	0.7	286
Nyamagabe	4.8	22.1	17.1	2.6	275
Ruhango	1.8	14.0	11.6	0.8	220
Muhanga	3.5	11.4	10.5	1.6	198
Kamonyi	2.7	13.0	11.4	3.2	261
Karongi	1.2	8.6	6.4	1.1	263
Rutsiro	3.0	7.5	5.8	0.0	305
Rubavu	9.1	12.8	13.0	2.3	315
Nyabihu	4.7	26.5	18.4	2.6	281
Ngororero	5.3	31.6	17.3	5.3	327
Rusizi	10.2	17.0	18.1	3.8	337
Nyamasheke	7.8	17.1	13.6	2.6	331
Rulindo	1.7	14.7	11.6	0.5	195
Gakenke	5.3	23.5	15.5	1.7	323
Musanze	0.0	8.8	8.1	1.2	283
Burera	3.1	18.1	9.7	1.2	253
Gicumbi	3.6	18.8	21.9	2.5	288
Rwamagana	3.8	8.1	9.1	2.0	263
Nyagatare	0.0	7.4	5.3	0.4	401
Gatsibo	0.0	7.6	5.2	1.3	377
Kayonza	1.6	11.2	16.0	1.3	239
Kirehe	0.4	9.4	12.6	1.4	285
Ngoma	4.7	16.8	19.1	3.5	304
Bugesera	3.8	14.9	13.4	2.5	354

[1] Symptoms of ARI (cough accompanied by short, rapid breathing which was chest-related and/or by difficult breathing which was chest-related) is considered a proxy for pneumonia

Table D.51 Knowledge of ORS packets or pre-packaged liquids

Percentage of women age 15-49 with a live birth in the five years preceding the survey who know about ORS packets or ORS pre-packaged liquids for treatment of diarrhea, by district, Rwanda 2010

District	Percentage of women who know about ORS packets or ORS pre-packaged liquids	Number of women
Nyarugenge	96.8	151
Gasabo	96.1	302
Kicukiro	91.3	181
Nyanza	92.0	168
Gisagara	96.3	228
Nyaruguru	90.8	187
Huye	98.2	214
Nyamagabe	85.8	199
Ruhango	96.5	171
Muhanga	95.9	167
Kamonyi	97.4	198
Karongi	83.1	193
Rutsiro	90.2	218
Rubavu	99.0	228
Nyabihu	87.3	209
Ngororero	71.7	246
Rusizi	98.6	226
Nyamasheke	86.2	225
Rulindo	93.0	158
Gakenke	96.4	240
Musanze	92.3	221
Burera	89.9	182
Gicumbi	83.3	234
Rwamagana	88.7	192
Nyagatare	96.4	292
Gatsibo	92.2	281
Kayonza	93.3	176
Kirehe	97.0	223
Ngoma	88.7	231
Bugesera	92.7	263

ORS = Oral rehydration salts

Table D.52 Disposal of children's stools

Percent distribution of youngest children under age five living with the mother by the manner of disposal of the child's last fecal matter, and percentage of children whose stools are disposed of safely, by district, Rwanda 2010

Background characteristic	Manner of disposal of children's stools								Total	Percentage of children whose stools are disposed of safely[1]	Number of children
	Child used toilet or latrine	Put/rinsed into toilet or latrine	Buried	Put/rinsed into drain or ditch	Thrown into garbage	Left in the open	Other	Missing			
Nyarugenge	14.4	81.0	0.6	1.2	0.0	0.0	2.8	0.0	100.0	95.9	143
Gasabo	20.2	72.3	0.7	2.8	1.6	1.2	1.2	0.0	100.0	93.2	283
Kicukiro	18.8	73.9	0.0	2.1	3.9	0.0	1.2	0.0	100.0	92.7	167
Nyanza	20.0	72.0	0.6	3.5	2.1	1.1	0.0	0.5	100.0	92.7	164
Gisagara	28.0	59.0	1.4	1.0	1.0	1.8	7.9	0.0	100.0	88.3	225
Nyaruguru	15.4	57.9	1.9	1.3	2.8	2.0	18.7	0.0	100.0	75.1	182
Huye	18.6	55.2	1.4	0.5	0.6	3.3	19.8	0.6	100.0	75.2	209
Nyamagabe	10.7	54.0	2.1	5.9	14.7	12.6	0.0	0.0	100.0	66.8	189
Ruhango	21.9	65.2	0.6	8.4	1.1	2.8	0.0	0.0	100.0	87.6	171
Muhanga	39.5	59.6	0.7	0.0	0.0	0.3	0.0	0.0	100.0	99.7	161
Kamonyi	26.2	65.5	2.7	2.5	0.5	0.6	2.0	0.0	100.0	94.4	194
Karongi	16.5	72.6	0.0	9.7	0.0	0.5	0.6	0.0	100.0	89.2	189
Rutsiro	21.1	70.7	0.0	5.0	0.0	1.2	2.0	0.0	100.0	91.8	214
Rubavu	7.3	63.3	0.0	0.0	0.9	2.1	26.4	0.0	100.0	70.6	222
Nyabihu	26.3	56.4	2.8	4.7	0.8	7.2	1.3	0.5	100.0	85.6	201
Ngororero	28.1	43.1	5.5	9.4	4.8	3.7	5.4	0.0	100.0	76.8	240
Rusizi	9.7	67.5	0.5	0.0	1.0	1.1	18.6	1.7	100.0	77.6	215
Nyamasheke	14.6	79.8	1.6	0.0	1.0	0.5	1.9	0.6	100.0	96.0	223
Rulindo	21.4	59.8	0.0	14.5	0.0	3.2	1.1	0.0	100.0	81.2	154
Gakenke	21.4	65.9	0.9	3.4	0.5	2.4	4.4	1.0	100.0	88.3	233
Musanze	27.5	55.2	0.5	2.0	3.1	2.2	9.5	0.0	100.0	83.1	209
Burera	23.5	55.1	1.1	3.0	4.2	3.0	9.3	1.0	100.0	79.6	173
Gicumbi	30.9	50.2	0.0	15.1	0.9	2.0	0.9	0.0	100.0	81.1	226
Rwamagana	15.6	82.3	0.0	0.6	0.0	0.4	1.1	0.0	100.0	97.9	188
Nyagatare	23.3	68.4	0.4	2.7	4.6	0.7	0.0	0.0	100.0	92.0	282
Gatsibo	15.5	76.6	0.4	1.4	4.2	1.4	0.4	0.0	100.0	92.5	269
Kayonza	17.7	76.0	0.5	0.5	3.1	0.6	1.5	0.0	100.0	94.3	169
Kirehe	27.3	55.3	7.5	5.5	3.9	0.0	0.4	0.0	100.0	90.1	216
Ngoma	21.4	56.2	1.0	0.5	2.1	2.0	16.2	0.5	100.0	78.6	221
Bugesera	19.5	73.2	0.7	0.0	0.0	0.4	5.7	0.6	100.0	93.4	255

[1] Children's stools are considered to be disposed of safely if the child used a toilet or latrine, if the fecal matter was put/rinsed into a toilet or latrine or if it was buried

Table D.53 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 district, Rwanda 2010

	Height-for-age[1]			Weight-for-height				Weight-for-age				
District	Percentage below -3 SD	Percentage below -2 SD[2]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[2]	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[2]	Percentage above +2 SD	Mean Z-score (SD)	Number of children
Nyarugenge	6.5	28.3	-1.2	0.6	3.5	6.5	0.3	2.0	5.7	1.8	-0.5	104
Gasabo	10.9	23.8	-1.3	2.4	6.2	7.1	0.4	1.4	10.8	0.7	-0.5	175
Kicukiro	4.4	18.9	-0.7	0.7	2.4	8.8	0.2	0.0	3.9	2.5	-0.3	118
Nyanza	2.8	26.4	-1.2	0.0	1.5	5.5	-0.0	0.8	3.9	2.1	-0.7	116
Gisagara	17.0	47.6	-1.9	2.2	8.5	4.9	0.0	6.2	17.8	1.2	-1.1	171
Nyaruguru	17.2	45.4	-1.8	0.7	1.0	6.2	0.3	1.9	13.7	1.3	-0.8	133
Huye	14.1	45.0	-1.8	0.0	2.3	4.3	0.3	1.4	11.6	0.0	-0.8	145
Nyamagabe	21.8	53.5	-1.9	1.5	5.1	9.4	0.3	4.3	19.7	0.6	-0.9	150
Ruhango	6.9	20.7	-1.1	2.7	6.5	3.2	-0.0	1.2	8.1	0.0	-0.6	110
Muhanga	18.3	46.7	-1.9	0.0	1.4	8.8	0.4	2.5	7.7	0.4	-0.8	94
Kamonyi	15.2	45.3	-1.8	1.3	2.7	3.7	0.3	2.8	10.9	0.0	-0.9	130
Karongi	22.1	56.7	-2.1	0.0	0.9	2.6	0.3	1.8	13.1	0.0	-1.0	123
Rutsiro	28.1	60.3	-2.3	0.0	1.1	9.2	0.5	3.6	16.4	0.0	-1.0	158
Rubavu	21.0	54.9	-2.0	0.0	0.5	10.3	0.6	1.3	10.3	0.7	-0.7	164
Nyabihu	22.2	51.5	-2.1	0.0	0.7	11.1	0.6	1.5	9.9	0.9	-0.8	135
Ngororero	23.8	53.4	-2.1	0.0	1.8	5.3	0.3	2.3	14.3	0.0	-1.0	177
Rusizi	16.1	40.9	-1.7	0.7	2.7	2.8	0.1	1.8	14.4	0.7	-0.9	172
Nyamasheke	9.8	33.2	-1.3	2.2	5.6	4.4	0.2	2.0	9.4	0.0	-0.6	157
Rulindo	11.1	42.9	-1.6	1.7	2.6	3.3	0.2	1.7	15.3	0.0	-0.8	106
Gakenke	28.4	63.6	-2.4	0.7	0.7	11.1	0.6	1.3	12.4	0.8	-1.0	164
Musanze	17.0	45.3	-1.9	0.0	0.7	8.4	0.8	2.6	7.0	0.0	-0.6	155
Burera	20.2	52.0	-2.1	0.0	0.9	3.9	0.5	2.5	10.5	0.9	-0.8	128
Gicumbi	16.8	46.6	-1.8	0.0	1.4	5.5	0.5	0.8	8.4	1.3	-0.7	158
Rwamagana	7.5	29.2	-1.1	2.7	5.7	6.9	0.2	0.7	5.4	1.5	-0.5	135
Nyagatare	16.6	42.2	-1.7	0.9	0.9	6.6	0.4	1.4	8.0	0.0	-0.7	219
Gatsibo	26.6	51.5	-2.0	1.2	2.6	12.7	0.6	3.4	10.6	0.7	-0.7	182
Kayonza	18.5	44.5	-1.8	1.9	4.1	4.7	0.1	4.4	15.6	3.0	-0.9	124
Kirehe	22.5	50.7	-2.1	0.0	1.5	9.9	0.5	2.4	13.2	0.8	-0.9	128
Ngoma	20.7	50.2	-2.0	1.3	4.2	4.3	0.2	4.8	15.8	0.0	-1.0	155
Bugesera	12.5	38.0	-1.6	0.0	4.4	7.3	0.2	2.6	13.4	0.6	-0.7	170

Note: Table is based on children who stayed in the household on the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the WHO Child Growth Standards adopted in 2006. The indices in this table are NOT comparable to those based on the previously used NCHS/CDC/WHO reference. Figures in the parentheses are based on 25-49 unweighted cases.

Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.

[1] Recumbent length is measured for children under age 2 and less than 85 cm; standing height is measured for all other children.

[2] Includes children who are below -3 standard deviations (SD) from the WHO Child Growth standards population median

Table D.54 Initial breastfeeding

Among last born children who were born in the two years preceding the survey, the percentage who were ever breastfed and the percentages who started breastfeeding within one hour and within one day of birth; and among last born children born in the two years preceding the survey who were ever breastfed, the percentage who received a prelacteal feed, by district, Rwanda 2010

	Among last-born children born in the past two years:				Among last-born children born in the past two years who were ever breastfed:	
District	Percentage ever breastfed	Percentage who started breastfeeding within 1 hour of birth	Percentage who started breastfeeding within 1 day of birth[1]	Number of last-born children	Percentage who received a prelacteal feed[2]	Number of last-born children ever breastfed
Nyarugenge	100.0	61.6	95.1	75	22.4	75
Gasabo	95.3	68.7	86.4	140	8.1	133
Kicukiro	98.4	58.5	88.2	82	27.5	81
Nyanza	97.7	74.6	97.7	88	16.6	86
Gisagara	100.0	74.5	95.7	122	17.6	122
Nyaruguru	99.2	74.0	93.0	104	21.0	103
Huye	97.9	71.2	91.9	91	16.6	89
Nyamagabe	97.0	52.6	83.3	112	21.8	109
Ruhango	98.5	81.5	96.0	77	14.7	76
Muhanga	97.4	60.0	90.7	70	10.8	69
Kamonyi	100.0	65.6	98.0	93	9.5	93
Karongi	98.2	89.3	93.7	112	10.4	110
Rutsiro	100.0	82.4	97.2	112	9.1	112
Rubavu	97.9	69.7	94.6	137	7.7	134
Nyabihu	100.0	73.5	93.2	106	23.7	106
Ngororero	98.2	62.2	85.7	128	24.1	125
Rusizi	99.2	72.3	97.5	135	3.7	134
Nyamasheke	99.1	71.6	96.3	145	9.1	144
Rulindo	100.0	80.5	96.2	71	17.3	71
Gakenke	100.0	61.7	91.8	112	7.5	112
Musanze	98.0	77.5	90.9	116	10.1	114
Burera	100.0	50.2	90.2	81	10.8	81
Gicumbi	98.9	68.2	93.0	98	19.3	97
Rwamagana	98.8	84.0	97.8	94	8.1	92
Nyagatare	100.0	78.9	96.6	137	27.3	137
Gatsibo	98.5	86.5	96.7	141	5.9	139
Kayonza	97.0	80.3	95.4	95	5.8	92
Kirehe	97.9	67.6	89.1	98	20.4	96
Ngoma	99.0	56.3	96.5	119	8.2	117
Bugesera	100.0	73.0	96.4	117	17.0	117

Note: Table is based on last-born children born in the two years preceding the survey regardless of whether the children are living or dead at the time of interview. 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

Table D.55 Median duration of breastfeeding

Median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children born in the three years preceding the survey, by district, Rwanda 2010

District	Median duration (months) of breastfeeding among children born in the past three years[1]		
	Any breastfeeding	Exclusive breastfeeding	Predominant breastfeeding[2]
Nyarugenge	24.9	5.2	5.7
Gasabo	26.0	5.3	5.6
Kicukiro	17.5	3.3	4.4
Nyanza	27.7	3.0	4.4
Gisagara	31.8	5.9	5.9
Nyaruguru	31.3	5.3	5.3
Huye	0.0	5.1	5.1
Nyamagabe	30.2	4.9	4.9
Ruhango	33.5	2.2	6.1
Muhanga	32.2	4.3	6.7
Kamonyi	33.1	4.8	4.8
Karongi	29.4	5.1	5.6
Rutsiro	30.9	5.2	6.4
Rubavu	25.9	4.0	6.5
Nyabihu	29.3	0.6	6.1
Ngororero	25.2	6.2	6.6
Rusizi	21.7	4.2	5.8
Nyamasheke	27.3	4.0	5.8
Rulindo	30.4	6.0	6.8
Gakenke	32.3	5.3	5.7
Musanze	30.1	5.8	6.0
Burera	29.7	5.6	6.2
Gicumbi	31.2	7.9	7.9
Rwamagana	24.8	5.6	5.8
Nyagatare	30.2	4.3	6.7
Gatsibo	26.1	5.6	6.1
Kayonza	22.5	5.3	5.6
Kirehe	31.3	5.9	6.4
Ngoma	23.5	6.5	7.1
Bugesera	31.8	5.0	5.4

Note: Median and mean durations are based on the distributions at the time of the survey of the proportion of births by months since birth. Includes children living and deceased at the time of the survey.

[1] It is assumed that non-last-born children and last-born children not currently living with the mother are not currently breastfeeding

[2] Either exclusively breastfed or received breast milk and plain water, and/or non-milk liquids only

Table D.56 Infant and young child feeding (IYCF) practices

Percentage of youngest children age 6-23 months living with their mother who are fed according to three IYCF feeding practices based on breastfeeding status, number of food groups and times they are fed during the day or night preceding the survey, by district, Rwanda 2010

	Among breastfed children 6-23 months, percentage fed:				Among all children 6-23 months, percentage fed[1]:				
District	4+ food groups[2]	Minimum meal frequency[3]	Both 4+ food groups and minimum meal frequency	Number of breastfed children 6-23 months	Breast-milk or milk products[4]	4+ food groups	Minimum meal frequency[5]	With all 3 IYCF practices	Number of all children 6-23 months
Nyarugenge	50.9	52.8	39.1	46	88.2	52.0	54.9	35.8	56
Gasabo	46.5	57.2	33.3	88	90.9	50.0	58.9	31.2	102
Kicukiro	39.4	59.2	28.4	47	93.1	43.3	59.3	30.0	55
Nyanza	33.0	66.2	27.6	72	95.3	31.6	65.1	25.5	78
Gisagara	32.2	63.3	22.7	88	96.6	33.2	62.2	22.0	91
Nyaruguru	30.8	40.6	17.5	80	98.4	30.3	40.0	17.2	82
Huye	29.6	35.8	14.5	56	100.0	31.0	37.0	16.1	57
Nyamagabe	14.9	49.3	8.7	73	92.4	15.0	48.9	9.3	80
Ruhango	43.0	69.9	43.0	52	97.1	42.6	68.4	42.6	55
Muhanga	46.7	61.6	28.5	57	98.4	47.5	60.6	28.1	58
Kamonyi	32.0	60.3	21.1	68	98.4	34.9	58.9	20.2	71
Karongi	17.0	57.4	14.5	83	95.0	16.1	56.9	13.7	88
Rutsiro	8.0	40.5	4.4	82	95.9	7.5	40.0	4.2	87
Rubavu	4.2	38.5	2.9	94	93.3	4.8	37.6	2.7	102
Nyabihu	12.8	37.5	3.5	71	95.1	13.1	35.6	3.3	74
Ngororero	16.4	29.5	6.7	84	98.6	18.3	32.3	7.8	87
Rusizi	10.9	36.1	9.7	83	90.2	11.0	33.4	8.6	94
Nyamasheke	29.2	50.6	21.0	109	96.0	29.1	49.6	20.2	113
Rulindo	25.2	64.5	23.5	52	96.9	24.4	62.5	22.7	54
Gakenke	38.1	54.9	23.7	82	93.5	37.9	53.2	23.2	89
Musanze	17.3	56.0	12.8	72	90.6	16.6	57.4	11.3	82
Burera	23.4	45.5	15.1	55	94.2	26.1	44.8	14.2	58
Gicumbi	27.6	56.6	14.8	60	96.2	27.3	55.9	15.4	65
Rwamagana	40.5	69.4	32.3	64	92.0	38.6	70.6	29.7	69
Nyagatare	25.8	62.2	19.9	108	98.0	24.6	62.9	19.0	113
Gatsibo	14.6	48.6	4.7	95	92.8	16.4	48.6	6.6	108
Kayonza	13.3	36.0	6.0	70	91.7	15.7	33.0	5.5	76
Kirehe	18.7	48.2	15.7	61	94.3	20.1	49.8	16.0	67
Ngoma	15.5	41.9	8.1	68	91.6	15.5	38.4	7.5	74
Bugesera	27.4	60.2	22.1	81	93.0	28.8	59.1	20.3	88

Note: Figures for non-breastfed children are based on fewer than 25 unweighted cases and has been suppressed.
[1] Including non-breastfed children 6-23 months
[2] Food groups: a. infant formula, milk other than breast milk, cheese or yogurt or other milk products; b. foods made from grains, roots, and tubers, including porridge and fortified baby food from grains; c. vitamin A-rich fruits and vegetables (and red palm oil); d. other fruits and vegetables; e. eggs; f. meat, poultry, fish, and shellfish (and organ meats); g. legumes and nuts.
[3] For breastfed children, minimum meal frequency is receiving solid or semi-solid food at least twice a day for infants 6-8 months and at least three times a day for children 9-23 months
[4] Breastfeeding, or not breastfeeding and receiving two or more feedings of commercial infant formula, fresh, tinned and powdered animal milk, and yogurt
[5] For breastfed children, minimum meal frequency is receiving solid or semi-solid food at least twice a day for infants 6-8 months and at least three times a day for children 9-23 monthsb. For non-breastfed children (data not shown) age 6-23 months, minimum meal frequency is receiving solid or semi-solid food or milk feeds at least four times a day)

Table D.57 Prevalence of anemia in children

Percentage of children age 6-59 months classified as having anemia, according district, Rwanda 2010

District	Anemia status by hemoglobin level				
	Any anemia (<11.0 g/dl)	Mild anemia (10.0-10.9 g/dl)	Moderate anemia (7.0-9.9 g/dl)	Severe anemia (<7.0 g/dl)	Number of children[1]
Nyarugenge	35.0	20.9	13.0	1.1	94
Gasabo	38.0	24.6	11.0	2.4	167
Kicukiro	41.1	23.1	17.4	0.6	105
Nyanza	28.4	21.7	6.7	0.0	113
Gisagara	52.7	30.8	21.2	0.6	158
Nyaruguru	43.4	22.2	20.9	0.3	125
Huye	28.1	21.6	6.5	0.0	134
Nyamagabe	45.4	30.9	14.5	0.0	138
Ruhango	23.0	18.3	4.8	0.0	101
Muhanga	34.2	19.1	14.1	1.1	95
Kamonyi	36.1	23.4	11.8	0.9	121
Karongi	40.2	24.6	15.6	0.0	118
Rutsiro	35.0	22.5	12.5	0.0	146
Rubavu	34.1	21.9	12.1	0.0	148
Nyabihu	28.8	22.3	6.5	0.0	128
Ngororero	32.2	20.5	11.7	0.0	161
Rusizi	50.0	33.1	16.9	0.0	155
Nyamasheke	47.9	26.0	21.2	0.8	147
Rulindo	28.6	20.6	8.0	0.0	96
Gakenke	34.7	22.4	11.5	0.8	160
Musanze	26.3	22.2	4.1	0.0	139
Burera	24.4	16.8	6.8	0.9	118
Gicumbi	36.7	24.9	11.8	0.0	143
Rwamagana	35.0	18.5	15.8	0.7	123
Nyagatare	44.0	24.5	19.5	0.0	209
Gatsibo	47.2	32.4	14.2	0.7	175
Kayonza	44.6	24.8	17.6	2.2	115
Kirehe	47.7	28.0	19.7	0.0	113
Ngoma	49.3	31.5	16.9	0.9	142
Bugesera	34.3	21.6	12.6	0.0	151

Note: Table is based on children who stayed in the household on the night before the interview. Prevalence of anemia, based on hemoglobin levels, is adjusted for altitude using formulas in CDC, 1998. Hemoglobin in grams per deciliter (g/dl).

[1] Includes children whose mothers are deceased

Table D.58 Micronutrient intake among children

Among youngest children age 6-23 months who are living with their mother, the percentages who consumed vitamin A-rich and iron-rich foods in the day or night preceding the survey, and among all children 6-59 months, the percentages who were given vitamin A supplements in the six months preceding the survey, who were given iron supplements in the past seven days, and who were given deworming medication in the six months preceding the survey, and among all children age 6-59 months who live in households that were tested for iodized salt, the percentage who live in households with iodized salt, by district, Rwanda 2010

	Among youngest children age 6-23 months living with the mother:			Among all children age 6-59 months:			Among children age 6-59 months living in households tested for iodized salt	
District	Percentage who consumed foods rich in vitamin A in last 24 hours[1]	Percentage who consumed foods rich in iron in last 24 hours[2]	Number of children	Percentage given vitamin A supplements in last 6 months	Percentage given deworming medication in last 6 months[3]	Number of children	Percentage living in households with iodized salt[4]	Number of children
Nyarugenge	82.4	47.4	56	94.4	87.8	184	99.0	183
Gasabo	80.1	32.4	102	99.1	90.2	370	99.3	350
Kicukiro	74.9	40.6	55	95.2	90.0	206	99.6	199
Nyanza	70.1	19.8	78	82.7	74.4	216	99.0	207
Gisagara	70.8	29.9	91	86.3	80.8	294	100.0	259
Nyaruguru	64.9	24.2	82	84.9	72.2	242	97.7	222
Huye	62.0	32.4	57	97.6	89.2	257	99.6	237
Nyamagabe	63.8	9.0	80	86.9	80.6	250	99.6	211
Ruhango	72.4	7.2	55	98.9	95.4	198	100.0	192
Muhanga	82.5	23.5	58	94.9	89.0	189	98.4	182
Kamonyi	86.2	21.0	71	97.8	92.8	239	99.5	219
Karongi	73.9	17.5	88	92.3	85.2	244	100.0	222
Rutsiro	60.9	6.3	87	97.4	91.6	282	99.1	257
Rubavu	67.8	14.2	102	98.5	89.7	286	98.3	245
Nyabihu	72.7	7.9	74	98.3	90.0	255	100.0	228
Ngororero	74.4	16.0	87	92.3	80.6	290	99.6	274
Rusizi	78.8	25.2	94	94.5	92.1	301	99.3	271
Nyamasheke	76.2	28.5	113	83.2	74.8	302	99.6	282
Rulindo	71.4	12.6	54	98.5	98.5	178	100.0	166
Gakenke	84.2	17.1	89	92.0	77.3	303	100.0	286
Musanze	66.8	14.0	82	97.0	90.3	254	100.0	244
Burera	75.3	15.1	58	93.5	87.8	232	98.4	213
Gicumbi	74.8	5.2	65	95.2	94.4	258	99.6	229
Rwamagana	84.0	25.4	69	97.1	94.0	242	100.0	232
Nyagatare	71.4	22.2	113	95.8	82.9	381	99.4	375
Gatsibo	63.2	13.9	108	93.9	90.3	349	98.1	323
Kayonza	68.4	7.5	76	82.9	77.7	223	100.0	210
Kirehe	67.3	26.4	67	85.4	76.7	258	99.1	241
Ngoma	70.4	23.4	74	87.8	83.7	267	97.5	261
Bugesera	73.4	22.3	88	92.9	89.0	325	100.0	299

Note: Information on vitamin A is based on both mother's recall and the immunization card (where available). Information on iron supplements and deworming medication is based on the mother's recall.

[1] Includes meat (and organ meat), fish, poultry, eggs, pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, dark green leafy vegetables, mango, papaya, and other locally grown fruits and vegetables that are rich in vitamin A, and red palm oil [if data are collected.]

[2] Includes meat, (including organ meat)

[3] Deworming for intestinal parasites is commonly done for helminthes and for schistosomiasis.

[4] Salt containing 15 parts per million of iodine or more. Excludes children in households in which salt was not tested.

Table D.59 Presence of iodized salt in household

Among all households, percentage of households tested for iodine content and percentage of households without salt; and among households with salt tested, the percentage with iodine present in salt, by district, Rwanda 2010

	Among all households, the percentage			Among households with tested salt:	
District	With salt tested	Without salt	Number of households	Percentage iodize salt	Number of households
Nyarugenge	91.8	8.2	331	98.6	304
Gasabo	89.2	10.8	581	99.5	518
Kicukiro	93.6	6.4	372	99.5	349
Nyanza	89.1	10.9	373	98.3	332
Gisagara	86.3	13.7	428	99.7	369
Nyaruguru	90.4	9.6	334	98.1	302
Huye	87.5	12.5	414	99.7	362
Nyamagabe	79.5	20.5	428	99.7	340
Ruhango	94.3	5.7	386	100.0	365
Muhanga	94.3	5.7	364	98.6	343
Kamonyi	91.0	9.0	410	99.7	373
Karongi	88.8	11.2	404	99.2	358
Rutsiro	92.8	7.2	392	99.4	363
Rubavu	85.2	14.8	445	98.9	379
Nyabihu	91.4	8.6	368	100.0	336
Ngororero	93.8	6.2	452	99.5	424
Rusizi	91.8	8.2	455	99.5	417
Nyamasheke	91.1	8.9	453	98.6	412
Rulindo	91.7	8.3	355	100.0	326
Gakenke	93.0	7.0	466	99.5	433
Musanze	95.2	4.8	444	100.0	423
Burera	91.1	8.9	400	98.6	364
Gicumbi	88.2	11.8	455	99.5	402
Rwamagana	92.3	7.7	380	99.8	351
Nyagatare	94.9	5.1	493	99.8	468
Gatsibo	88.7	11.3	505	98.7	448
Kayonza	93.8	6.2	371	99.8	348
Kirehe	89.7	10.3	412	99.1	370
Ngoma	94.5	5.5	437	97.5	413
Bugesera	92.0	8.0	435	99.7	400

Table D.60 Nutritional status of women

Among women age 15-49, the percentage with height under 145 cm, mean body mass index (BMI), and the percentage with specific BMI levels, by district, Rwanda 2010

	Height		Body Mass Index[1]								
District	Percentage below 145 cm	Number of women	Mean Body Mass Index (BMI)	18.5-24.9 (Total normal)	<18.5 (Total thin)	17.0-18.4 (Mildly thin)	<17 (Moderately and severely thin)	>=25.0 (Total over weight or obese)	25.0-29.9 (Overweight)	>=30.0 (Obese)	Number of women
Nyarugenge	4.4	209	23.9	63.2	5.2	3.8	1.4	31.6	23.4	8.2	194
Gasabo	3.7	350	23.6	64.6	7.3	5.8	1.6	28.1	21.1	7.0	319
Kicukiro	2.9	248	23.8	63.7	6.0	4.9	1.1	30.4	22.2	8.2	230
Nyanza	2.5	181	21.6	81.7	6.8	5.0	1.8	11.6	9.9	1.6	168
Gisagara	2.5	218	21.4	82.2	9.4	6.7	2.7	8.4	7.3	1.1	199
Nyaruguru	3.4	171	21.6	78.7	12.0	10.4	1.6	9.4	8.8	0.5	158
Huye	5.3	217	21.7	82.3	8.1	7.7	0.4	9.5	9.0	0.6	197
Nyamagabe	4.5	225	21.2	78.3	13.4	11.0	2.4	8.3	8.3	0.0	211
Ruhango	2.9	200	21.9	75.2	10.3	6.6	3.7	14.5	13.1	1.4	191
Muhanga	5.5	176	22.5	73.5	7.9	5.4	2.5	18.6	16.5	2.1	166
Kamonyi	5.6	208	21.4	75.1	15.9	13.1	2.9	9.0	8.4	0.6	201
Karongi	1.9	222	21.6	84.4	7.8	6.3	1.5	7.8	7.8	0.0	207
Rutsiro	6.0	225	22.8	76.9	3.9	3.5	0.4	19.3	17.9	1.3	210
Rubavu	2.1	245	23.3	74.3	0.9	0.9	0.0	24.8	21.0	3.8	221
Nyabihu	1.0	208	23.6	73.8	1.5	1.5	0.0	24.7	21.3	3.4	190
Ngororero	5.5	263	21.9	83.3	6.0	4.6	1.4	10.7	9.8	0.9	240
Rusizi	4.4	249	21.7	77.5	10.7	8.6	2.1	11.8	10.1	1.7	215
Nyamasheke	5.3	285	21.6	79.3	10.2	7.5	2.7	10.4	10.4	0.0	273
Rulindo	3.0	215	22.2	80.7	6.4	4.9	1.5	12.9	11.9	1.0	195
Gakenke	3.1	253	22.1	83.7	4.8	2.6	2.1	11.5	10.6	0.9	236
Musanze	2.2	254	22.9	78.6	2.6	1.7	0.9	18.8	17.3	1.5	235
Burera	0.9	202	22.9	77.2	3.9	3.3	0.6	19.0	16.7	2.3	182
Gicumbi	1.9	251	22.3	81.7	6.2	4.7	1.5	12.1	11.3	0.8	234
Rwamagana	2.8	220	22.7	74.3	5.6	4.1	1.5	20.1	19.2	0.9	198
Nyagatare	3.7	260	23.1	69.8	4.7	3.8	1.0	25.5	21.9	3.6	237
Gatsibo	3.3	292	22.3	72.6	8.8	6.1	2.7	18.6	16.7	1.9	260
Kayonza	5.2	221	22.2	78.2	8.1	4.9	3.2	13.7	11.3	2.3	210
Kirehe	2.8	217	22.3	79.4	5.6	4.0	1.6	15.1	13.5	1.6	199
Ngoma	2.0	216	21.3	78.0	13.1	10.8	2.4	8.9	8.3	0.6	190
Bugesera	1.8	242	22.0	76.3	8.2	5.5	2.6	15.5	12.5	3.0	201

Note: The Body Mass Index (BMI) is expressed as the ratio of weight in kilograms to the square of height in meters (kg/m^2).
[1] Excludes pregnant women and women with a birth in the preceding 2 months

Table D.61 Nutritional status of men

Among men age 15-49, mean body mass index (BMI), and the percentage with specific BMI levels, by district, Rwanda 2010

	Body Mass Index								
District	Mean Body Mass Index (BMI)	18.5-24.9 (Total normal)	<18.5 (Total thin)	17.0-18.4 (Mildly thin)	<17 (Moderately and severely thin)	≥25.0 (Total overweight or obese)	25.0-29.9 (Overweight)	≥30.0 (Obese)	Number of men
Nyarugenge	21.2	68.9	19.5	13.0	6.6	11.6	10.2	1.5	195
Gasabo	21.5	77.2	11.1	9.3	1.8	11.7	9.9	1.8	359
Kicukiro	21.5	75.9	11.5	9.3	2.2	12.7	11.4	1.3	224
Nyanza	19.9	74.5	23.2	14.3	8.8	2.4	2.4	0.0	168
Gisagara	19.7	71.5	26.7	16.8	9.9	1.9	1.9	0.0	213
Nyaruguru	20.1	74.7	23.9	12.7	11.2	1.4	1.4	0.0	168
Huye	19.9	76.2	23.2	14.6	8.6	0.6	0.6	0.0	180
Nyamagabe	20.3	81.5	17.3	9.6	7.7	1.2	1.2	0.0	200
Ruhango	20.0	76.7	23.3	17.1	6.2	0.0	0.0	0.0	178
Muhanga	20.3	75.6	20.8	14.9	5.9	3.6	3.6	0.0	145
Kamonyi	19.8	73.9	25.5	16.7	8.8	0.6	0.6	0.0	189
Karongi	20.4	81.9	15.5	7.9	7.6	2.6	2.6	0.0	192
Rutsiro	21.7	84.9	8.0	5.7	2.3	7.1	7.1	0.0	214
Rubavu	21.8	85.8	6.2	4.1	2.1	7.9	7.4	0.5	232
Nyabihu	21.8	88.8	4.9	4.4	0.5	6.3	5.4	0.8	166
Ngororero	20.8	81.8	13.9	7.0	6.9	4.2	4.2	0.0	183
Rusizi	20.2	74.3	23.9	15.2	8.7	1.9	1.5	0.4	287
Nyamasheke	20.6	79.8	18.0	12.3	5.8	2.2	2.2	0.0	205
Rulindo	20.6	84.3	14.1	11.5	2.6	1.6	1.6	0.0	178
Gakenke	20.9	88.6	9.6	8.4	1.2	1.7	1.7	0.0	203
Musanze	21.4	88.7	7.7	4.7	3.0	3.7	3.7	0.0	220
Burera	21.6	85.1	7.8	6.7	1.2	7.1	6.5	0.6	172
Gicumbi	20.5	81.6	17.1	15.2	1.8	1.4	1.4	0.0	239
Rwamagana	20.9	79.4	16.6	12.2	4.3	4.0	2.2	1.8	206
Nyagatare	21.2	84.6	11.7	8.4	3.4	3.6	3.2	0.5	274
Gatsibo	20.6	81.9	15.4	11.2	4.2	2.7	2.7	0.0	264
Kayonza	20.0	75.9	23.3	16.2	7.1	0.8	0.4	0.4	194
Kirehe	20.6	82.2	16.2	11.6	4.7	1.6	1.6	0.0	199
Ngoma	19.9	74.8	24.3	17.2	7.1	0.9	0.9	0.0	218
Bugesera	20.5	83.3	15.5	10.1	5.3	1.2	0.8	0.4	239

Note: The Body Mass Index (BMI) is expressed as the ratio of weight in kilograms to the square of height in meters (kg/m^2).

Table D.62 Prevalence of anemia in women

Percentage of women age 15-49 with anemia, by district, Rwanda 2010

District	Anemia status by hemoglobin level				
	Any anemia	Mild anemia	Moderate anemia	Severe anemia	Number of women
Nyarugenge	11.8	9.6	2.2	0.0	209
Gasabo	20.1	14.8	5.0	0.3	350
Kicukiro	20.2	15.8	4.2	0.3	247
Nyanza	19.7	15.2	4.5	0.0	179
Gisagara	31.2	24.0	6.6	0.5	218
Nyaruguru	8.8	7.8	0.9	0.0	171
Huye	9.4	7.3	2.1	0.0	216
Nyamagabe	26.9	24.7	2.2	0.0	226
Ruhango	11.4	8.3	2.7	0.5	202
Muhanga	12.9	12.4	0.5	0.0	177
Kamonyi	15.4	13.2	2.2	0.0	204
Karongi	9.2	8.7	0.5	0.0	223
Rutsiro	7.5	7.5	0.0	0.0	225
Rubavu	6.6	6.6	0.0	0.0	245
Nyabihu	14.7	14.2	0.5	0.0	209
Ngororero	12.0	11.6	0.5	0.0	264
Rusizi	30.5	26.0	4.0	0.5	248
Nyamasheke	24.2	19.7	4.5	0.0	285
Rulindo	12.2	10.9	0.8	0.4	215
Gakenke	12.9	8.7	4.1	0.0	253
Musanze	7.3	6.5	0.8	0.0	254
Burera	8.4	8.4	0.0	0.0	205
Gicumbi	16.6	16.2	0.4	0.0	251
Rwamagana	20.9	12.7	7.3	0.9	220
Nyagatare	30.8	24.3	5.8	0.7	260
Gatsibo	19.9	16.1	3.3	0.5	292
Kayonza	19.2	13.7	4.6	0.9	220
Kirehe	35.3	26.5	7.9	0.9	217
Ngoma	17.7	14.4	3.3	0.0	214
Bugesera	15.8	13.3	2.1	0.5	244

Note: Prevalence is adjusted for altitude and for smoking status if known using formulas in CDC, 1998. Women with <7.0 g/dl of hemoglobin have severe anemia, women with 7.0-9.9 g/dl have moderate anemia, and pregnant women with 10.0-10.9 g/dl and non-pregnant women with 10.0-11.9 g/dl have mild anemia.

Table D.63 Micronutrient intake among mothers

Among women age 15-49 with a child born in the past five years, the percentage who received a vitamin A dose in the first two months after the birth of the last child, and the percentages who, during the pregnancy of the last child born in the five years prior to the survey, took iron tablets or syrup for specific numbers of days and took deworming medication; and among women age 15-49 with a child born in the past five years and who live in households that were tested for iodized salt, the percentage who live in households with iodized salt, by district, Rwanda 2010

District	Percentage who received vitamin A dose postpartum[1]	Number of days women took iron tablets or syrup during pregnancy of last birth					Percentage of women who took deworming medication during pregnancy of last birth	Number of women	Among women with a child born in the last five years, who live in households that were tested for iodized salt	
		None	<60	60-89	90+	Don't know/ missing			Percentage living in households with iodized salt[2]	Number of women
Nyarugenge	50.3	22.4	75.0	1.2	0.4	1.0	37.5	151	98.8	150
Gasabo	50.6	32.7	56.1	1.7	1.7	7.8	31.2	302	99.1	289
Kicukiro	59.8	23.5	69.4	2.7	1.8	2.5	33.0	181	99.5	174
Nyanza	56.1	18.4	78.3	2.2	0.0	1.2	34.9	168	98.7	161
Gisagara	48.8	32.9	63.5	1.8	1.3	0.5	30.5	228	100.0	200
Nyaruguru	57.2	20.7	59.7	0.5	1.8	17.4	23.8	187	97.5	172
Huye	52.1	18.8	65.5	2.7	2.3	10.7	36.9	214	99.5	194
Nyamagabe	56.6	28.0	68.5	1.5	1.1	1.0	38.4	199	99.4	168
Ruhango	61.5	17.2	80.2	1.1	1.0	0.5	22.0	171	100.0	165
Muhanga	62.1	31.3	63.7	2.8	1.1	1.1	30.2	167	98.2	161
Kamonyi	46.5	22.5	60.7	10.7	2.9	3.3	42.7	198	99.4	182
Karongi	64.4	23.7	68.3	5.5	1.4	1.0	43.8	193	100.0	174
Rutsiro	57.4	35.4	59.2	3.7	1.2	0.5	47.6	218	99.5	203
Rubavu	38.8	25.9	73.7	0.0	0.4	0.0	45.3	228	97.9	197
Nyabihu	42.2	24.0	73.7	0.9	0.5	0.9	37.1	209	100.0	192
Ngororero	38.9	51.4	43.0	3.2	1.5	0.9	21.7	246	99.5	230
Rusizi	53.5	15.5	81.2	1.0	0.4	1.9	47.0	226	99.5	205
Nyamasheke	45.1	17.6	75.2	2.6	4.6	0.0	56.0	225	99.5	211
Rulindo	56.6	16.8	75.5	4.4	1.7	1.6	50.3	158	100.0	144
Gakenke	50.5	20.1	62.3	3.9	6.0	7.6	40.7	240	100.0	227
Musanze	48.8	29.1	67.1	1.4	0.8	1.6	42.1	221	100.0	212
Burera	53.8	14.2	79.1	2.3	1.2	3.3	52.3	182	98.7	168
Gicumbi	56.7	24.1	71.5	0.9	2.4	1.0	42.1	234	99.5	208
Rwamagana	44.9	22.3	73.3	1.8	2.2	0.4	48.9	192	100.0	183
Nyagatare	57.7	32.4	65.4	0.7	0.5	0.9	51.0	292	99.6	284
Gatsibo	63.2	23.3	74.3	1.7	0.0	0.7	38.5	281	98.6	256
Kayonza	60.8	25.8	69.5	1.1	0.9	2.7	35.4	176	100.0	167
Kirehe	63.2	33.6	62.1	1.7	0.0	2.7	56.4	223	99.0	208
Ngoma	47.7	38.8	58.2	0.0	0.0	3.0	30.1	231	97.2	227
Bugesera	33.2	38.4	59.9	0.4	0.8	0.5	25.0	263	100.0	244

[1] In the first two months after delivery
[2] Excludes women in households where salt was not tested.

Table D.64 Household possession of mosquito nets

Percentage of households with at least one and more than one mosquito net (treated or untreated), insecticide treated net (ITN), and long-lasting insecticidal net (LLIN), and the average number of nets per household, by district, Rwanda 2010

	Any type of mosquito net			Insecticide treated mosquito nets (ITN)[1]			Long-lasting insecticide net (LLIN)			
District	Percentage with at least one	Percentage with more than one	Average number of nets per household	Percentage with at least one	Percentage with more than one	Average number of ITNs per household	Percentage with at least one	Percentage with more than one	Average number of LLINs per household	Number of households
Nyarugenge	79.3	53.0	1.7	78.9	52.1	1.6	78.7	51.7	1.6	331
Gasabo	89.6	66.9	2.2	89.1	65.8	2.2	88.6	65.6	2.2	581
Kicukiro	89.8	66.9	2.2	89.2	65.1	2.1	88.8	63.8	2.1	372
Nyanza	91.3	69.9	2.0	89.9	68.0	1.9	89.0	66.4	1.9	373
Gisagara	86.3	55.8	1.7	85.9	53.9	1.6	84.5	52.0	1.6	428
Nyaruguru	59.9	24.3	0.9	59.0	23.2	0.9	58.3	22.4	0.9	334
Huye	94.3	69.2	2.0	94.3	69.0	2.0	94.3	68.7	2.0	414
Nyamagabe	68.8	33.2	1.1	68.2	32.7	1.1	67.2	32.4	1.1	428
Ruhango	94.8	73.4	2.1	94.0	72.2	2.1	94.0	72.2	2.1	386
Muhanga	80.0	41.9	1.4	77.6	40.0	1.4	76.7	38.6	1.3	364
Kamonyi	91.5	67.3	2.0	90.7	66.2	2.0	90.5	65.7	1.9	410
Karongi	67.7	33.6	1.1	66.3	32.4	1.1	66.0	32.4	1.1	404
Rutsiro	77.5	49.9	1.5	76.5	49.1	1.5	76.5	48.8	1.5	392
Rubavu	86.6	57.6	1.7	86.0	57.3	1.7	85.8	57.3	1.7	445
Nyabihu	70.5	39.7	1.2	70.2	39.7	1.2	70.2	39.7	1.2	368
Ngororero	65.6	28.1	1.0	65.2	27.9	1.0	64.5	27.0	1.0	452
Rusizi	91.7	70.3	2.0	91.7	70.1	1.9	91.0	69.4	1.9	455
Nyamasheke	94.4	73.8	2.1	93.6	73.3	2.1	93.6	73.3	2.1	453
Rulindo	76.1	41.1	1.4	75.3	40.6	1.4	75.1	40.6	1.4	355
Gakenke	76.2	42.8	1.4	74.7	40.7	1.3	74.0	38.9	1.3	466
Musanze	74.6	43.3	1.4	74.4	43.1	1.4	74.4	43.1	1.4	444
Burera	60.4	32.1	1.1	60.0	31.5	1.0	59.4	30.7	1.0	400
Gicumbi	68.0	34.3	1.1	66.3	32.7	1.1	65.6	32.4	1.1	455
Rwamagana	90.5	70.0	2.1	90.5	70.0	2.1	90.5	70.0	2.1	380
Nyagatare	90.2	70.8	2.0	89.1	68.9	1.9	87.1	66.5	1.8	493
Gatsibo	88.1	67.2	1.8	87.5	66.7	1.8	87.2	66.5	1.8	505
Kayonza	92.8	71.6	2.0	92.5	71.1	2.0	92.5	71.1	2.0	371
Kirehe	92.0	68.2	1.9	92.0	67.4	1.9	91.4	66.6	1.9	412
Ngoma	93.0	69.9	1.9	92.7	69.4	1.9	92.5	69.2	1.9	437
Bugesera	89.6	62.9	1.9	89.3	62.4	1.9	89.0	62.1	1.9	435

[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN) or (2) a pretreated net obtained within the past 12 months or (3) a net that has been soaked with insecticide within the past 12 months

Table D.65 Use of mosquito nets by persons in the household

Percentage of the de facto household population who slept the night before the survey under a mosquito net (treated or untreated), under an insecticide-treated net (ITN), under a long-lasting insecticidal net (LLIN); and among the de facto household population in households with at least one ITN, the percentage who slept under an ITN the night before the survey, by district, Rwanda 2010

	Household population				Household population in households with at least one ITN[1]	
District	Percentage who slept under any net last night	Percentage who slept under an ITN[1] last night	Percentage who slept under an LLIN last night	Number	Percentage who slept under an ITN[1] last night	Number
Nyarugenge	59.4	58.6	59.1	1,368	68.7	1,167
Gasabo	67.3	66.7	67.3	2,511	71.5	2,343
Kicukiro	66.3	65.4	66.0	1,577	70.6	1,462
Nyanza	70.3	68.9	70.0	1,521	74.1	1,414
Gisagara	63.5	62.5	63.5	1,844	69.0	1,669
Nyaruguru	36.3	35.6	36.3	1,562	55.1	1,010
Huye	67.8	67.5	67.8	1,747	70.5	1,674
Nyamagabe	40.6	40.2	40.5	1,874	55.0	1,371
Ruhango	75.0	73.4	74.5	1,636	76.6	1,567
Muhanga	54.7	52.4	54.6	1,426	62.7	1,192
Kamonyi	61.6	60.4	61.3	1,790	64.9	1,667
Karongi	54.1	53.2	54.1	1,770	74.1	1,270
Rutsiro	59.1	58.7	59.1	1,873	71.9	1,528
Rubavu	51.4	51.3	51.3	2,035	57.4	1,817
Nyabihu	47.1	47.0	47.0	1,670	63.9	1,228
Ngororero	48.1	47.7	48.1	1,946	66.0	1,406
Rusizi	63.6	62.3	63.6	2,189	65.7	2,077
Nyamasheke	73.3	72.7	73.1	2,039	75.3	1,968
Rulindo	44.4	44.2	44.3	1,521	55.9	1,202
Gakenke	52.1	50.1	51.7	2,016	62.4	1,620
Musanze	52.4	51.9	52.4	1,946	66.2	1,524
Burera	35.9	35.6	35.8	1,724	51.9	1,183
Gicumbi	39.7	38.5	39.3	2,167	54.2	1,542
Rwamagana	72.5	72.5	72.5	1,651	76.3	1,568
Nyagatare	64.1	61.6	64.1	2,415	67.6	2,201
Gatsibo	70.9	70.4	70.4	2,283	78.7	2,043
Kayonza	69.7	69.3	69.5	1,665	73.3	1,574
Kirehe	58.7	58.3	58.7	1,810	61.7	1,712
Ngoma	69.1	68.5	69.1	1,786	72.1	1,696
Bugesera	62.3	61.4	62.3	1,931	66.6	1,777

[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN) or (2) a pretreated net obtained within the past 12 months or (3) a net that has been soaked with insecticide within the past 12 months

Table D.66 Use of mosquito nets by children

Percentage of children under age five who, the night before the survey, slept under a mosquito net (treated or untreated), under an insecticide-treated net (ITN), under a long-lasting insecticidal net (LLIN); and among children under five years of age in households with at least one ITN, the percentage who slept under an ITN the night before the survey, by district, Rwanda 2010

	Children under age 5 in all households				Children under age 5 in households with at least one ITN[1]	
District	Percentage who slept under any net last night	Percentage who slept under an ITN[1] last night	Percentage who slept under an LLIN last night	Number of children	Percentage who slept under an ITN[1] last night	Number of children
Nyarugenge	74.4	74.0	74.0	200.2	79.3	187
Gasabo	77.6	77.3	77.6	396.1	78.9	388
Kicukiro	75.2	75.2	75.2	229.2	77.5	222
Nyanza	79.4	77.2	79.4	236.0	80.2	227
Gisagara	70.6	70.6	70.6	337.6	74.3	321
Nyaruguru	53.1	52.5	53.1	274.5	69.5	207
Huye	75.8	75.8	75.8	294.4	79.2	282
Nyamagabe	59.4	59.4	59.4	299.7	65.2	273
Ruhango	79.3	77.8	78.5	250.1	81.1	240
Muhanga	72.9	70.6	72.9	209.1	76.3	193
Kamonyi	68.3	67.2	68.3	269.5	71.4	254
Karongi	82.9	82.9	82.9	268.2	90.6	245
Rutsiro	74.4	74.4	74.4	307.0	82.3	278
Rubavu	54.4	54.4	54.4	338.7	61.0	302
Nyabihu	61.0	61.0	61.0	287.8	71.9	244
Ngororero	64.2	63.9	64.2	345.9	76.3	289
Rusizi	75.5	74.0	75.5	348.9	75.7	341
Nyamasheke	80.5	80.1	80.1	338.2	81.3	333
Rulindo	66.0	65.6	65.6	194.6	72.3	177
Gakenke	74.6	72.5	73.9	334.3	77.6	312
Musanze	71.8	71.1	71.8	298.2	77.2	275
Burera	56.9	56.4	56.9	255.1	62.3	231
Gicumbi	60.3	59.2	59.9	305.4	67.1	270
Rwamagana	76.7	76.7	76.7	272.2	79.0	264
Nyagatare	65.0	62.5	65.0	431.4	67.6	399
Gatsibo	77.0	76.2	76.2	393.7	82.9	362
Kayonza	76.9	76.5	76.9	252.1	80.0	241
Kirehe	64.4	64.1	64.4	290.3	66.8	279
Ngoma	73.5	72.8	73.5	323.0	75.9	310
Bugesera	70.4	69.2	70.1	360.3	72.8	343

[1] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment (LLIN), or (2) a pretreated net obtained within the past 12 months, or (3) a net that has been soaked with insecticide within the past 12 months

Table D.67 Malaria among children

Percentage of children age 6-59 months classified as having malaria, by district, Rwanda 2010

District	Malaria	Number of children
Nyarugenge	0.0	94
Gasabo	0.0	167
Kicukiro	0.8	105
Nyanza	0.0	113
Gisagara	4.1	158
Nyaruguru	2.4	125
Huye	1.6	134
Nyamagabe	0.0	138
Ruhango	0.0	101
Muhanga	2.0	95
Kamonyi	0.0	121
Karongi	0.0	118
Rutsiro	0.0	148
Rubavu	0.7	149
Nyabihu	0.0	128
Ngororero	0.0	161
Rusizi	1.5	157
Nyamasheke	1.4	148
Rulindo	0.0	96
Gakenke	0.0	160
Musanze	0.0	139
Burera	0.0	118
Gicumbi	0.0	143
Rwamagana	2.3	124
Nyagatare	6.0	209
Gatsibo	3.1	176
Kayonza	4.1	115
Kirehe	1.8	113
Ngoma	4.8	142
Bugesera	0.6	152

Table D.68 Malaria among women

Percentage of women 15-49 years of age classified as having malaria, by district, Rwanda 2010

District	Malaria	Number of women
Nyarugenge	0.4	208
Gasabo	0.0	345
Kicukiro	0.0	248
Nyanza	0.5	180
Gisagara	2.9	219
Nyaruguru	0.0	169
Huye	1.0	217
Nyamagabe	0.0	226
Ruhango	1.4	202
Muhanga	0.0	179
Kamonyi	1.6	208
Karongi	0.0	218
Rutsiro	0.0	226
Rubavu	0.0	243
Nyabihu	0.0	208
Ngororero	0.4	262
Rusizi	0.0	246
Nyamasheke	0.9	282
Rulindo	0.4	215
Gakenke	0.0	250
Musanze	0.0	255
Burera	0.5	205
Gicumbi	0.0	250
Rwamagana	0.4	220
Nyagatare	2.2	259
Gatsibo	0.0	294
Kayonza	3.1	219
Kirehe	3.2	217
Ngoma	2.7	214
Bugesera	0.5	245

Table D.69 Knowledge of AIDS

Percentage of women and men age 15-49 who have heard of AIDS, by district, Rwanda 2010

	Women		Men	
District	Has heard of AIDS	Number of respondents	Has heard of AIDS	Number of respondents
Nyarugenge	100.0	617	100.0	308
Gasabo	100.0	608	100.0	307
Kicukiro	99.8	665	100.0	317
Nyanza	100.0	390	100.0	184
Gisagara	100.0	428	99.5	209
Nyaruguru	99.8	433	100.0	202
Huye	100.0	424	100.0	184
Nyamagabe	100.0	423	100.0	191
Ruhango	100.0	420	100.0	194
Muhanga	100.0	395	100.0	167
Kamonyi	100.0	427	100.0	186
Karongi	100.0	417	100.0	187
Rutsiro	100.0	451	100.0	222
Rubavu	100.0	442	100.0	215
Nyabihu	100.0	455	100.0	183
Ngororero	99.8	460	100.0	165
Rusizi	100.0	442	100.0	259
Nyamasheke	100.0	471	100.0	182
Rulindo	100.0	466	99.5	203
Gakenke	100.0	429	100.0	177
Musanze	100.0	464	100.0	204
Burera	100.0	413	100.0	174
Gicumbi	100.0	427	100.0	213
Rwamagana	100.0	456	100.0	223
Nyagatare	100.0	442	100.0	217
Gatsibo	99.8	467	100.0	219
Kayonza	100.0	445	100.0	207
Kirehe	100.0	426	100.0	198
Ngoma	100.0	398	100.0	203
Bugesera	100.0	470	100.0	229

Table D.70 Knowledge of HIV prevention methods

Percentage of women and men age 15-49 who, in response to prompted questions, say that people can reduce the risk of getting the AIDS virus by using condoms every time they have sexual intercourse, and by having one sex partner who is not infected and has no other partners, by district, Rwanda 2010

	Women				Men			
District	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner	Number of women	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner	Number of men
Nyarugenge	94.8	93.4	89.0	617	96.8	50.0	48.7	308
Gasabo	95.7	92.6	89.1	608	94.8	92.2	87.9	307
Kicukiro	93.4	93.8	89.3	665	96.5	86.1	83.9	317
Nyanza	94.6	92.1	87.2	390	94.0	78.3	75.0	184
Gisagara	87.6	86.4	77.1	428	91.4	58.4	55.5	209
Nyaruguru	86.4	90.5	80.8	433	89.6	89.1	79.7	202
Huye	88.9	95.5	85.4	424	94.6	95.1	90.2	184
Nyamagabe	81.6	81.8	71.4	423	93.7	83.2	78.0	191
Ruhango	93.3	97.9	91.4	420	96.4	83.0	80.9	194
Muhanga	94.4	90.1	85.8	395	94.0	80.2	76.0	167
Kamonyi	94.4	88.3	84.3	427	94.6	40.3	39.2	186
Karongi	88.5	80.8	72.9	417	87.7	82.9	74.9	187
Rutsiro	83.6	84.0	72.5	451	80.6	78.8	66.2	222
Rubavu	96.6	54.8	51.8	442	93.0	80.9	78.1	215
Nyabihu	82.9	77.4	64.8	455	94.0	95.6	90.7	183
Ngororero	83.9	76.5	64.8	460	92.7	80.6	76.4	165
Rusizi	88.5	67.9	60.9	442	91.1	77.2	71.8	259
Nyamasheke	89.6	91.7	84.7	471	84.6	93.4	80.8	182
Rulindo	95.9	97.2	93.3	466	95.1	78.3	74.4	203
Gakenke	96.3	90.0	86.9	429	88.7	83.6	74.6	177
Musanze	90.9	81.5	75.9	464	85.3	82.8	74.0	204
Burera	86.7	87.7	77.7	413	87.9	87.9	79.9	174
Gicumbi	93.4	82.7	78.0	427	92.5	75.1	72.3	213
Rwamagana	91.7	93.4	87.5	456	96.0	90.1	86.5	223
Nyagatare	95.9	87.3	85.7	442	98.6	84.8	83.9	217
Gatsibo	92.5	81.8	76.7	467	95.0	94.5	90.4	219
Kayonza	90.3	81.1	75.3	445	86.0	86.0	76.8	207
Kirehe	82.4	72.8	65.3	426	98.0	79.3	79.3	198
Ngoma	90.5	86.7	81.4	398	89.7	60.1	54.7	203
Bugesera	93.2	83.6	78.9	470	92.1	41.9	38.9	229

[1] Using condoms every time they have sexual intercourse
[2] Partner who has no other partners

Table D.71.1 Comprehensive knowledge about AIDS: Women

Percentage of women age 15-49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly reject local misconceptions about AIDS transmission or prevention, and the percentage with a comprehensive knowledge about AIDS, by district, Rwanda 2010

	Percentage of respondents who say that:						
Districts	A healthy-looking person can have the AIDS virus	AIDS cannot be transmitted by mosquito bites	AIDS cannot be transmitted by supernatural means	A person cannot become infected by sharing food with a person who has AIDS	Percentage who say that a healthy looking person can have the AIDS virus and who reject the two most common local misconceptions[1]	Percentage with a comprehensive knowledge about AIDS[2]	Number of women
Nyarugenge	95.8	90.8	98.1	96.1	86.2	77.3	617
Gasabo	94.6	86.5	95.4	94.6	79.8	71.7	608
Kicukiro	93.7	87.2	95.2	93.4	78.6	71.9	665
Nyanza	94.4	88.2	98.5	93.6	82.3	73.1	390
Gisagara	86.7	77.6	95.6	92.3	66.8	52.1	428
Nyaruguru	86.8	77.4	93.5	88.2	65.8	55.4	433
Huye	94.1	85.8	96.7	94.6	80.0	67.7	424
Nyamagabe	86.8	77.3	90.3	84.2	62.2	48.5	423
Ruhango	96.9	87.9	98.8	92.6	84.8	80.2	420
Muhanga	89.4	79.5	95.4	90.6	70.1	58.7	395
Kamonyi	86.2	84.1	97.4	93.9	72.1	62.1	427
Karongi	89.2	82.0	93.5	92.1	73.4	55.9	417
Rutsiro	83.8	78.3	88.5	88.5	65.4	52.5	451
Rubavu	75.6	78.3	82.4	85.5	63.1	38.9	442
Nyabihu	77.1	68.6	91.0	83.7	51.4	35.6	455
Ngororero	77.8	70.4	89.1	76.7	53.0	34.8	460
Rusizi	83.3	73.8	89.4	87.3	60.0	36.9	442
Nyamasheke	86.8	84.5	93.4	88.5	70.7	62.4	471
Rulindo	91.0	88.4	95.1	93.8	78.1	72.3	466
Gakenke	80.0	62.9	82.5	86.2	42.9	36.8	429
Musanze	87.3	71.6	87.5	87.7	60.8	44.0	464
Burera	82.6	57.6	76.0	76.5	40.9	34.4	413
Gicumbi	88.8	81.5	90.6	91.8	69.6	55.5	427
Rwamagana	86.4	89.7	96.7	96.5	75.2	67.8	456
Nyagatare	93.4	84.2	95.7	94.1	77.1	69.7	442
Gatsibo	86.9	79.7	90.8	91.6	66.8	54.2	467
Kayonza	92.1	79.6	93.9	91.7	71.2	54.4	445
Kirehe	88.3	79.3	92.7	93.9	69.7	45.3	426
Ngoma	89.7	60.3	86.4	82.2	54.0	46.0	398
Bugesera	87.0	78.9	95.3	92.1	65.1	52.8	470

[1] Two most common local misconceptions: HIV transmission by mosquito bites and sharing food

[2] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention.

Table D.71.2 Comprehensive knowledge about AIDS: Men

Percentage of men age 15-49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly reject local misconceptions about AIDS transmission or prevention, and the percentage with a comprehensive knowledge about AIDS, by district, Rwanda 2010

	Percentage of respondents who say that:						
Districts	A healthy-looking person can have the AIDS virus	AIDS cannot be transmitted by mosquito bites	AIDS cannot be transmitted by supernatural means	A person cannot become infected by sharing food with a person who has AIDS	Percentage who say that a healthy looking person can have the AIDS virus and who reject the two most common local misconceptions[1]	Percentage with a comprehensive knowledge about AIDS[2]	Number of men
Nyarugenge	95.1	88.3	97.1	96.1	82.8	38.3	308
Gasabo	95.4	83.4	96.1	93.2	78.2	70.7	307
Kicukiro	94.0	93.1	98.1	94.3	87.1	73.8	317
Nyanza	93.5	81.0	96.7	92.4	72.8	54.3	184
Gisagara	86.1	82.3	94.7	92.3	69.9	43.1	209
Nyaruguru	86.1	61.4	83.2	85.1	50.0	41.6	202
Huye	88.6	77.7	92.9	92.4	66.8	60.3	184
Nyamagabe	89.5	77.5	95.8	83.2	67.0	50.8	191
Ruhango	90.2	83.0	97.9	94.3	75.3	58.8	194
Muhanga	94.6	74.9	98.2	90.4	70.7	53.3	167
Kamonyi	95.7	71.5	95.7	94.6	67.7	29.0	186
Karongi	82.4	68.4	87.2	81.3	54.5	41.7	187
Rutsiro	77.5	63.5	67.1	78.4	38.3	28.4	222
Rubavu	85.1	56.3	79.5	84.2	45.1	35.3	215
Nyabihu	88.0	80.3	94.0	89.1	67.2	61.7	183
Ngororero	84.8	76.4	93.3	88.5	64.2	51.5	165
Rusizi	93.8	71.4	92.3	92.7	66.8	48.3	259
Nyamasheke	85.2	63.7	79.7	78.6	48.4	39.6	182
Rulindo	92.6	78.3	95.1	91.1	70.4	52.2	203
Gakenke	87.6	63.8	87.0	86.4	54.8	41.2	177
Musanze	84.8	83.8	91.7	92.6	68.1	55.4	204
Burera	79.9	71.3	92.5	89.1	55.7	46.6	174
Gicumbi	92.5	80.3	96.2	93.0	73.7	54.5	213
Rwamagana	90.6	73.1	90.6	86.5	61.4	53.4	223
Nyagatare	94.5	78.8	96.3	91.2	73.3	64.1	217
Gatsibo	91.8	88.6	96.8	94.5	81.7	75.3	219
Kayonza	93.2	82.1	95.7	86.0	73.9	59.4	207
Kirehe	94.9	75.8	94.4	91.9	70.2	56.6	198
Ngoma	87.7	74.4	95.1	92.6	64.0	34.5	203
Bugesera	83.8	85.2	94.8	95.6	69.9	27.5	229

[1] Two most common local misconceptions: HIV transmission by mosquito bites and sharing food

[2] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention.

Table D.72 Knowledge of prevention of mother to child transmission of HIV

Percentage of women and men age 15-49 who know that HIV can be transmitted from mother to child 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 district, Rwanda 2010

	Women						Men					
Districts	HIV can be transmitted by breastfeeding	HIV can be transmitted during pregnancy	HIV can be transmitted during delivery	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of women	HIV can be transmitted by breastfeeding	HIV can be transmitted during pregnancy	HIV can be transmitted during delivery	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of men
Nyarugenge	95.5	61.1	96.4	95.5	92.4	617	89.6	55.2	93.5	94.8	85.4	308
Gasabo	97.2	67.6	98.4	97.5	95.4	608	88.9	56.0	94.8	93.5	84.4	307
Kicukiro	94.3	68.3	95.6	93.8	89.6	665	91.5	70.0	95.0	95.6	88.6	317
Nyanza	94.6	71.5	95.9	94.1	89.2	390	96.7	64.7	96.2	93.5	90.8	184
Gisagara	91.8	67.3	93.0	87.6	82.2	428	85.6	61.2	88.5	89.5	79.9	209
Nyaruguru	95.6	61.4	89.4	90.1	87.3	433	92.1	62.4	88.1	85.1	80.2	202
Huye	94.3	68.4	92.9	95.3	91.5	424	89.1	67.9	91.3	89.1	81.5	184
Nyamagabe	92.9	64.5	91.5	90.1	85.8	423	91.6	60.7	93.2	94.2	87.4	191
Ruhango	98.6	49.5	98.6	96.7	95.5	420	96.9	71.1	96.9	96.4	93.3	194
Muhanga	96.5	58.2	97.5	94.7	92.2	395	93.4	56.3	93.4	85.0	80.8	167
Kamonyi	91.1	52.0	92.7	90.6	85.9	427	93.0	62.4	96.8	91.4	85.5	186
Karongi	94.5	74.3	94.2	95.9	92.8	417	90.9	61.0	92.0	93.6	87.7	187
Rutsiro	92.2	74.1	93.1	93.6	87.8	451	90.5	63.5	89.2	88.7	82.9	222
Rubavu	93.2	84.8	98.6	96.2	92.3	442	90.7	74.4	86.5	83.7	79.1	215
Nyabihu	87.5	72.3	92.1	94.5	83.5	455	90.2	54.1	94.0	94.5	86.9	183
Ngororero	88.3	68.7	88.3	88.9	80.9	460	75.2	58.8	92.7	92.1	70.9	165
Rusizi	86.7	64.9	94.1	90.0	83.0	442	92.3	58.3	90.0	90.0	84.2	259
Nyamasheke	94.9	64.3	88.5	94.3	91.5	471	93.4	64.3	91.8	94.5	90.7	182
Rulindo	97.6	66.5	95.5	96.8	94.8	466	89.7	63.5	87.7	88.2	81.8	203
Gakenke	94.9	70.9	97.0	94.2	90.7	429	88.7	57.6	93.8	93.2	84.2	177
Musanze	94.6	59.1	94.8	90.7	86.9	464	90.2	66.2	93.6	88.2	81.4	204
Burera	93.7	68.0	92.5	90.1	87.4	413	86.2	66.7	85.1	89.1	81.6	174
Gicumbi	96.0	65.6	95.1	93.4	91.3	427	93.0	70.4	94.4	91.1	84.5	213
Rwamagana	97.4	44.7	97.6	99.1	97.1	456	89.7	59.2	94.6	93.3	87.0	223
Nyagatare	98.4	65.2	98.2	94.1	93.9	442	81.1	60.8	94.5	96.8	80.2	217
Gatsibo	90.4	43.5	97.6	98.1	89.3	467	89.5	62.6	92.7	75.3	69.4	219
Kayonza	94.6	63.6	96.9	94.8	89.9	445	92.8	70.5	97.1	93.7	89.9	207
Kirehe	94.8	58.2	93.9	87.6	84.7	426	90.4	49.0	86.9	89.4	83.8	198
Ngoma	93.5	61.6	97.5	95.5	89.9	398	89.2	54.2	92.1	88.7	80.8	203
Bugesera	94.3	64.3	96.0	88.5	84.7	470	91.7	60.7	90.8	90.0	85.6	229

Table D.73 Information given about AIDS during antenatal visits

Percentage of women age 15-49 with a child born since January 2008 and who know about AIDS who were given specific information about AIDS during antenatal care visits for their last born child, by district, Rwanda 2010

	Percentage were informed about:			
District	Babies getting the AIDS virus from their mother	Things you can do to prevent getting the AIDS virus	Getting tested for the AIDS virus	Number of women
Nyarugenge	95.1	94.5	95.7	164
Gasabo	95.8	97.4	98.4	189
Kicukiro	94.8	93.1	97.7	173
Nyanza	93.9	95.4	95.4	131
Gisagara	94.7	90.8	94.7	152
Nyaruguru	86.2	92.5	96.2	159
Huye	90.4	91.7	95.5	157
Nyamagabe	89.6	92.4	95.8	144
Ruhango	100.0	100.0	100.0	121
Muhanga	96.4	98.2	99.1	110
Kamonyi	98.6	99.3	99.3	145
Karongi	97.3	97.9	98.6	146
Rutsiro	94.9	94.9	96.6	175
Rubavu	93.9	93.3	93.9	165
Nyabihu	98.8	98.8	98.8	165
Ngororero	92.8	92.1	98.7	152
Rusizi	93.1	91.8	96.2	159
Nyamasheke	94.4	90.0	96.9	160
Rulindo	98.4	99.2	100.0	123
Gakenke	87.9	85.8	95.7	141
Musanze	92.8	93.4	94.1	152
Burera	88.4	93.4	95.9	121
Gicumbi	92.5	94.0	97.0	133
Rwamagana	89.5	94.8	96.7	153
Nyagatare	96.0	98.9	96.6	174
Gatsibo	98.3	98.3	98.3	174
Kayonza	91.6	93.0	96.5	143
Kirehe	85.1	90.9	92.9	154
Ngoma	96.0	94.7	99.3	150
Bugesera	95.6	95.1	95.1	182

Table D.74.1 Accepting attitudes toward those living with HIV/AIDS: Women

Among women age 15-49 who have heard of AIDS, percentage expressing specific accepting attitudes toward people with AIDS, by district, Rwanda 2010

	Percentage of respondents who:					
Districts	Are willing to care for a family member with the AIDS virus in the respondent's home	Would buy fresh vegetables from shopkeeper who has the AIDS virus	Say that a female teacher with the AIDS virus and is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus	Percentage expressing acceptance attitudes on all four indicators	Number of respondents who have heard of AIDS
Nyarugenge	97.9	92.7	93.0	61.1	55.3	617
Gasabo	99.3	92.3	95.2	63.5	56.7	608
Kicukiro	98.3	92.2	95.0	65.2	58.1	664
Nyanza	99.5	88.7	91.0	73.1	61.5	390
Gisagara	96.7	88.8	91.8	70.6	58.4	428
Nyaruguru	95.8	80.6	87.5	84.3	62.7	432
Huye	98.1	88.7	91.5	84.2	71.0	424
Nyamagabe	97.4	86.8	90.1	87.7	70.4	423
Ruhango	98.6	87.9	92.1	76.0	66.2	420
Muhanga	99.5	81.0	84.3	67.8	50.6	395
Kamonyi	97.2	83.1	87.6	73.8	60.4	427
Karongi	97.8	91.1	89.9	58.5	50.4	417
Rutsiro	94.2	77.4	84.3	53.0	41.2	451
Rubavu	87.8	71.0	76.0	63.6	47.5	442
Nyabihu	96.7	74.7	87.0	33.2	21.5	455
Ngororero	92.6	68.0	77.1	55.6	29.8	459
Rusizi	92.8	81.7	83.0	69.2	52.9	442
Nyamasheke	92.8	74.7	84.9	69.2	52.0	471
Rulindo	99.8	84.8	92.7	69.3	56.4	466
Gakenke	98.4	84.6	91.4	52.0	39.2	429
Musanze	95.0	79.1	83.0	50.9	36.6	464
Burera	90.8	70.5	77.7	51.3	30.3	413
Gicumbi	99.1	80.8	87.4	76.6	58.5	427
Rwamagana	97.6	86.2	92.1	62.5	53.5	456
Nyagatare	97.7	88.7	87.3	74.2	63.6	442
Gatsibo	94.6	82.6	83.7	67.8	52.4	466
Kayonza	97.3	86.3	86.5	75.3	59.8	445
Kirehe	97.4	89.4	87.6	74.2	60.6	426
Ngoma	96.5	77.4	80.2	74.4	54.8	398
Bugesera	97.4	90.6	92.1	70.9	61.7	470

Table D.74.2 Accepting attitudes toward those living with HIV/AIDS: Men

Among men age 15-49 who have heard of HIV/AIDS, percentage expressing specific accepting attitudes toward people with HIV/AIDS, by district, Rwanda 2010

District	Percentage of respondents who:				Percentage expressing acceptance attitudes on all four indicators	Number of respondents who have heard of AIDS
	Are willing to care for a family member with the AIDS virus in the respondent's home	Would buy fresh vegetables from shopkeeper who has the AIDS virus	Say that a female teacher with the AIDS virus and is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus		
Nyarugenge	99.0	97.4	97.4	82.1	77.9	308
Gasabo	98.4	93.8	93.2	75.2	67.4	307
Kicukiro	99.4	93.7	92.1	79.5	70.3	317
Nyanza	97.8	92.9	92.4	77.7	66.3	184
Gisagara	96.2	88.5	86.5	94.2	77.4	208
Nyaruguru	95.0	93.1	85.6	86.6	70.3	202
Huye	97.8	90.2	95.7	79.3	71.2	184
Nyamagabe	99.0	89.5	91.6	87.4	71.2	191
Ruhango	98.5	90.7	94.8	87.6	78.4	194
Muhanga	98.2	92.8	89.8	76.6	66.5	167
Kamonyi	97.3	91.9	91.9	82.8	74.7	186
Karongi	95.2	88.2	87.7	78.6	62.0	187
Rutsiro	91.4	77.0	80.2	67.1	46.4	222
Rubavu	93.0	76.7	70.7	72.1	45.1	215
Nyabihu	95.1	91.3	84.7	57.9	45.4	183
Ngororero	94.5	79.4	81.2	70.3	49.1	165
Rusizi	98.1	88.4	81.9	85.3	64.5	259
Nyamasheke	96.7	85.2	84.1	77.5	58.8	182
Rulindo	97.5	88.6	89.1	75.2	60.9	202
Gakenke	98.9	89.3	89.3	62.1	50.3	177
Musanze	95.6	87.7	89.2	54.9	43.1	204
Burera	97.7	86.8	90.2	59.8	46.0	174
Gicumbi	97.2	91.1	93.9	81.7	72.3	213
Rwamagana	98.2	83.0	88.3	78.9	62.8	223
Nyagatare	98.6	91.7	81.1	67.7	51.2	217
Gatsibo	98.2	92.7	95.9	93.6	85.4	219
Kayonza	96.1	93.7	92.3	89.4	77.8	207
Kirehe	99.0	91.9	87.4	87.4	72.7	198
Ngoma	96.6	91.6	82.3	85.7	66.5	203
Bugesera	99.6	93.4	89.5	89.1	76.4	229

Table D.75 Attitudes toward negotiating safer sexual relations with husband

Percentage of women and men age 15-49 who believe that a woman is justified in refusing to have sexual intercourse with her husband if she knows that he has sexual intercourse with other women, and percentage who believe that a woman is justified in asking that they use a condom if she knows that her husband has a sexually transmitted infection (STI), by district, Rwanda 2010

	Women			Men		
District	Refusing to have sexual intercourse with husband if she knows he has sex with other women	Asking that they use a condom if she knows that her husband has an STI	Number of women	Refusing to have sexual intercourse with husband if she knows he has sex with other women	Asking that they use a condom if she knows that her husband has an STI	Number of men
Nyarugenge	84.4	98.2	617	94.2	98.7	308
Gasabo	87.2	98.2	608	89.9	97.7	307
Kicukiro	83.6	95.8	665	85.2	97.2	317
Nyanza	88.7	95.6	390	88.0	97.3	184
Gisagara	83.4	94.6	428	73.7	97.1	209
Nyaruguru	82.0	92.6	433	81.7	94.1	202
Huye	86.6	95.8	424	79.9	97.3	184
Nyamagabe	81.3	92.4	423	84.8	95.3	191
Ruhango	85.5	96.7	420	86.6	99.0	194
Muhanga	73.7	97.7	395	97.0	99.4	167
Kamonyi	79.6	97.9	427	99.5	99.5	186
Karongi	74.3	95.0	417	81.8	94.7	187
Rutsiro	71.6	93.3	451	73.0	91.0	222
Rubavu	69.5	98.0	442	81.4	96.3	215
Nyabihu	80.7	96.7	455	83.1	96.2	183
Ngororero	76.1	94.1	460	86.7	95.2	165
Rusizi	77.6	95.9	442	83.8	95.0	259
Nyamasheke	81.5	93.2	471	91.2	96.2	182
Rulindo	89.5	97.6	466	89.7	99.5	203
Gakenke	79.7	96.0	429	88.1	98.3	177
Musanze	86.9	93.5	464	80.4	97.5	204
Burera	79.7	92.5	413	86.2	96.6	174
Gicumbi	87.1	98.1	427	90.6	97.2	213
Rwamagana	83.8	96.9	456	94.2	98.7	223
Nyagatare	67.2	98.0	442	94.5	97.2	217
Gatsibo	71.5	98.1	467	83.6	86.3	219
Kayonza	84.0	91.7	445	81.6	91.3	207
Kirehe	79.1	92.3	426	91.4	96.5	198
Ngoma	86.4	95.7	398	82.8	94.6	203
Bugesera	89.8	96.2	470	82.5	95.6	229

Table D.76 Adult support of education about condom use to prevent AIDS

Percentage of women and men age 18-49 who agree that children age 12-14 years should be taught about using a condom to avoid AIDS, by district, Rwanda 2010

	Women		Men	
Districts	Percentage who agree	Number	Percentage who agree	Number
Nyarugenge	91.4	538	93.1	277
Gasabo	95.1	555	93.3	283
Kicukiro	92.4	582	94.4	285
Nyanza	88.3	334	92.5	161
Gisagara	88.1	377	83.7	172
Nyaruguru	83.0	358	88.6	166
Huye	90.7	377	94.1	153
Nyamagabe	91.4	360	92.1	164
Ruhango	92.0	361	90.6	171
Muhanga	88.3	349	83.6	146
Kamonyi	87.4	373	84.1	164
Karongi	88.5	364	96.1	152
Rutsiro	90.3	382	91.3	183
Rubavu	75.3	381	87.6	170
Nyabihu	89.2	388	89.3	149
Ngororero	84.8	389	93.7	143
Rusizi	88.5	381	88.9	217
Nyamasheke	83.3	395	90.2	153
Rulindo	94.8	385	91.2	170
Gakenke	91.8	376	91.7	156
Musanze	89.2	388	87.3	173
Burera	86.2	363	84.6	143
Gicumbi	91.3	366	90.3	176
Rwamagana	93.9	395	95.4	194
Nyagatare	88.6	395	87.8	189
Gatsibo	94.1	389	97.9	187
Kayonza	89.9	377	97.2	179
Kirehe	86.4	376	82.0	161
Ngoma	86.7	353	90.9	175
Bugesera	89.6	394	87.6	194

Table D.77.1 Multiple sexual partners: Women

Among all women age 15-49, the percentage who had sexual intercourse with more than one sexual partner in the past 12 months; and the mean number of sexual partners during their lifetime for women who ever had sexual intercourse, by district, Rwanda 2010

	All women		Among women who ever had sexual intercourse[1]:	
District	Percentage who had 2+ partners in the past 12 months	Number of women	Mean number of sexual partners in lifetime	Number of women
Nyarugenge	1.5	617	1.8	417
Gasabo	1.3	608	1.8	428
Kicukiro	0.5	665	1.7	450
Nyanza	0.3	390	1.4	277
Gisagara	0.5	428	1.3	317
Nyaruguru	0.5	433	1.3	295
Huye	0.5	424	1.8	312
Nyamagabe	0.2	423	1.3	269
Ruhango	0.2	420	1.3	288
Muhanga	0.8	395	1.5	289
Kamonyi	0.0	427	1.4	291
Karongi	0.5	417	1.3	289
Rutsiro	0.4	451	1.3	314
Rubavu	0.2	442	1.3	309
Nyabihu	0.9	455	1.5	314
Ngororero	1.1	460	1.4	322
Rusizi	0.2	442	1.2	292
Nyamasheke	0.6	471	1.4	283
Rulindo	0.4	466	1.5	303
Gakenke	0.0	429	1.4	293
Musanze	0.0	464	1.3	301
Burera	0.5	413	1.3	291
Gicumbi	1.2	427	1.8	307
Rwamagana	0.7	456	1.4	314
Nyagatare	1.4	442	1.3	353
Gatsibo	0.2	467	1.5	333
Kayonza	0.4	445	1.5	310
Kirehe	0.5	426	1.4	304
Ngoma	1.5	398	1.6	310
Bugesera	0.4	470	1.3	339

[1] Means are calculated excluding respondents who gave non-numeric responses.

Table D.77.2 Multiple sexual partners: Men

Among all men age 15-49, the percentage who had sexual intercourse with more than one sexual partner in the past 12 months; and the mean number of sexual partners during their lifetime for men who ever had sexual intercourse, by district, Rwanda 2010

	All men		Among men who ever had sexual intercourse[1]:	
District	Percentage who had 2+ partners in the past 12 months	Number of men	Mean number of sexual partners in lifetime	Number of men
Nyarugenge	6.8	308	4.8	242
Gasabo	5.5	307	3.5	234
Kicukiro	6.3	317	4.9	222
Nyanza	2.7	184	3.0	139
Gisagara	2.9	209	1.4	126
Nyaruguru	2.0	202	2.0	132
Huye	2.7	184	2.2	124
Nyamagabe	2.1	191	2.1	123
Ruhango	3.1	194	2.3	137
Muhanga	3.6	167	2.5	123
Kamonyi	1.6	186	2.7	138
Karongi	5.3	187	2.6	126
Rutsiro	9.9	222	2.2	148
Rubavu	6.0	215	3.1	151
Nyabihu	9.3	183	3.6	135
Ngororero	5.5	165	3.3	126
Rusizi	2.3	259	2.8	173
Nyamasheke	3.8	182	2.1	134
Rulindo	2.5	203	2.8	137
Gakenke	1.1	177	2.0	136
Musanze	2.9	204	2.5	158
Burera	1.1	174	1.7	131
Gicumbi	4.7	213	2.8	151
Rwamagana	5.8	223	4.9	179
Nyagatare	6.5	217	2.6	163
Gatsibo	1.8	219	2.8	161
Kayonza	2.4	207	2.9	151
Kirehe	3.0	198	2.3	146
Ngoma	5.9	203	3.3	157
Bugesera	2.2	229	2.2	158

[1] Means are calculated excluding respondents who gave non-numeric responses.

Table D.78 Point prevalence and cumulative prevalence of concurrent sexual partners

Percentage of all women and men age 15-49 who had concurrent sexual partners six months before the survey (point prevalence), and percentage of all women and all men 15-49 who had any concurrent sexual partners during the 12 months before the survey (cumulative prevalence), by district, Rwanda 2010

District	Point of prevalence of concurrent sexual partners[1]	Cumulative prevalence of concurrent sexual partners[2]	Number of respondents
	WOMEN		
Nyarugenge	0.3	0.5	617
Gasabo	0.2	1.0	608
Kicukiro	0.0	0.2	665
Nyanza	0.0	0.0	390
Gisagara	0.0	0.2	428
Nyaruguru	0.2	0.5	433
Huye	0.0	0.0	424
Nyamagabe	0.2	0.2	423
Ruhango	0.0	0.2	420
Muhanga	0.0	0.3	395
Kamonyi	0.0	0.0	427
Karongi	0.0	0.2	417
Rutsiro	0.2	0.2	451
Rubavu	0.2	0.2	442
Nyabihu	0.0	0.4	455
Ngororero	0.2	0.9	460
Rusizi	0.2	0.2	442
Nyamasheke	0.4	0.6	471
Rulindo	0.2	0.4	466
Gakenke	0.0	0.0	429
Musanze	0.0	0.0	464
Burera	0.0	0.5	413
Gicumbi	0.5	0.9	427
Rwamagana	0.0	0.2	456
Nyagatare	0.5	0.7	442
Gatsibo	0.0	0.0	467
Kayonza	0.2	0.2	445
Kirehe	0.0	0.2	426
Ngoma	0.0	1.0	398
Bugesera	0.0	0.4	470
	MEN		
Nyarugenge	1.3	4.5	308
Gasabo	2.0	3.6	307
Kicukiro	0.9	3.8	317
Nyanza	0.5	2.2	184
Gisagara	2.4	2.9	209
Nyaruguru	2.0	2.0	202
Huye	1.1	1.6	184
Nyamagabe	2.1	2.1	191
Ruhango	1.5	1.5	194
Muhanga	0.0	3.0	167
Kamonyi	0.0	1.6	186
Karongi	1.6	4.8	187
Rutsiro	5.4	9.5	222
Rubavu	1.9	4.7	215
Nyabihu	3.8	7.7	183
Ngororero	2.4	4.8	165
Rusizi	1.9	2.3	259
Nyamasheke	2.7	3.8	182
Rulindo	2.0	2.5	203
Gakenke	0.6	0.6	177
Musanze	1.0	1.5	204
Burera	0.0	0.6	174
Gicumbi	1.4	3.3	213
Rwamagana	0.9	4.0	223
Nyagatare	3.7	6.5	217
Gatsibo	1.4	1.8	219
Kayonza	1.4	2.4	207
Kirehe	1.5	3.0	198
Ngoma	3.0	4.9	203
Bugesera	1.7	1.7	229

Note: Two sexual partners are considered to be concurrent if the date of the most recent sexual intercourse with the earlier partner is after the date of the first sexual intercourse with the later partner. 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. Total includes 8 men with information missing on type of union.

[1] The percentage of respondents who had two (or more) sexual partners that were concurrent at the point in time six months before the survey

[2] The percentage of respondents who had two (or more) sexual partners that were concurrent anytime during the 12 months preceding the survey

Table D.79 Payment for sexual intercourse and condom use at last paid sexual intercourse

Percentage of men age 15-49 who ever paid for sexual intercourse and percentage reporting payment for sexual intercourse in the past 12 months, by district, Rwanda 2010

	Among all men		
District	Percentage who ever paid for sexual intercourse	Percentage who paid for sexual intercourse in the past 12 months	Number of men
Nyarugenge	14.0	1.0	308
Gasabo	7.5	0.7	307
Kicukiro	5.4	0.6	317
Nyanza	3.8	0.0	184
Gisagara	2.4	1.0	209
Nyaruguru	3.5	0.0	202
Huye	1.6	0.0	184
Nyamagabe	0.5	0.0	191
Ruhango	3.1	0.0	194
Muhanga	1.8	0.6	167
Kamonyi	5.4	0.0	186
Karongi	1.6	0.0	187
Rutsiro	2.3	0.0	222
Rubavu	4.2	0.0	215
Nyabihu	1.1	0.0	183
Ngororero	3.0	0.6	165
Rusizi	4.6	0.4	259
Nyamasheke	3.3	0.5	182
Rulindo	2.5	0.0	203
Gakenke	5.6	1.1	177
Musanze	5.9	1.0	204
Burera	0.6	0.6	174
Gicumbi	3.8	0.0	213
Rwamagana	5.4	0.0	223
Nyagatare	4.1	0.0	217
Gatsibo	1.8	0.0	219
Kayonza	2.4	0.5	207
Kirehe	3.5	0.0	198
Ngoma	6.4	1.0	203
Bugesera	0.9	0.4	229

Table D.80.1 Coverage of prior HIV testing: Women

Percentage of women age 15-49 who know where to get an HIV test, percent distribution of women age 15-49 by testing status and by whether they received the results of the last test, the percentage of women ever tested, and the percentage of women age 15-49 who received their test results the last time they were tested for HIV in the past 12 months, by district, Rwanda 2010

District	Percentage who know where to get an HIV test	Percent distribution of women/men by testing status and by whether they received the results of the last test			Total	Percentage ever tested	Percentage who received results from last HIV test taken in the past 12 months	Number of women
		Ever tested and received results	Ever tested, did not receive results	Never tested[1]				
Nyarugenge	99.2	79.3	1.0	19.8	100.0	80.2	38.7	617
Gasabo	99.2	82.7	1.5	15.8	100.0	84.2	37.3	608
Kicukiro	98.2	80.9	1.1	18.0	100.0	82.0	36.2	665
Nyanza	100.0	70.0	1.3	28.7	100.0	71.3	24.4	390
Gisagara	99.5	70.8	1.6	27.6	100.0	72.4	34.3	428
Nyaruguru	97.2	72.1	4.2	23.8	100.0	76.2	35.3	433
Huye	99.1	75.7	2.4	21.9	100.0	78.1	36.1	424
Nyamagabe	98.1	70.9	1.9	27.2	100.0	72.8	39.0	423
Ruhango	99.8	71.0	1.2	27.9	100.0	72.1	27.1	420
Muhanga	99.7	78.2	1.5	20.3	100.0	79.7	44.1	395
Kamonyi	100.0	76.8	2.1	21.1	100.0	78.9	40.0	427
Karongi	96.2	71.2	1.0	27.8	100.0	72.2	34.3	417
Rutsiro	96.2	71.6	2.4	25.9	100.0	74.1	39.7	451
Rubavu	99.5	64.5	0.5	35.1	100.0	64.9	33.3	442
Nyabihu	98.5	79.1	1.8	19.1	100.0	80.9	45.7	455
Ngororero	93.9	67.2	1.1	31.7	100.0	68.3	36.7	460
Rusizi	98.6	79.2	2.3	18.6	100.0	81.4	40.3	442
Nyamasheke	99.6	77.1	3.4	19.5	100.0	80.5	43.5	471
Rulindo	99.6	71.7	1.7	26.6	100.0	73.4	37.6	466
Gakenke	99.1	79.7	0.7	19.6	100.0	80.4	44.3	429
Musanze	99.1	73.9	2.4	23.7	100.0	76.3	44.8	464
Burera	99.3	71.7	2.2	26.2	100.0	73.8	39.2	413
Gicumbi	99.1	80.8	3.5	15.7	100.0	84.3	46.8	427
Rwamagana	98.9	82.9	0.4	16.7	100.0	83.3	43.0	456
Nyagatare	99.3	74.4	0.2	25.3	100.0	74.7	35.7	442
Gatsibo	99.4	79.7	1.9	18.4	100.0	81.6	44.1	467
Kayonza	99.1	78.2	1.3	20.4	100.0	79.6	36.9	445
Kirehe	98.6	72.3	0.9	26.8	100.0	73.2	31.9	426
Ngoma	99.5	74.6	1.3	24.1	100.0	75.9	41.5	398
Bugesera	99.4	79.1	1.7	19.1	100.0	80.9	39.4	470

[1] Includes 'don't know/missing'

Table D.80.2 Coverage of prior HIV testing: Men

Percentage of men age 15-49 who know where to get an HIV test, percent distribution of men age 15-49 by testing status and by whether they received the results of the last test, the percentage of men ever tested, and the percentage of men age 15-49 who received their test results the last time they were tested for HIV in the past 12 months, by district, Rwanda 2010

District	Percentage who know where to get an HIV test	Percent distribution of women/men by testing status and by whether they received the results of the last test			Total	Percentage ever tested	Percentage who received results from last HIV test taken in the past 12 months	Number of men
		Ever tested and received results	Ever tested, did not receive results	Never tested[1]				
Nyarugenge	99.0	76.9	0.6	22.4	100.0	77.6	39.9	308
Gasabo	99.0	76.5	3.3	20.2	100.0	79.8	36.5	307
Kicukiro	99.4	76.7	1.3	22.1	100.0	77.9	32.5	317
Nyanza	97.8	62.0	2.2	35.9	100.0	64.1	25.0	184
Gisagara	90.0	59.8	6.2	34.0	100.0	66.0	24.9	209
Nyaruguru	98.5	60.9	12.4	26.7	100.0	73.3	36.6	202
Huye	95.1	62.0	2.7	35.3	100.0	64.7	34.2	184
Nyamagabe	99.5	63.9	3.7	32.5	100.0	67.5	39.3	191
Ruhango	99.5	61.9	0.5	37.6	100.0	62.4	35.6	194
Muhanga	99.4	61.7	4.8	33.5	100.0	66.5	28.1	167
Kamonyi	99.5	68.3	5.9	25.8	100.0	74.2	27.4	186
Karongi	93.6	62.0	2.1	35.8	100.0	64.2	32.1	187
Rutsiro	96.4	60.4	4.1	35.6	100.0	64.4	37.8	222
Rubavu	96.7	57.2	5.1	37.7	100.0	62.3	28.8	215
Nyabihu	97.3	78.1	1.1	20.8	100.0	79.2	52.5	183
Ngororero	96.4	63.0	2.4	34.5	100.0	65.5	32.7	165
Rusizi	98.1	73.7	6.2	20.1	100.0	79.9	35.1	259
Nyamasheke	100.0	77.5	4.9	17.6	100.0	82.4	50.0	182
Rulindo	98.5	62.6	2.0	35.5	100.0	64.5	33.5	203
Gakenke	97.2	73.4	3.4	23.2	100.0	76.8	40.1	177
Musanze	95.6	77.0	2.5	20.6	100.0	79.4	49.5	204
Burera	99.4	66.1	1.7	32.2	100.0	67.8	35.6	174
Gicumbi	99.1	68.1	6.1	25.8	100.0	74.2	36.6	213
Rwamagana	97.8	70.0	3.6	26.5	100.0	73.5	39.9	223
Nyagatare	99.5	65.9	2.8	31.3	100.0	68.7	36.9	217
Gatsibo	97.7	74.9	2.3	22.8	100.0	77.2	37.0	219
Kayonza	99.5	74.9	2.9	22.2	100.0	77.8	31.9	207
Kirehe	99.0	58.6	3.0	38.4	100.0	61.6	29.8	198
Ngoma	98.5	69.5	3.0	27.6	100.0	72.4	43.3	203
Bugesera	96.1	74.7	2.6	22.7	100.0	77.3	49.3	229

[1] Includes 'don't know/missing'

Table D.81 Pregnant women counseled and tested for HIV

Among all women age 15-49 who gave birth in the two years preceding the survey, the percentage who received HIV pretest counseling, the percentage who received an HIV test during antenatal care for their most recent birth by whether they received their results and post-test counseling, and percentage who received an HIV test at the time of delivery for their most recent birth by whether they received their test results, by district, Rwanda 2010

Background characteristic	Percentage who received HIV counseling during antenatal care[1]	Percentage who were tested for HIV during antenatal care and who:			Percentage who received pretest counseling, had an HIV test, and who received results	Percentage who had an HIV test during labor and who:		Number of women who gave birth in the past two years[2]
		Received results and received post-test counseling	Received results and did not receive post-test counseling	Did not receive results		Received results	Did not receive results	
Nyarugenge	92.2	90.4	5.2	1.7	90.4	0.0	0.0	115
Gasabo	94.9	89.7	7.7	0.0	94.0	0.0	0.0	117
Kicukiro	91.1	94.6	2.7	0.0	90.2	0.0	0.9	112
Nyanza	92.8	93.8	2.1	2.1	90.7	0.0	0.0	97
Gisagara	82.8	74.1	12.9	0.9	75.0	0.9	0.9	116
Nyaruguru	84.2	91.7	6.7	0.0	84.2	0.0	0.0	120
Huye	92.2	91.1	3.3	2.2	87.8	0.0	0.0	90
Nyamagabe	85.2	79.6	6.5	2.8	77.8	1.9	0.0	108
Ruhango	98.8	98.8	0.0	0.0	98.8	1.3	0.0	80
Muhanga	92.4	79.7	11.4	3.8	87.3	0.0	0.0	79
Kamonyi	94.7	88.3	7.4	1.1	93.6	0.0	0.0	94
Karongi	95.5	96.4	0.9	0.0	94.6	0.0	0.0	111
Rutsiro	93.9	90.4	3.5	0.9	91.3	0.0	0.0	115
Rubavu	92.8	90.4	0.0	0.0	89.6	0.0	0.0	125
Nyabihu	95.6	86.7	7.1	0.9	92.0	0.9	0.0	113
Ngororero	85.0	73.5	12.4	0.0	79.6	0.0	0.0	113
Rusizi	91.7	89.2	10.0	0.8	91.7	0.0	0.0	120
Nyamasheke	89.0	94.5	3.9	0.0	89.0	0.0	0.0	127
Rulindo	98.8	93.9	1.2	1.2	93.9	0.0	0.0	82
Gakenke	82.5	82.5	7.2	0.0	76.3	0.0	0.0	97
Musanze	88.0	88.0	6.5	0.0	88.0	0.0	0.0	108
Burera	86.4	81.5	11.1	1.2	84.0	0.0	0.0	81
Gicumbi	91.0	84.3	12.4	0.0	88.8	0.0	0.0	89
Rwamagana	88.9	97.0	0.0	0.0	87.9	0.0	0.0	99
Nyagatare	89.1	85.5	1.8	2.7	85.5	0.0	0.0	110
Gatsibo	96.6	91.5	5.9	0.0	96.6	0.0	0.0	118
Kayonza	91.3	91.3	6.8	0.0	90.3	0.0	0.0	103
Kirehe	83.0	74.0	21.0	0.0	82.0	0.0	0.0	100
Ngoma	90.8	80.7	15.6	1.8	89.9	0.0	0.0	109
Bugesera	93.7	89.2	9.0	0.0	93.7	0.0	0.0	111

[1] In this context, "counseled" means that someone talked with the respondent about all three of the following topics: 1) babies getting the AIDS virus from their mother, 2) preventing the virus, and 3) getting tested for the virus
[2] Denominator for percentages includes women who did not receive antenatal care for their last birth in the past two years

Table D.82 HIV testing for prenuptial purposes

Percentage of women and men age 15-49 who were ever tested for the HIV virus because of prenuptial purposes by district, Rwanda 2010

	Women		Men	
District	Tested for prenuptial purposes	Number of respondents	Tested for prenuptial purposes	Number of respondents
Nyarugenge	27.7	617	28.9	308
Gasabo	30.6	608	30.6	307
Kicukiro	29.9	665	29.0	317
Nyanza	24.1	390	27.2	184
Gisagara	27.1	428	29.7	209
Nyaruguru	21.5	433	25.7	202
Huye	25.0	424	30.4	184
Nyamagabe	30.5	423	28.3	191
Ruhango	21.9	420	20.1	194
Muhanga	38.0	395	27.5	167
Kamonyi	31.9	427	31.7	186
Karongi	24.7	417	23.5	187
Rutsiro	16.4	451	20.7	222
Rubavu	13.6	442	18.6	215
Nyabihu	21.8	455	19.1	183
Ngororero	23.5	460	28.5	165
Rusizi	26.0	442	23.6	259
Nyamasheke	29.5	471	31.9	182
Rulindo	20.2	466	19.2	203
Gakenke	24.7	429	27.7	177
Musanze	21.8	464	22.1	204
Burera	20.8	413	25.3	174
Gicumbi	19.0	427	18.8	213
Rwamagana	21.7	456	24.7	223
Nyagatare	25.1	442	30.0	217
Gatsibo	49.3	467	21.0	219
Kayonza	44.5	445	17.9	207
Kirehe	23.5	426	25.8	198
Ngoma	28.9	398	34.0	203
Bugesera	26.6	470	35.8	229

Table D.83 HIV testing as a couple

Percentage of ever married women and men age 15-49 who were ever tested for the HIV virus as a couple by district, Rwanda 2010

	Women		Men	
District	Tested for a couple	Number of respondents	Tested for a couple	Number of respondents
Nyarugenge	78.9	323	79.2	149
Gasabo	77.0	339	81.8	143
Kicukiro	77.5	355	81.6	141
Nyanza	59.1	252	78.1	96
Gisagara	69.1	275	75.4	114
Nyaruguru	72.4	272	72.1	111
Huye	60.5	261	73.5	98
Nyamagabe	71.3	251	78.6	103
Ruhango	52.5	255	68.5	92
Muhanga	77.8	239	77.7	94
Kamonyi	77.0	256	84.1	113
Karongi	66.3	264	68.6	102
Rutsiro	66.2	275	67.5	117
Rubavu	65.3	274	64.3	112
Nyabihu	72.4	290	81.1	106
Ngororero	65.2	290	73.2	112
Rusizi	82.2	258	86.0	121
Nyamasheke	69.5	246	88.3	103
Rulindo	74.0	246	73.6	106
Gakenke	75.0	264	80.2	101
Musanze	72.0	275	80.7	109
Burera	75.6	266	84.9	106
Gicumbi	74.6	276	77.4	115
Rwamagana	65.9	264	83.9	112
Nyagatare	69.8	338	72.9	140
Gatsibo	83.6	292	78.0	123
Kayonza	83.3	275	88.5	113
Kirehe	67.4	276	67.5	114
Ngoma	70.5	264	74.8	127
Bugesera	75.2	298	85.4	130

Table D.84 Male circumcision

Percentage of men age 15-49 who report having been circumcised, by district, Rwanda 2010

District	Percentage circumcised	Number of men
Nyarugenge	40.9	308
Gasabo	32.6	307
Kicukiro	34.4	317
Nyanza	6.0	184
Gisagara	4.3	209
Nyaruguru	2.0	202
Huye	6.0	184
Nyamagabe	2.6	191
Ruhango	5.7	194
Muhanga	6.0	167
Kamonyi	2.7	186
Karongi	3.7	187
Rutsiro	4.5	222
Rubavu	28.8	215
Nyabihu	14.2	183
Ngororero	4.2	165
Rusizi	52.5	259
Nyamasheke	17.0	182
Rulindo	3.0	203
Gakenke	2.8	177
Musanze	9.3	204
Burera	6.3	174
Gicumbi	3.3	213
Rwamagana	9.4	223
Nyagatare	9.7	217
Gatsibo	11.4	219
Kayonza	14.0	207
Kirehe	5.1	198
Ngoma	7.4	203
Bugesera	9.6	229

Table D.85 Self-reported prevalence of sexually-transmitted infections (STIs) and STIs symptoms

Among women and men age 15-49 who ever had sexual intercourse, the percentage reporting having an STI and/or symptoms of an STI in the past 12 months, by district, Rwanda 2010

	Women					Men				
District	STI	Bad smelling/ abnormal genital discharge	Genital sore/ulcer	STI/ genital discharge/ sore or ulcer	Number of respondents who ever had sexual intercourse	STI	Bad smelling/ abnormal genital discharge	Genital sore/ulcer	STI/ genital discharge/ sore or ulcer	Number of respondents who ever had sexual intercourse
Nyarugenge	2.9	5.3	5.3	7.9	418	3.7	2.1	2.5	5.8	242
Gasabo	3.3	8.1	4.7	11.2	430	3.8	4.6	3.8	10.1	237
Kicukiro	3.8	4.2	3.1	6.4	452	3.6	5.4	4.9	10.7	224
Nyanza	1.1	11.5	7.9	14.0	278	2.9	7.9	6.4	13.6	140
Gisagara	3.5	7.6	4.4	11.7	317	0.0	5.2	2.2	6.7	134
Nyaruguru	2.7	3.4	2.4	5.4	295	1.5	3.0	2.3	5.3	133
Huye	4.8	6.4	4.8	9.6	312	1.6	4.8	4.0	7.3	124
Nyamagabe	2.2	3.7	2.6	6.3	268	0.8	4.9	1.6	7.3	123
Ruhango	3.1	6.9	4.2	8.0	289	2.2	11.6	8.7	18.8	138
Muhanga	2.4	8.0	5.5	11.1	289	1.6	1.6	1.6	4.1	123
Kamonyi	0.3	11.0	8.2	13.4	292	0.0	0.7	3.6	3.6	138
Karongi	0.7	5.5	1.4	5.9	289	1.6	7.1	5.5	11.0	127
Rutsiro	3.5	4.4	5.1	6.3	315	2.0	7.4	5.4	12.2	148
Rubavu	4.2	8.1	4.8	9.0	310	4.6	8.6	5.3	13.2	151
Nyabihu	2.2	2.9	2.2	3.2	315	1.5	0.0	1.5	3.0	135
Ngororero	0.9	5.6	2.2	6.2	322	0.8	0.8	1.6	1.6	126
Rusizi	4.8	11.7	5.5	12.7	291	1.2	6.4	5.2	9.8	173
Nyamasheke	7.8	8.1	8.8	10.6	283	7.5	3.7	9.7	14.9	134
Rulindo	1.0	3.6	1.3	4.3	303	0.0	1.5	0.7	2.2	137
Gakenke	1.7	6.1	3.1	7.8	294	1.5	9.5	1.5	10.2	137
Musanze	2.3	3.6	1.3	5.3	302	1.3	4.4	3.2	5.7	158
Burera	1.7	3.4	2.1	5.5	290	0.8	2.3	2.3	4.6	131
Gicumbi	1.3	5.2	2.0	6.5	307	2.6	1.3	4.0	5.3	151
Rwamagana	4.5	4.8	4.8	6.1	314	3.3	3.3	3.3	7.2	180
Nyagatare	2.5	3.4	2.3	4.0	353	4.3	3.1	4.9	9.2	163
Gatsibo	4.8	6.3	4.8	6.9	333	0.0	0.0	0.0	0.0	162
Kayonza	6.5	11.6	7.4	14.8	310	2.6	2.0	0.7	2.6	151
Kirehe	3.6	4.6	5.0	7.3	303	4.1	4.1	4.8	10.9	147
Ngoma	2.6	3.9	7.4	9.7	310	3.2	8.3	8.3	14.0	157
Bugesera	6.5	8.0	5.6	13.6	339	1.9	1.9	0.0	3.2	158

Table D.86 Prevalence of medical injections

Percentage of women and men age 15-49 who received at least one medical injection in the last 12 months, the average number of medical injections per person in the last 12 months, and among those who received a medical injection, the percentage of last medical injections for which the syringe and needle were taken from a new, unopened package, by district, Rwanda 2010

	Women					Men				
District	Percentage who received a medical injection in the last 12 months	Average number of medical injections per person in the last 12 months	Number of respondents	For last injection, syringe and needle taken from a new, unopened package	Number of respondents receiving medical injections in the last 12 months	Percentage who received a medical injection in the last 12 months	Average number of medical injections per person in the last 12 months	Number of respondents	For last injection, syringe and needle taken from a new, unopened package	Number of respondents receiving medical injections in the last 12 months
Nyarugenge	62.1	2.2	617	99.5	383	46.4	0.8	308	100.0	143
Gasabo	59.5	1.7	608	99.2	362	47.9	1.0	307	98.6	147
Kicukiro	60.8	1.7	665	97.0	404	43.2	0.9	317	100.0	137
Nyanza	53.1	1.5	390	99.5	207	43.5	0.6	184	100.0	80
Gisagara	46.5	1.5	428	99.0	199	*	*	*	*	21
Nyaruguru	42.7	1.2	433	99.5	185	45.5	1.5	202	97.8	92
Huye	46.5	1.5	424	100.0	197	44.0	1.3	184	100.0	81
Nyamagabe	48.0	1.4	423	97.0	203	48.2	1.7	191	98.9	92
Ruhango	49.3	1.3	420	99.0	207	53.6	0.7	194	100.0	104
Muhanga	45.3	1.6	395	99.4	179	(32.9)	(0.9)	(167)	(98.2)	55
Kamonyi	50.8	1.5	427	97.7	217	39.2	0.5	186	100.0	73
Karongi	43.4	0.9	417	94.5	181	*	*	*	*	11
Rutsiro	57.2	1.7	451	96.9	258	36.9	1.0	222	98.8	82
Rubavu	47.5	1.2	442	100.0	210	36.3	0.5	215	100.0	78
Nyabihu	66.8	1.5	455	98.4	304	56.3	0.8	183	99.0	103
Ngororero	36.3	1.0	460	98.2	167	35.8	0.6	165	98.3	59
Rusizi	57.9	1.5	442	100.0	256	56.0	1.2	259	98.6	145
Nyamasheke	59.4	1.5	471	98.6	280	74.2	1.1	182	100.0	135
Rulindo	61.8	1.6	466	99.7	288	40.4	0.6	203	97.6	82
Gakenke	64.6	1.7	429	97.8	277	47.5	0.7	177	97.6	84
Musanze	64.2	1.5	464	99.7	298	49.0	1.1	204	100.0	100
Burera	54.0	1.5	413	99.1	223	43.1	0.9	174	98.7	75
Gicumbi	66.5	1.8	427	96.8	284	39.9	0.8	213	96.5	85
Rwamagana	61.0	1.7	456	99.3	278	56.1	0.9	223	100.0	125
Nyagatare	58.6	1.6	442	100.0	259	47.5	0.8	217	99.0	103
Gatsibo	58.5	1.7	467	98.5	273	47.0	0.5	219	100.0	103
Kayonza	59.6	1.6	445	100.0	265	48.3	0.5	207	100.0	100
Kirehe	58.7	1.6	426	100.0	250	49.0	0.7	198	100.0	97
Ngoma	62.1	1.9	398	99.6	247	52.2	0.7	203	99.1	106
Bugesera	60.0	1.5	470	98.9	282	31.0	0.4	229	100.0	71

Note: Medical injections are those given by a doctor, nurse, pharmacist, dentist or other health worker. 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.

Table D.87 Comprehensive knowledge about AIDS and of a source of condoms among youth

Percentage of young women and young men age 15-24 with comprehensive knowledge about AIDS and percentage with knowledge of a source of condoms, by district, Rwanda 2010

	Women			Men		
Background characteristic	Percentage with comprehensive knowledge of AIDS[1]	Percentage who know a condom source[2]	Number of respondents	Percentage with comprehensive knowledge of AIDS[1]	Percentage who know a condom source[2]	Number of respondents
Nyarugenge	77.5	98.0	302	40.4	99.0	104
Gasabo	72.0	93.6	250	61.7	93.5	107
Kicukiro	69.5	87.7	302	66.4	97.7	128
Nyanza	68.5	88.6	149	52.6	94.7	76
Gisagara	41.4	87.9	157	38.8	78.8	80
Nyaruguru	50.5	66.1	192	38.5	75.8	91
Huye	61.6	80.8	146	55.1	93.6	78
Nyamagabe	49.7	56.7	187	41.6	93.5	77
Ruhango	83.5	95.1	164	43.4	100.0	83
Muhanga	51.4	93.2	148	58.1	93.5	62
Kamonyi	56.3	97.9	142	28.3	88.7	53
Karongi	50.3	76.5	153	35.0	71.3	80
Rutsiro	50.0	78.9	194	22.2	78.8	99
Rubavu	36.0	98.6	214	33.3	89.5	114
Nyabihu	36.4	71.8	195	55.3	78.9	76
Ngororero	34.4	55.4	195	46.6	79.3	58
Rusizi	34.8	87.5	184	47.7	86.5	111
Nyamasheke	60.4	85.7	217	37.8	94.6	74
Rulindo	67.7	93.0	201	55.7	94.3	88
Gakenke	32.2	87.4	183	43.8	94.5	73
Musanze	41.5	83.1	207	48.4	83.5	91
Burera	36.6	84.8	164	44.8	76.1	67
Gicumbi	56.9	80.4	153	56.4	96.0	101
Rwamagana	63.8	97.3	188	51.1	100.0	90
Nyagatare	68.8	88.1	160	57.1	95.6	91
Gatsibo	44.9	94.4	198	72.4	98.0	98
Kayonza	50.0	89.9	178	56.4	93.6	78
Kirehe	37.9	80.2	177	52.8	95.5	89
Ngoma	48.5	90.8	163	33.3	97.6	84
Bugesera	49.5	93.8	192	29.8	97.9	94

[1] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention. The components of comprehensive knowledge are presented in Tables 13.2, 13.3.1, and 13.3.2

[2] For this table, the following responses are not considered sources for condoms: friends, family members and home

Table D.88 Age at first sexual intercourse among youth

Percentage of young women and of young men age 15-24 who had sexual intercourse before age 15 and percentage of young women and of young men age 18-24 who had sexual intercourse before age 18, by district, Rwanda 2010

	Women				Men			
District	Percentage who had sexual intercourse before age 15	Number of respondents (15-24)	Percentage who had sexual intercourse before age 18	Number of respondents (18-24)	Percentage who had sexual intercourse before age 15	Number of respondents (15-24)	Percentage who had sexual intercourse before age 18	Number of respondents (18-24)
Nyarugenge	5.0	302	22.9	223	2.9	104	(20.5)	73
Gasabo	3.6	250	16.8	197	14.0	107	26.5	83
Kicukiro	4.0	302	21.0	219	3.9	128	20.8	96
Nyanza	2.0	149	6.5	93	18.4	76	(30.2)	53
Gisagara	3.2	157	15.1	106	2.5	80	(9.3)	43
Nyaruguru	2.6	192	10.3	117	9.9	91	(16.4)	55
Huye	3.4	146	11.1	99	7.7	78	(19.1)	47
Nyamagabe	0.5	187	10.5	124	3.9	77	20.0	50
Ruhango	1.2	164	13.3	105	13.3	83	25.0	60
Muhanga	5.4	148	17.6	102	1.6	62	(19.5)	41
Kamonyi	6.3	142	20.5	88	0.0	53	(6.5)	31
Karongi	2.6	153	13.0	100	11.3	80	(15.6)	45
Rutsiro	3.6	194	12.8	125	10.1	99	21.7	60
Rubavu	2.3	214	20.9	153	14.9	114	44.9	69
Nyabihu	5.1	195	18.8	128	10.5	76	(33.3)	42
Ngororero	5.6	195	18.5	124	13.8	58	(33.3)	36
Rusizi	3.3	184	13.0	123	12.6	111	17.4	69
Nyamasheke	3.7	217	10.6	141	14.9	74	24.4	45
Rulindo	4.0	201	16.7	120	8.0	88	(23.6)	55
Gakenke	2.2	183	12.3	130	15.1	73	26.9	52
Musanze	5.8	207	17.6	131	23.1	91	38.3	60
Burera	4.9	164	18.4	114	20.9	67	(30.6)	36
Gicumbi	3.9	153	7.6	92	12.9	101	29.7	64
Rwamagana	6.4	188	21.3	127	25.6	90	44.3	61
Nyagatare	1.9	160	19.5	113	9.9	91	36.5	63
Gatsibo	5.1	198	18.3	120	10.2	98	27.3	66
Kayonza	4.5	178	17.3	110	10.3	78	(38.0)	50
Kirehe	3.4	177	15.0	127	22.5	89	28.8	52
Ngoma	5.5	163	29.7	118	1.2	84	25.0	56
Bugesera	3.6	192	19.8	116	4.3	94	18.6	59

[1] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention. The components of comprehensive knowledge are presented in Tables 13.2, 13.3.1, and 13.3.2. Figures in parentheses are based on 25-49 unweighted cases.

[2] For this table, the following responses are not considered sources for condoms: friends, family members and home

Table D.89 Premarital sexual intercourse and condom use during premarital sexual intercourse among youth

Among never-married women and men age 15-24, the percentage who have never had sexual intercourse, and the percentage who had sexual intercourse in the past 12 months, by district, Rwanda 2010

	Women			Men		
Districts	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the past 12 months	Number of never married respondents	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the past 12 months	Number of never married respondents
Nyarugenge	73.2	13.8	239	60.0	17.0	100
Gasabo	75.5	7.1	196	58.2	17.3	98
Kicukiro	74.5	12.7	251	65.6	17.2	122
Nyanza	88.2	6.7	119	55.1	14.5	69
Gisagara	80.5	4.9	123	87.0	6.5	77
Nyaruguru	88.7	5.3	151	84.0	3.7	81
Huye	77.0	10.3	126	74.3	12.2	74
Nyamagabe	94.8	2.6	153	82.2	4.1	73
Ruhango	86.0	3.7	136	62.5	16.3	80
Muhanga	76.0	13.6	125	71.9	12.3	57
Kamonyi	81.0	6.3	126	83.0	5.7	53
Karongi	89.0	3.1	127	74.0	3.9	77
Rutsiro	81.3	5.8	155	75.6	7.8	90
Rubavu	81.3	11.8	144	62.1	16.8	95
Nyabihu	86.3	6.2	146	65.2	10.1	69
Ngororero	81.2	4.5	154	74.0	6.0	50
Rusizi	85.7	5.4	147	70.8	2.8	106
Nyamasheke	88.0	3.1	191	63.2	11.8	68
Rulindo	81.6	6.9	174	71.6	3.7	81
Gakenke	84.0	8.3	144	56.9	18.5	65
Musanze	89.1	5.1	156	51.3	16.3	80
Burera	87.4	2.5	119	67.2	8.2	61
Gicumbi	86.3	4.8	124	66.3	8.7	92
Rwamagana	77.9	9.1	154	48.8	11.9	84
Nyagatare	86.9	8.1	99	71.8	14.1	71
Gatsibo	84.2	3.3	152	62.6	13.2	91
Kayonza	82.3	10.2	147	64.9	9.1	77
Kirehe	83.2	4.6	131	64.6	5.1	79
Ngoma	69.5	16.9	118	63.8	15.9	69
Bugesera	79.2	4.7	149	78.3	7.2	83

Table D.90.1 Multiple sexual partners in the past 12 months among young people: Women

Among all women age 15-24, the percentage who had sexual intercourse with more than one sexual partner in the past 12 months, by district, Rwanda 2010

	Among all women age 15-24	
District	Percentage who had 2+ partners in the past 12 months	Number of women
Nyarugenge	1.7	302
Gasabo	0.8	250
Kicukiro	0.7	302
Nyanza	0.0	149
Gisagara	0.6	157
Nyaruguru	0.5	192
Huye	1.4	146
Nyamagabe	0.0	187
Ruhango	0.0	164
Muhanga	1.4	148
Kamonyi	0.0	142
Karongi	0.0	153
Rutsiro	0.5	194
Rubavu	0.0	214
Nyabihu	1.5	195
Ngororero	0.5	195
Rusizi	0.5	184
Nyamasheke	0.0	217
Rulindo	0.0	201
Gakenke	0.0	183
Musanze	0.0	207
Burera	1.2	164
Gicumbi	0.7	153
Rwamagana	1.1	188
Nyagatare	1.3	160
Gatsibo	0.5	198
Kayonza	0.0	178
Kirehe	0.6	177
Ngoma	2.5	163
Bugesera	0.0	192

Table D.90.2 Multiple sexual partners in the past 12 months among young people: Men

Among all young men age 15-24, the percentage who had sexual intercourse with more than one sexual partner in the past 12 months, by district, Rwanda 2010

	Among all men age 15-24	
District	Percentage who had 2+ partners in the past 12 months	Number of men
Nyarugenge	1.9	104
Gasabo	1.9	107
Kicukiro	4.7	128
Nyanza	2.6	76
Gisagara	0.0	80
Nyaruguru	0.0	91
Huye	1.3	78
Nyamagabe	0.0	77
Ruhango	2.4	83
Muhanga	1.6	62
Kamonyi	0.0	53
Karongi	0.0	80
Rutsiro	3.0	99
Rubavu	4.4	114
Nyabihu	3.9	76
Ngororero	3.4	58
Rusizi	0.0	111
Nyamasheke	0.0	74
Rulindo	0.0	88
Gakenke	1.4	73
Musanze	3.3	91
Burera	0.0	67
Gicumbi	3.0	101
Rwamagana	1.1	90
Nyagatare	1.1	91
Gatsibo	0.0	98
Kayonza	0.0	78
Kirehe	2.2	89
Ngoma	4.8	84
Bugesera	1.1	94

Table D.91 HIV prevalence

Percentage HIV positive among women and men age 15-49 who were tested, by district, Rwanda 2010

	Women		Men		Total	
District	Percentage HIV positive[1]	Number	Percentage HIV positive[1]	Number	Percentage HIV positive[1]	Number
Nyarugenge	9.8	210	6.8	200	8.3	410
Gasabo	8.7	351	4.1	362	6.4	714
Kicukiro	10.1	247	5.5	227	7.9	474
Nyanza	2.1	180	2.2	168	2.1	348
Gisagara	1.4	216	0.9	213	1.1	430
Nyaruguru	1.3	170	0.5	169	0.9	339
Huye	4.2	216	2.7	182	3.5	398
Nyamagabe	2.9	225	2.8	200	2.8	425
Ruhango	3.4	200	1.6	178	2.5	378
Muhanga	3.9	177	1.6	145	2.9	322
Kamonyi	4.4	208	1.7	189	3.1	398
Karongi	3.4	221	3.3	194	3.3	414
Rutsiro	3.7	224	3.0	214	3.4	439
Rubavu	4.3	244	1.3	233	2.8	477
Nyabihu	2.1	206	3.4	169	2.7	376
Ngororero	2.6	265	1.4	185	2.1	450
Rusizi	2.8	246	2.8	288	2.8	534
Nyamasheke	3.8	282	3.5	205	3.6	487
Rulindo	2.3	212	1.0	178	1.7	391
Gakenke	0.5	252	2.5	205	1.4	457
Musanze	3.3	252	2.1	220	2.7	472
Burera	6.0	203	0.6	172	3.5	375
Gicumbi	3.9	249	2.9	239	3.4	488
Rwamagana	5.0	219	4.2	206	4.6	425
Nyagatare	2.4	258	1.4	274	1.9	532
Gatsibo	1.2	291	0.5	264	0.9	555
Kayonza	4.4	220	2.9	194	3.7	414
Kirehe	1.5	216	0.5	199	1.0	415
Ngoma	3.1	215	2.1	219	2.6	434
Bugesera	0.8	241	1.1	239	1.0	480

Table D.92 HIV prevalence among young people

Percentage HIV-positive among women and men age 15-24 who were tested for HIV, by district, Rwanda 2010

	Women		Men			
District	Percentage HIV positive[1]	Number	Percentage HIV positive[1]	Number	Percentage HIV positive[1]	Number
Nyarugenge	4.8	108	0.7	66	3.2	174
Gasabo	4.6	149	2.3	128	3.6	276
Kicukiro	1.8	115	0.0	94	1.0	209
Nyanza	1.3	74	0.0	70	0.7	144
Gisagara	1.4	79	0.0	82	0.7	161
Nyaruguru	1.0	70	0.0	76	0.5	146
Huye	1.5	83	2.7	78	2.1	160
Nyamagabe	1.9	99	0.0	81	1.1	180
Ruhango	1.2	83	0.0	76	0.6	159
Muhanga	3.0	64	0.7	53	2.0	117
Kamonyi	1.1	71	0.0	55	0.6	126
Karongi	1.4	75	0.0	83	0.6	159
Rutsiro	0.0	103	1.4	95	0.7	198
Rubavu	2.7	117	0.0	123	1.3	240
Nyabihu	0.0	93	0.0	69	0.0	162
Ngororero	2.0	110	0.0	65	1.3	175
Rusizi	1.2	104	0.0	124	0.5	229
Nyamasheke	0.0	139	0.0	84	0.0	223
Rulindo	0.7	102	0.0	77	0.4	179
Gakenke	0.0	102	0.0	85	0.0	187
Musanze	2.0	113	0.0	98	1.1	212
Burera	2.6	79	0.0	66	1.4	146
Gicumbi	0.0	92	1.1	114	0.6	207
Rwamagana	3.2	98	1.0	83	2.2	181
Nyagatare	2.5	85	0.0	115	1.1	200
Gatsibo	0.0	125	0.0	120	0.0	245
Kayonza	0.8	87	0.0	73	0.5	159
Kirehe	0.9	97	0.0	90	0.5	187
Ngoma	1.3	90	0.0	91	0.6	181
Bugesera	0.0	98	0.0	94	0.0	192

Table D.93 HIV prevalence among couples

Percent distribution of couples living in the same household, both of whom were tested for HIV, by HIV status, by district, Rwanda 2010

District	Both HIV positive[1]	Man HIV positive, woman HIV negative[1]	Woman HIV positive, man HIV negative[1]	Both HIV negative[1]	Total	Number
Nyarugenge	7.1	5.0	3.4	84.6	100.0	76
Gasabo	8.5	0.0	6.4	85.1	100.0	133
Kicukiro	9.9	1.1	2.6	86.4	100.0	83
Nyanza	1.2	1.3	0.0	97.5	100.0	75
Gisagara	1.0	1.0	0.0	98.0	100.0	94
Nyaruguru	0.0	1.1	0.0	98.9	100.0	81
Huye	1.1	1.4	0.0	97.4	100.0	78
Nyamagabe	1.1	2.6	0.0	96.3	100.0	88
Ruhango	1.4	1.5	0.0	97.1	100.0	64
Muhanga	0.0	2.7	0.0	97.3	100.0	72
Kamonyi	1.2	1.3	0.0	97.4	100.0	93
Karongi	4.9	1.1	0.0	94.1	100.0	92
Rutsiro	0.9	1.9	3.0	94.2	100.0	96
Rubavu	0.9	0.9	0.0	98.2	100.0	103
Nyabihu	2.6	3.2	0.0	94.2	100.0	86
Ngororero	1.1	0.0	0.0	98.9	100.0	99
Rusizi	3.2	0.0	1.1	95.7	100.0	108
Nyamasheke	5.5	0.0	0.0	94.5	100.0	96
Rulindo	0.0	1.3	0.0	98.7	100.0	74
Gakenke	1.2	2.7	0.0	96.1	100.0	98
Musanze	2.8	0.0	0.0	97.2	100.0	94
Burera	1.2	0.0	0.0	98.8	100.0	88
Gicumbi	3.0	3.2	0.0	93.8	100.0	112
Rwamagana	3.6	3.8	5.2	87.4	100.0	78
Nyagatare	1.0	0.9	0.7	97.3	100.0	144
Gatsibo	0.0	1.1	1.7	97.2	100.0	132
Kayonza	3.2	2.0	0.0	94.8	100.0	88
Kirehe	0.0	0.0	0.0	100.0	100.0	90
Ngoma	3.1	0.0	0.0	96.9	100.0	109
Bugesera	0.0	1.2	0.8	98.0	100.0	119

Table D.94 Control over women's cash earnings and relative magnitude of women's cash earnings

Percent distribution of currently married women age 15-49 who received cash earnings for employment in the 12 months preceding the survey by person who decides how wife's cash earnings are used and by whether she earned more or less than her husband, by district, Rwanda 2010

	Person who decides how the wife's cash earnings are used:					Wife's cash earnings compared with husband's cash earnings:						
District	Mainly wife	Wife and husband jointly	Mainly husband	Missing	Total	More	Less	About the same	Husband has no earnings	Don't know/ Missing	Total	Number of women
Nyarugenge	38.2	58.5	3.3	0.0	100.0	17.5	64.2	14.7	3.0	0.7	100.0	112
Gasabo	25.8	61.8	11.4	1.0	100.0	14.4	73.0	10.8	0.4	1.3	100.0	272
Kicukiro	30.7	59.7	9.7	0.0	100.0	15.1	70.5	11.5	2.9	0.0	100.0	145
Nyanza	14.7	70.4	12.5	2.3	100.0	8.3	45.9	41.3	2.2	2.3	100.0	126
Gisagara	29.8	58.7	9.5	2.0	100.0	11.9	64.5	18.6	3.0	2.0	100.0	98
Nyaruguru	18.4	70.4	10.3	0.9	100.0	10.6	36.7	48.7	1.9	2.1	100.0	141
Huye	28.4	64.4	7.2	0.0	100.0	5.4	32.1	43.8	16.6	2.1	100.0	133
Nyamagabe	31.8	55.1	13.1	0.0	100.0	14.1	64.5	18.7	2.7	0.0	100.0	109
Ruhango	12.1	81.2	5.8	1.0	100.0	9.3	35.2	53.1	1.5	1.0	100.0	129
Muhanga	25.9	66.6	6.4	1.0	100.0	10.8	74.3	8.9	5.0	1.0	100.0	82
Kamonyi	12.2	67.8	16.1	3.8	100.0	2.3	76.6	15.0	2.3	3.8	100.0	82
Karongi	24.3	66.7	8.9	0.0	100.0	14.2	53.3	22.6	6.3	3.6	100.0	141
Rutsiro	18.2	65.3	15.8	0.7	100.0	6.0	64.6	16.9	11.1	1.4	100.0	155
Rubavu	21.2	51.2	27.6	0.0	100.0	13.9	77.8	8.3	0.0	0.0	100.0	128
Nyabihu	10.3	82.0	7.6	0.0	100.0	5.3	82.8	9.5	1.5	1.0	100.0	192
Ngororero	16.7	72.4	7.3	3.5	100.0	14.0	74.3	5.1	1.4	5.2	100.0	158
Rusizi	7.1	72.2	17.8	2.9	100.0	14.0	57.3	22.4	1.6	4.7	100.0	70
Nyamasheke	9.0	74.7	15.8	0.6	100.0	8.6	65.7	22.9	2.2	0.6	100.0	197
Rulindo	19.1	72.3	8.6	0.0	100.0	8.4	76.1	10.4	4.6	0.5	100.0	151
Gakenke	15.4	65.1	19.5	0.0	100.0	7.6	55.7	29.2	5.5	2.0	100.0	163
Musanze	13.8	70.8	14.8	0.6	100.0	5.8	83.1	8.2	1.1	1.7	100.0	220
Burera	33.5	41.1	18.0	7.4	100.0	5.6	73.0	14.0	0.0	7.3	100.0	111
Gicumbi	13.5	80.1	6.4	0.0	100.0	23.1	49.6	16.5	2.7	8.1	100.0	120
Rwamagana	12.1	67.9	19.2	0.8	100.0	3.8	72.3	20.0	3.0	0.8	100.0	196
Nyagatare	12.8	81.4	5.8	0.0	100.0	7.5	89.1	2.7	0.7	0.0	100.0	133
Gatsibo	6.5	51.1	42.3	0.0	100.0	4.5	82.7	11.5	1.3	0.0	100.0	271
Kayonza	16.6	57.0	20.3	6.2	100.0	10.2	60.6	18.4	2.2	8.5	100.0	77
Kirehe	15.4	69.5	15.1	0.0	100.0	11.6	76.7	9.9	0.9	0.9	100.0	114
Ngoma	22.8	56.6	19.9	0.7	100.0	8.2	50.7	36.2	3.6	1.4	100.0	181
Bugesera	15.0	67.7	17.4	0.0	100.0	8.3	74.1	17.2	0.5	0.0	100.0	215

Table D.95 Control over men's cash earnings

Percent distributions of currently married men age 15-49 who receive cash earnings and of currently married women 15-49 whose husbands receive cash earnings, by person who decides how husband's cash earnings are used, by district, Rwanda 2010

	Men						Women						
District	Mainly wife	Husband and wife jointly	Mainly husband	Missing	Total	Number	Mainly wife	Husband and wife jointly	Mainly husband	Other	Missing	Total	Number
Nyarugenge	2.0	64.5	33.4	0.0	100.0	88.3	6.5	69.7	23.8	0.0	0.0	100.0	175
Gasabo	1.4	72.7	25.9	0.0	100.0	162.9	8.5	65.2	25.2	0.0	1.1	100.0	336
Kicukiro	1.1	77.1	21.8	0.0	100.0	93.1	8.0	67.2	24.2	0.0	0.6	100.0	206
Nyanza	2.3	76.9	20.8	0.0	100.0	78.2	4.2	64.2	30.5	0.0	1.1	100.0	175
Gisagara	8.2	43.8	48.0	0.0	100.0	24.9	10.0	56.0	32.5	0.0	1.5	100.0	198
Nyaruguru	11.3	75.0	13.7	0.0	100.0	59.2	5.5	66.3	26.1	1.0	1.1	100.0	196
Huye	7.8	79.9	12.3	0.0	100.0	50.4	9.3	69.2	19.4	1.6	0.6	100.0	196
Nyamagabe	4.7	77.1	18.2	0.0	100.0	85.8	11.0	54.4	34.6	0.0	0.0	100.0	215
Ruhango	2.4	79.8	17.8	0.0	100.0	73.5	6.0	68.7	24.2	0.0	1.1	100.0	192
Muhanga	2.9	57.2	39.9	0.0	100.0	77.2	2.2	64.0	31.8	1.1	0.9	100.0	178
Kamonyi	1.0	84.3	14.8	0.0	100.0	110.7	2.7	54.1	41.3	0.0	1.9	100.0	223
Karongi	0.0	71.3	28.7	0.0	100.0	82.7	4.1	72.2	22.3	0.0	1.4	100.0	222
Rutsiro	4.3	73.6	22.1	0.0	100.0	98.0	3.6	59.5	34.9	0.0	1.9	100.0	215
Rubavu	6.5	74.7	18.8	0.0	100.0	97.7	3.6	53.8	42.7	0.0	0.0	100.0	239
Nyabihu	0.0	91.6	8.4	0.0	100.0	90.9	1.6	73.8	24.6	0.0	0.0	100.0	215
Ngororero	0.0	82.3	17.7	0.0	100.0	112.5	5.3	64.6	28.3	0.4	1.3	100.0	268
Rusizi	3.1	78.6	18.3	0.0	100.0	110.3	0.5	64.6	34.4	0.0	0.4	100.0	240
Nyamasheke	1.2	84.6	14.2	0.0	100.0	113.4	1.8	80.7	16.5	0.0	1.0	100.0	239
Rulindo	1.7	78.2	20.1	0.0	100.0	90.4	1.6	76.2	22.2	0.0	0.0	100.0	175
Gakenke	0.0	75.2	24.8	0.0	100.0	86.2	3.5	65.5	31.0	0.0	0.0	100.0	239
Musanze	2.3	86.5	11.2	0.0	100.0	102.1	1.7	73.7	24.1	0.0	0.5	100.0	243
Burera	5.1	79.5	15.4	0.0	100.0	58.2	3.2	53.4	40.4	0.0	2.9	100.0	218
Gicumbi	1.3	79.7	19.0	0.0	100.0	87.0	1.3	81.4	16.9	0.0	0.4	100.0	254
Rwamagana	4.3	78.9	16.9	0.0	100.0	93.4	2.7	75.7	20.7	0.0	0.8	100.0	193
Nyagatare	1.1	49.4	48.1	1.4	100.0	132.9	0.8	79.4	19.8	0.0	0.0	100.0	333
Gatsibo	4.1	67.0	28.9	0.0	100.0	135.5	3.9	45.8	50.3	0.0	0.0	100.0	283
Kayonza	7.2	67.6	25.2	0.0	100.0	82.1	6.1	55.0	37.7	0.0	1.3	100.0	195
Kirehe	3.1	69.0	27.9	0.0	100.0	93.2	2.5	67.4	29.8	0.0	0.4	100.0	235
Ngoma	0.0	63.2	36.8	0.0	100.0	45.6	3.0	54.8	42.2	0.0	0.0	100.0	222
Bugesera	3.1	61.4	35.5	0.0	100.0	27.4	4.2	57.1	37.4	0.5	0.8	100.0	248

Table D.96 Women's participation in decision making by background characteristics

Percentage of currently married women age 15-49 who usually make specific decisions either by themselves or jointly with their husband, by district, Rwanda 2010

District	Specific decisions			Percentage who participate in all three decisions	Percentage who participate in none of the three decisions	Number of women
	Woman's own health care	Making major household purchases	Visits to her family or relatives			
District						
Nyarugenge	92.6	86.9	95.7	81.4	1.2	179
Gasabo	71.2	71.8	83.9	58.1	10.4	337
Kicukiro	79.7	82.5	87.4	67.7	5.4	211
Nyanza	75.7	76.6	84.2	64.9	9.8	177
Gisagara	65.7	67.9	74.8	49.3	11.3	201
Nyaruguru	79.3	76.5	87.3	62.9	3.9	199
Huye	83.4	82.1	92.1	72.0	1.8	218
Nyamagabe	71.9	68.4	80.9	56.5	10.8	218
Ruhango	84.7	80.8	90.6	71.6	5.0	194
Muhanga	53.7	70.9	74.8	37.1	8.5	182
Kamonyi	57.7	63.7	72.6	38.8	12.6	225
Karongi	87.3	70.4	90.3	61.9	3.9	231
Rutsiro	78.7	68.8	86.9	61.9	7.5	232
Rubavu	62.5	59.0	63.8	57.7	34.9	239
Nyabihu	75.5	64.7	87.5	53.6	7.1	217
Ngororero	78.8	68.5	81.9	55.3	5.3	270
Rusizi	65.9	63.9	67.2	58.9	28.5	241
Nyamasheke	82.9	85.3	85.0	73.3	6.2	244
Rulindo	79.2	75.6	86.6	60.9	5.6	182
Gakenke	73.8	66.4	76.9	57.3	14.5	248
Musanze	71.5	75.0	82.1	54.6	7.1	245
Burera	40.7	51.5	72.8	28.1	19.4	218
Gicumbi	85.5	77.6	89.6	69.3	4.0	257
Rwamagana	81.6	79.0	83.9	74.5	12.3	199
Nyagatare	96.1	83.8	94.9	80.8	1.5	334
Gatsibo	46.8	53.1	55.7	32.5	31.7	287
Kayonza	62.3	60.0	69.8	44.7	17.9	197
Kirehe	86.1	76.1	87.7	70.0	6.8	236
Ngoma	79.0	67.6	76.1	59.6	11.9	228
Bugesera	60.7	67.0	77.7	46.6	10.7	249
Total	**73.7**	**71.2**	**81.2**	**58.7**	**10.8**	**6,897**

Table D.97.1 Attitude toward wife beating: Women

Percentage of all women age 15-49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by district, Rwanda 2010

District	Husband is justified in hitting or beating his wife if she:					Percentage who agree with at least one specified reason	Number
	Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him		
District							
Nyarugenge	9.8	19.4	22.6	26.6	20.5	32.7	399
Gasabo	20.5	29.8	30.3	36.6	27.3	42.1	728
Kicukiro	8.2	18.8	20.6	25.5	21.1	38.5	469
Nyanza	6.6	14.6	25.7	29.3	15.5	39.8	356
Gisagara	16.4	37.6	36.2	54.4	36.0	67.2	444
Nyaruguru	15.7	32.1	35.2	43.6	35.8	60.4	361
Huye	11.8	19.7	34.1	44.2	20.8	54.2	421
Nyamagabe	17.3	35.1	32.9	37.8	40.2	55.4	442
Ruhango	2.9	12.1	20.5	21.6	10.1	27.4	397
Muhanga	21.2	42.8	50.7	49.1	47.9	75.0	354
Kamonyi	10.0	22.8	33.4	41.6	19.0	52.2	438
Karongi	5.2	13.2	21.2	23.1	20.7	36.2	422
Rutsiro	10.8	17.9	16.7	28.9	23.6	42.3	437
Rubavu	39.1	47.5	44.6	46.5	66.4	69.4	481
Nyabihu	17.6	34.5	38.8	52.1	31.0	61.0	415
Ngororero	17.4	32.4	37.1	51.4	32.4	64.4	521
Rusizi	44.2	55.5	57.3	58.8	62.2	69.0	491
Nyamasheke	7.6	36.0	62.5	67.9	70.7	88.5	538
Rulindo	15.3	26.5	24.1	37.1	26.1	45.7	404
Gakenke	32.0	53.2	45.8	56.2	47.3	67.1	495
Musanze	34.0	58.7	56.2	63.2	62.2	73.4	497
Burera	38.1	58.0	58.5	65.0	55.2	78.1	408
Gicumbi	15.0	25.1	26.5	36.2	26.3	47.9	474
Rwamagana	3.0	20.8	30.6	32.6	44.8	54.2	424
Nyagatare	6.4	13.1	16.2	25.8	14.7	30.0	536
Gatsibo	37.1	46.4	43.6	48.7	58.0	66.3	567
Kayonza	43.4	57.0	55.7	61.9	62.2	73.1	405
Kirehe	15.2	31.8	30.1	44.8	31.1	56.1	428
Ngoma	25.4	34.3	32.2	46.7	31.8	60.0	427
Bugesera	7.9	24.4	28.5	44.3	23.9	55.3	493
Total	**18.8**	**32.7**	**35.8**	**43.6**	**36.6**	**56.2**	**13,671**

Table D.97.2 Attitude toward wife beating: Men

Percentage of all men age 15-49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by district, Rwanda 2010

District	Husband is justified in hitting or beating his wife if she:					Percentage who agree with at least one specified reason	Number
	Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him		
District							
Nyarugenge	0.3	6.3	10.1	13.2	6.9	20.1	200
Gasabo	0.6	3.0	4.1	5.3	0.3	7.9	362
Kicukiro	0.3	3.3	2.4	7.9	2.3	10.1	227
Nyanza	6.0	14.7	15.9	21.0	18.6	33.3	168
Gisagara	2.2	14.5	10.6	21.1	9.8	27.4	213
Nyaruguru	2.5	11.0	13.6	22.3	6.6	30.8	169
Huye	2.2	18.5	12.3	28.6	11.7	36.4	182
Nyamagabe	3.1	7.4	11.0	21.8	5.8	27.9	200
Ruhango	7.2	12.8	16.9	17.9	15.0	28.2	178
Muhanga	0.0	1.8	2.5	9.5	1.9	11.0	145
Kamonyi	0.0	0.5	1.8	4.4	1.7	5.0	189
Karongi	6.1	11.0	14.4	18.0	11.4	23.5	193
Rutsiro	7.2	14.2	16.3	23.3	15.7	29.5	214
Rubavu	18.8	26.7	28.9	39.6	25.0	46.6	233
Nyabihu	6.7	20.3	17.1	36.1	18.5	43.1	169
Ngororero	9.7	23.0	18.7	28.3	16.6	35.1	185
Rusizi	6.4	11.3	12.7	18.5	16.6	26.4	288
Nyamasheke	9.3	15.9	13.6	27.9	16.6	35.9	205
Rulindo	9.1	16.5	14.2	22.6	15.3	33.7	178
Gakenke	3.8	7.7	2.9	9.1	6.2	15.9	205
Musanze	0.0	3.5	5.4	6.5	5.6	13.3	220
Burera	1.1	4.2	6.5	7.6	6.2	17.1	172
Gicumbi	3.7	6.9	8.7	18.5	7.5	26.6	239
Rwamagana	7.2	14.8	12.9	24.2	12.5	30.3	206
Nyagatare	0.0	1.4	8.3	7.3	8.5	15.4	274
Gatsibo	0.9	2.8	3.7	4.1	2.4	5.5	264
Kayonza	6.2	10.7	13.2	18.7	12.9	25.0	194
Kirehe	4.1	11.4	11.6	26.7	14.9	35.6	199
Ngoma	6.1	11.6	14.8	24.8	8.6	35.9	218
Bugesera	4.9	14.2	16.3	25.5	12.6	30.8	239

SURVEY PERSONNEL

Appendix E

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QUESTIONNAIRES

Appendix **F**

RWANDA DEMOGRAPHIC AND HEALTH SURVEYS 2010
HOUSEHOLD QUESTIONNAIRE

MINECOFIN | MINISTRY OF HEALTH

NATIONAL INSTITUTE OF STATISTICS

IDENTIFICATION

PLACE NAME _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBER . . . . . | | | |

HOUSEHOLD STRUCTURE NUMBER . . . . . | | | |

HOUSEHOLD NUMBER . . . . . | | |

HOUSEHOLD SELECTED FOR MALE INTERVIEW, HIV, MALARIA TEST, ANTHROPOMETRIC MEASUREMENTS AND SECTION 12 OF THE WOMAN'S QUESTIONNAIRE

YES = 1
NO = 2 | |

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY | |
				MONTH | |
				YEAR 2 0 1 |
INTERVIEWER'S NAME				INT. NUMBER | | |
RESULT*				RESULT |
NEXT VISIT: DATE				TOTAL NUMBER 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 RESPONDENT TO HOUSEHOLD QUESTIONNAIRE | |

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____ | | |	NAME _____ | | |	| |	| |

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INTRODUCTION AND CONSENT

Hello. My name is _____. I am working with National Institute of Statistics of Rwanda. We are conducting a survey about health all over Rwanda. The information we collect will help the government to plan health services. Your household was selected for the survey. I would like to ask you some questions about your household. The questions usually take about 15 to 20 minutes. All of the answers you give will be confidential and will not be shared with anyone other than members of our survey team. You don't have to be in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time.
In case you need more information about the survey, you may contact the person listed on this card.

GIVE CARD WITH CONTACT INFORMATION

Do you have any questions?
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

HOUSEHOLD SCHEDULE

							IF AGE 15 OR OLDER			
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	MARITAL STATUS	ELIGIBILITY		
1	2	3	4	5	6	7	8	9	10	11
	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. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-36 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)? IF 95 OR MORE, RECORD 95'.	What is (NAME'S) current marital status? 1 = MARRIED OR LIVING TOGETHER 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER-MARRIED AND NEVER LIVED TOGETHER	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF ALL MEN AGE 15-59	CIRCLE LINE NUMBER OF ALL CHILDREN AGE 0-5
01			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS		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 = OTHER RELATIVE
10 = ADOPTED/FOSTER/ STEPCHILD
11 = NOT RELATED
12 = DOMESTIC WORKER
98 = DON'T KNOW

	IF AGE 0-17 YEARS				IF AGE 3 YEARS OR OLDER		IF AGE 3-24 YEARS		IF AGE 0-4 YEARS
LINE NO.	SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS				EVER ATTENDED SCHOOL		CURRENT/RECENT SCHOOL ATTENDANCE		BIRTH REGIS-TRATION
	12	13	14	15	16	17	18	19	20
	Is (NAME)'s natural mother alive?	Does (NAME)'s natural mother usually live in this household or was she a guest last night? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER. IF NO, RECORD '00'.	Is (NAME)'s natural father alive?	Does (NAME)'s natural father usually live in this household or was he a guest last night? IF YES: What is his name? RECORD FATHER'S LINE NUMBER. IF NO, RECORD '00'.	Has (NAME) ever attended school?	What is the highest level of school (NAME) has attended? SEE CODES BELOW. What is the highest grade (NAME) completed at that level? SEE CODES BELOW.	Did (NAME) attend school at any time during the (2009 - 2010) **(3)** school year?	During this/that school year, what level and grade [is/was] (NAME) attending? SEE CODES BELOW.	Does (NAME) have a birth certificate? IF NO, PROBE: Has (NAME)'s birth ever been registered with the civil authority? 1 = HAS CERTIFICATE 2 = REGISTERED 3 = NEITHER 8 = DON'T KNOW
	Y N DK		Y N DK		Y N	LEVEL GRADE	Y N	LEVEL GRADE	
01	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
02	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
03	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
04	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
05	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
06	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
07	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
08	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
09	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
10	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		

CODES FOR Qs. 17 AND 19: EDUCATION

LEVEL
1 = PRIMARY
2 = POST-PRIMARY/VOCATIONAL
3 = SECONDARY
4 = TERTIARY
6 = PRE-PRIMARY
8 = DON'T KNOW

GRADE
00 = LESS THAN 1 YEAR COMPLETED (USE '00' FOR Q. 17 ONLY. THIS CODE IS NOT ALLOWED FOR Q. 19)
98 = DON'T KNOW

HOUSEHOLD HEALTH EXPENDITURE

LINE NO.	HEALTH INSURANCE		INPATIENT		OUTPATIENT		ILLNESS/ INJURY
	21	**22**	**23**	**24**	**25**	**27**	**28**
	Is (NAME) covered by any health insurance?	What is (NAME)'s main type of health insurance?	In the last six months, was (NAME) admitted overnight to stay at a health facility?	CIRCLE LINE NUMBER OF PERSON ELIGIBLE FOR IN-PATIENT MODULE	In the last four weeks, did (NAME) receive care from a health provider, a pharmacy, or a traditional healer without staying overnight?	CIRCLE LINE NUMBER OF PERSON ELIGIBLE FOR OUT-PATIENT MODULE	Was (NAME) ill or injured in the last four weeks?
01	Y N DK 1 2 8 GO TO 23		Y N DK 1 2 8 GO TO 25	01	Y N DK 1 2 8 GO TO 28	01	Y N DK 1 2 8
02	1 2 8 GO TO 23		1 2 8 GO TO 25	02	1 2 8 GO TO 28	02	1 2 8
03	1 2 8 GO TO 23		1 2 8 GO TO 25	03	1 2 8 GO TO 28	03	1 2 8
04	1 2 8 GO TO 23		1 2 8 GO TO 25	04	1 2 8 GO TO 28	04	1 2 8
05	1 2 8 GO TO 23		1 2 8 GO TO 25	05	1 2 8 GO TO 28	05	1 2 8
06	1 2 8 GO TO 23		1 2 8 GO TO 25	06	1 2 8 GO TO 28	06	1 2 8
07	1 2 8 GO TO 23		1 2 8 GO TO 25	07	1 2 8 GO TO 28	07	1 2 8
08	1 2 8 GO TO 23		1 2 8 GO TO 25	08	1 2 8 GO TO 28	08	1 2 8
09	1 2 8 GO TO 23		1 2 8 GO TO 25	09	1 2 8 GO TO 28	09	1 2 8
10	1 2 8 GO TO 23		1 2 8 GO TO 25	10	1 2 8 GO TO 28	10	1 2 8

CODES FOR Q. 22: TYPE OF HEALTH INSURANCE

1 = MUTUELLE HEALTH INSURANCE/
COMMUNITY BASED HEALTH INSURANCE
2 = RAMA
3 = MMI
4 = PRIVATELY PURCHASED/COMMERCIAL HEALTH INSURANCE
6 = OTHER
8 = DON'T KNOW

CHILD LABOR

	IF AGE 5-16 YEARS								
LINE NO.									
	29	**29A**	**30**	**31**	**32**	**33**	**34**	**35**	**36**
	During the past week, did (NAME) do any kind of work for someone who is not a member of this household? IF YES: For pay in cash or kind? 1=YES FOR PAY (IN CASH/KIND) 2=YES, UNPAID 3=NO	What kind of work did (NAME) do for someone who is not a member of this household during the past week? SEE CODES BELOW.	Since last (DAY OF THE WEEK), about how many hours did he/she do this work for someone who is not a member of this household? IF MORE THAN ONE JOB, INCLUDE ALL HOURS IN ALL JOBS.	During the past week, did (NAME), fetch water or collect firewood, for house-hold use?	Since last (DAY OF THE WEEK), about how many hours did he/she fetch water or collect firewood, for household use?	During the past week, did (NAME) do any other family work (on the farm or in a business, or selling goods in the street)? INCLUDE WORK FOR A BUSINESS RUN BY THE CHILD, ALONE OR WITH ONE OR MORE PARTNERS	Since last (DAY OF THE WEEK), about how many hours did he/she spend doing this work for his/her family or himself/ herself?	During the past week, did (NAME) help with household chores such as shopping, cleaning, washing clothes, cooking, or caring for children or sick people?	Since last (DAY OF THE WEEK), about how many hours did he/she spend doing these chores?
	PAID 1 UNPAID 2 NO 3 → GO TO 31			Y 1 N 2 → GO TO 33		Y 1 N 2 → GO TO 35		Y 1 N 2 → NEXT LINE	
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									

CODES FOR Q. 29A: TYPE OF WORK THAT THE CHILD DOES OUTSIDE THE HOUSEHOLD

01 = HOUSEHOLD CHORE (COOKING, FETCHING, WATER/FIRE WOOD, WASHING CLOTHES, HOUSE CLEANING, BABY SITTING, ETC.)
02 = CULTIVATING/HARVESTING IN GARDEN OR FIELD
03 = IN PLANTATION (TEA, RICE, COFFEE, OTHER)
04 = FISHERY
05 = IN MINE/QUARRIES (BREAKING STONES, MOLDING BRICKS LOADING TRUCK, OTHER)
06 = SELLING GOODS ON THE MARKETS/STREET/SHOP
07 = PROSTITUTION
08 = SELLING ALCOHOL, DRUG, AND CIGARETTES
96 = OTHER

HOUSEHOLD SCHEDULE

							IF AGE 15 OR OLDER			
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	MARITAL STATUS	ELIGIBILITY		
1	2	3	4	5	6	7	8	9	10	11
	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. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-36 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)? IF 95 OR MORE, RECORD 95'.	What is (NAME'S) current marital status? 1 = MARRIED OR LIVING TOGETHER 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER-MARRIED AND NEVER LIVED TOGETHER	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF ALL MEN AGE 15-59	CIRCLE LINE NUMBER OF ALL CHILDREN AGE 0-5
1	2	3	4	5	6	7	8	9	10	11
11			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS		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

TICK HERE IF CONTINUATION SHEET USED ☐

2A) Just to make sure that I have a complete listing. Are there any other persons such as small children or infants that we have not listed? YES ☐ → ADD TO TABLE NO ☐

2B) 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 ☐ → ADD TO TABLE NO ☐

2C) Are there any guests or temporary visitors staying here, or anyone else who stayed here last night, who have not been listed? YES ☐ → ADD TO TABLE NO ☐

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 = OTHER RELATIVE
10 = ADOPTED/FOSTER/ STEPCHILD
11 = NOT RELATED
12 = DOMESTIC WORKER
98 = DON'T KNOW

	IF AGE 0-17 YEARS				IF AGE 3 YEARS OR OLDER		IF AGE 3-24 YEARS		IF AGE 0-4 YEARS
LINE NO.	SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS				EVER ATTENDED SCHOOL		CURRENT/RECENT SCHOOL ATTENDANCE		BIRTH REGIS-TRATION
	12	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
	Is (NAME)'s natural mother alive?	Does (NAME)'s natural mother usually live in this household or was she a guest last night? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER. IF NO, RECORD '00'.	Is (NAME)'s natural father alive?	Does (NAME)'s natural father usually live in this household or was he a guest last night? IF YES: What is his name? RECORD FATHER'S LINE NUMBER. IF NO, RECORD '00'.	Has (NAME) ever attended school?	What is the highest level of school (NAME) has attended? SEE CODES BELOW. What is the highest grade (NAME) completed at that level? SEE CODES BELOW.	Did (NAME) attend school at any time during the (2009 - 2010) **(3)** school year?	During this/that school year, what level and grade [is/was] (NAME) attending? SEE CODES BELOW.	Does (NAME) have a birth certificate? IF NO, PROBE: Has (NAME)'s birth ever been registered with the civil authority? 1 = HAS CERTIFICATE 2 = REGISTERED 3 = NEITHER 8 = DON'T KNOW
	12	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
11	Y N DK 1 2 8 GO TO 14		Y N DK 1 2 8 GO TO 16		Y N 1 2 GO TO 20	LEVEL GRADE	Y N 1 2 GO TO 20	LEVEL GRADE	
12	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
13	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
14	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
15	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
16	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
17	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
18	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
19	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		
20	1 2 8 GO TO 14		1 2 8 GO TO 16		1 2 GO TO 20		1 2 GO TO 20		

CODES FOR Qs. 17 AND 19: EDUCATION

LEVEL	**GRADE**
1 = PRIMARY	00 = LESS THAN 1 YEAR COMPLETED
2 = POST-PRIMARY/VOCATIONAL	(USE '00' FOR Q. 17 ONLY.
3 = SECONDARY	THIS CODE IS NOT ALLOWED
4 = TERTIARY	FOR Q. 19)
6 = PRE-PRIMARY	98 = DON'T KNOW
8 = DON'T KNOW	

HOUSEHOLD HEALTH EXPENDITURE

LINE NO.	HEALTH INSURANCE		INPATIENT		OUTPATIENT		ILLNESS/ INJURY
	21	**22**	**23**	**24**	**25**	**27**	**28**
	Is (NAME) covered by any health insurance?	What is (NAME)'s main type of health insurance?	In the last six months, was (NAME) admitted overnight to stay at a health facility?	CIRCLE LINE NUMBER OF PERSON ELIGIBLE FOR IN-PATIENT MODULE	In the last four weeks, did (NAME) receive care from a health provider, a pharmacy, or a traditional healer without staying overnight?	CIRCLE LINE NUMBER OF PERSON ELIGIBLE FOR OUT-PATIENT MODULE	Was (NAME) ill or injured in the last four weeks?
	21	**22**	**23**	**24**	**25**	**27**	**28**
	Y N DK		Y N DK		Y N DK		Y N DK
11	1 2 8 GO TO 23		1 2 8 GO TO 25	11	1 2 8 GO TO 28	11	1 2 8
12	1 2 8 GO TO 23		1 2 8 GO TO 25	12	1 2 8 GO TO 28	12	1 2 8
13	1 2 8 GO TO 23		1 2 8 GO TO 25	13	1 2 8 GO TO 28	13	1 2 8
14	1 2 8 GO TO 23		1 2 8 GO TO 25	14	1 2 8 GO TO 28	14	1 2 8
15	1 2 8 GO TO 23		1 2 8 GO TO 25	15	1 2 8 GO TO 28	15	1 2 8
16	1 2 8 GO TO 23		1 2 8 GO TO 25	16	1 2 8 GO TO 28	16	1 2 8
17	1 2 8 GO TO 23		1 2 8 GO TO 25	17	1 2 8 GO TO 28	17	1 2 8
18	1 2 8 GO TO 23		1 2 8 GO TO 25	18	1 2 8 GO TO 28	18	1 2 8
19	1 2 8 GO TO 23		1 2 8 GO TO 25	19	1 2 8 GO TO 28	19	1 2 8
20	1 2 8 GO TO 23		1 2 8 GO TO 25	20	1 2 8 GO TO 28	20	1 2 8

CODES FOR Q. 22: TYPE OF HEALTH INSURANCE

1 = MUTUELLE HEALTH INSURANCE/
COMMUNITY BASED HEALTH INSURANCE
2 = RAMA
3 = MMI
4 = PRIVATELY PURCHASED/COMMERCIAL HEALTH INSURANCE
5 = OTHER
8 = DON'T KNOW

CHILD LABOR

	IF AGE 5-16 YEARS								
LINE NO.									
	29	**29A**	**30**	**31**	**32**	**33**	**34**	**35**	**36**
	During the past week, did (NAME) do any kind of work for someone who is not a member of this household? IF YES: For pay in cash or kind? 1=YES FOR PAY (IN CASH/KIND) 2=YES, UNPAID 3=NO	What kind of work did (NAME) do for someone who is not a member of this household during the past week? SEE CODES BELOW.	Since last (DAY OF THE WEEK), about how many hours did he/she do this work for someone who is not a member of this household? IF MORE THAN ONE JOB, INCLUDE ALL HOURS IN ALL JOBS.	During the past week, did (NAME), fetch water or collect firewood, for house-hold use?	Since last (DAY OF THE WEEK), about how many hours did he/she fetch water or collect firewood, for household use?	During the past week, did (NAME) do any other family work (on the farm or in a business, or selling goods in the street)? INCLUDE WORK FOR A BUSINESS RUN BY THE CHILD, ALONE OR WITH ONE OR MORE PARTNERS	Since last (DAY OF THE WEEK), about how many hours did he/she spend doing this work for his/her family or himself/ herself?	During the past week, did (NAME) help with household chores such as shopping, cleaning, washing clothes, cooking, or caring for children or sick people?	Since last (DAY OF THE WEEK), about how many hours did he/she spend doing these chores?
	29	**29A**	**30**	**31**	**32**	**33**	**34**	**35**	**36**
	PAID 1 · UNPAID 2 · NO 3 → GO TO 31			Y 1 · N 2 → GO TO 33		Y 1 · N 2 → GO TO 35		Y 1 · N 2 → NEXT LINE	
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

CODES FOR Q. 29A: TYPE OF WORK THAT THE CHILD DOES OUTSIDE THE HOUSEHOLD

01 = HOUSEHOLD CHORE (COOKING, FETCHING, WATER/FIRE WOOD, WASHING CLOTHES, HOUSE CLEANING, BABY SITTING, ETC.)
02 = CULTIVATING/HARVESTING IN GARDEN OR FIELD
03 = IN PLANTATION (TEA, RICE, COFFEE, OTHER)
04 = FISHERY
05 = IN MINE/QUARRIES (BREAKING STONES, MOLDING BRICKS LOADING TRUCK, OTHER)
06 = SELLING GOODS ON THE MARKETS/STREET/SHOP
07 = PROSTITUTION
08 = SELLING ALCOHOL, DRUG, AND CIGARETTES
09 = OTHER

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	How often does anyone smoke inside your house? Would you say daily, weekly, monthly, less than monthly, or never?	DAILY . . . . . 1 WEEKLY . . . . . 2 MONTHLY . . . . . 3 LESS THAN MONTHLY . . . . . 4 NEVER 5	
102	What is the main source of drinking water for members of your household?	PIPED WATER PIPED INTO DWELLING . . . . . 11 PIPED TO YARD/PLOT . . . . . 12 PUBLIC TAP/STANDPIPE . . . . . 13 TUBE WELL OR BOREHOLE . . . . . 21 DUG WELL PROTECTED WELL . . . . . 31 UNPROTECTED WELL . . . . . 32 WATER FROM SPRING PROTECTED SPRING . . . . . 41 UNPROTECTED SPRING . . . . . 42 RAINWATER . . . . . 51 TANKER TRUCK . . . . . 61 CART WITH SMALL TANK . . . . . 71 SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/ IRRIGATION CHANNEL) . . . . . 81 BOTTLED WATER . . . . . 91 OTHER _____ 96 (SPECIFY)	→ 105 → 105
103	Where is that water source located?	IN OWN DWELLING . . . . . 1 IN OWN YARD/PLOT . . . . . 2 ELSEWHERE 3	→ 105
104	How long does it take to go there, get water, and come back?	MINUTES . . . . . [ ][ ][ ] DON'T KNOW 998	
104A	What is the distance from your home to that water source?	LESS THAN 200 M . . . . . 1 200 M - 500 M . . . . . 2 MORE THAN 500 M . . . . . 3 DON'T KNOW 8	
105	Do you do anything to the water to make it safer to drink?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 106A
106	What do you usually do to make the water safer to drink? Anything else? RECORD ALL MENTIONED.	BOIL . . . . . A ADD BLEACH/CHLORINE . . . . . B STRAIN THROUGH A CLOTH . . . . . C USE WATER FILTER (CERAMIC/ SAND/COMPOSITE/ETC.) . . . . . D SOLAR DISINFECTION . . . . . E LET IT STAND AND SETTLE . . . . . F OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
106A	Is the water this household uses for drinking stored?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 107

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
106B	ASK TO SEE THE CONTAINER(S) IN WHICH WATER IS STORED. RECORD OBSERVATION.	JERRY CAN . . . . . 1 POT . . . . . 2 BOTTLE . . . . . 3 COOKING POT . . . . . 4 OTHER _____ 6 SPECIFY NOT AVAILABLE TO BE OBSERVED 8	
106C	How many times per week does your household wash these containers?	NO. OF TIMES PER WEEK IF LESS THAN 7 . . . . . [ ] 7 OR MORE TIMES PER WEEK . . . . . 7 DON'T KNOW 8	
107	What kind of toilet facility do members of your household usually use?	FLUSH OR POUR FLUSH TOILET FLUSH TO PIPED SEWER SYSTEM . . . . . 11 FLUSH TO SEPTIC TANK . . . . . 12 FLUSH TO PIT LATRINE . . . . . 13 FLUSH TO SOMEWHERE ELSE . . . . . 14 FLUSH, DON'T KNOW WHERE . . . . . 15 PIT LATRINE VENTILATED IMPROVED PIT LATRINE . . . . . 21 PIT LATRINE WITH SLAB . . . . . 22 PIT LATRINE WITHOUT SLAB/ OPEN PIT . . . . . 23 COMPOSTING TOILET . . . . . 31 BUCKET TOILET . . . . . 41 HANGING TOILET/HANGING LATRINE . . . . . 51 NO FACILITY/BUSH/FIELD . . . . . 61 OTHER _____ 96 (SPECIFY)	→ 110
108	Do you share this toilet facility with other households?	YES . . . . . 1 NO 2	→ 109A
109	How many households use this toilet facility?	NO. OF HOUSEHOLDS IF LESS THAN 10 . . . . . [0][ ] 10 OR MORE HOUSEHOLDS . . . . . 95 DON'T KNOW 98	
109A	CLEANLINESS OF THE TOILET FACILITY RECORD OBSERVATION.	TOILET'S PLATE FORM IS DRY AND CLEAN . . . . . A WITH URINE OR EXCRETA . . . . . B WITH FLIES C	
110	Does your household have:	YES NO	
	Electricity?	ELECTRICITY 1 2	
	A radio?	RADIO 1 2	
	A television?	TELEVISION 1 2	
	A mobile telephone?	MOBILE TELEPHONE 1 2	
	A non-mobile telephone?	NON-MOBILE TELEPHONE . . . 1 2	
	A refrigerator?	REFRIGERATOR 1 2	
	A computer?	COMPUTER 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
111	What type of fuel does your household mainly use for cooking?	ELECTRICITY . . . . . 01 LPG . . . . . 02 NATURAL GAS . . . . . 03 BIOGAS . . . . . 04 KEROSENE . . . . . 05 CHARCOAL . . . . . 07 WOOD . . . . . 08 STRAW/SHRUBS/GRASS . . . . . 09 AGRICULTURAL CROP . . . . . 10 ANIMAL DUNG . . . . . 11 NO FOOD COOKED IN HOUSEHOLD . . . . . 95 OTHER _____ 96 (SPECIFY)	→ 114
112	Is the cooking usually done in the house, in a separate building, or outdoors?	IN THE HOUSE . . . . . 1 IN A SEPARATE BUILDING . . . . . 2 OUTDOORS . . . . . 3 OTHER _____ 6 (SPECIFY)	→ 114
113	Do you have a separate room which is used as a kitchen?	YES . . . . . 1 NO 2	
114	MAIN MATERIAL OF THE FLOOR. RECORD OBSERVATION.	NATURAL FLOOR EARTH/SAND . . . . . 11 DUNG . . . . . 12 RUDIMENTARY FLOOR WOOD PLANKS . . . . . 21 PALM/BAMBOO . . . . . 22 FINISHED FLOOR PARQUET OR POLISHED WOOD . . . . . 31 VINYL OR ASPHALT STRIPS . . . . . 32 CERAMIC TILES . . . . . 33 CEMENT . . . . . 34 CARPET . . . . . 35 OTHER _____ 96 (SPECIFY)	
115	MAIN MATERIAL OF THE ROOF. RECORD OBSERVATION.	NATURAL ROOFING NO ROOF . . . . . 11 THATCH/PALM LEAF/LEAF . . . . . 12 SOD . . . . . 13 RUDIMENTARY ROOFING RUSTIC MAT/PLASTIC . . . . . 21 PALM/BAMBOO . . . . . 22 WOOD PLANKS . . . . . 23 CARDBOARD . . . . . 24 FINISHED ROOFING METAL/IRON SHEET . . . . . 31 WOOD . . . . . 32 CALAMINE/CEMENT FIBER . . . . . 33 CERAMIC TILES . . . . . 34 CEMENT . . . . . 35 ROOFING SHINGLES . . . . . 36 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
116	MAIN MATERIAL OF THE EXTERIOR WALLS. RECORD OBSERVATION.	NATURAL WALLS NO WALLS . . . . . 11 CANE/PALM/TRUNKS . . . . . 12 DIRT . . . . . 13 RUDIMENTARY WALLS BAMBOO WITH MUD . . . . . 21 STONE WITH MUD . . . . . 22 UNCOVERED ADOBE . . . . . 23 PLYWOOD . . . . . 24 CARDBOARD . . . . . 25 REUSED WOOD . . . . . 26 FINISHED WALLS CEMENT . . . . . 31 STONE WITH LIME/CEMENT . . . . . 32 BRICKS . . . . . 33 CEMENT BLOCKS . . . . . 34 COVERED ADOBE . . . . . 35 WOOD PLANKS/SHINGLES . . . . . 36 OTHER _____ 96 (SPECIFY)	
117	How many rooms in this household are used for sleeping?	ROOMS . . . . . ☐☐	
118	Does any member of this household own: A watch? A bicycle? A motorcycle or motor scooter? An animal-drawn cart? A car or truck? A boat without a motor? A boat with a motor?	YES NO WATCH . . . . . 1 2 BICYCLE . . . . . 1 2 MOTORCYCLE/SCOOTER . . . 1 2 ANIMAL-DRAWN CART . . . . . 1 2 CAR/TRUCK . . . . . 1 2 BOAT WITHOUT MOTOR . . . 1 2 BOAT WITH MOTOR 1 2	
119	Does any member of this household own any agricultural land?	YES . . . . . 1 NO 2	→ 121
120	How many hectares of agricultural land do members of this household own? IF 95 OR MORE, CIRCLE '950'	HECTARES ☐☐.☐ 95 OR MORE HECTARES . . . . . 95.0 DON'T KNOW 99.8	
121	Does this household own any livestock, herds, other farm animals, or poultry?	YES . . . . . 1 NO 2	→ 123

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
122	How many of the following animals does this household own? IF NONE, ENTER '00'. IF 95 OR MORE, ENTER '95'. IF UNKNOWN, ENTER '98'.		
	Cows (traditional)?	COWS	
	Milk cows (modern)?	MILK COWS	
	Bulls?	BULLS	
	Goats?	GOATS	
	Sheep?	SHEEP	
	Chickens?	CHICKENS	
	Pigs?	PIGS	
	Rabbits?	RABBITS	
	Horses, donkeys, or mules?	HORSES/DONKEYS/MULES	
123	Does any member of this household have a bank account?	YES . . . . . 1 NO 2	
123A	CHECK 21: AT LEAST ONE "YES" ☐ OTHER ☐		→ 126
123C	ASK TO SEE INSURANCE CARD(S)	YES, CARD SEEN . . . . . 1 NO, CARD NOT SEEN 2	
123D	Are all members of this household covered by this health insurance?	ALL HOUSEHOLD MEMBERS . . . . . 1 SOME HOUSEHOLD MEMBERS 2	→ 126
123E	Does your household plan to obtain health insurance for members that are currently not covered?	YES . . . . . 1 NO 2	
126	Does your household have any mosquito nets that can be used while sleeping?	YES . . . . . 1 NO 2	→ 137
127	How many mosquito nets does your household have? IF 7 OR MORE NETS, RECORD '7'.	NUMBER OF NETS	

		NET #1	NET #2	NET #3
128	ASK THE RESPONDENT TO SHOW YOU ALL THE NETS IN THE HOUSEHOLD. IF MORE THAN 3 NETS, USE ADDITIONAL QUESTIONNAIRE(S).	OBSERVED . . . . . 1 NOT OBSERVED 2	OBSERVED . . . . . 1 NOT OBSERVED 2	OBSERVED . . . . . 1 NOT OBSERVED 2
129	How many months ago did your household get the mosquito net? IF LESS THAN ONE MONTH AGO, RECORD '00'.	MONTHS AGO . . . ☐☐ MORE THAN 36 MONTHS AGO . . . 95 NOT SURE 98	MONTHS AGO . . . ☐☐ MORE THAN 36 MONTHS AGO . . . 95 NOT SURE 98	MONTHS AGO . . . ☐☐ MORE THAN 36 MONTHS AGO . . . 95 NOT SURE 98
130	OBSERVE OR ASK THE BRAND/ TYPE OF MOSQUITO NET. IF BRAND IS UNKNOWN AND YOU CANNOT OBSERVE THE NET, SHOW PICTURES OF TYPICAL NET TYPES/BRANDS TO RESPONDENT.	LONG-LASTING INSECTICIDE-TREATED NET (LLIN) PERMANET/MAMA NET/TUZANET OLYSET/NET PROTECT . . . 11 OTHER LLIN DK BRAND . . . 16 (SKIP TO 133A) 'PRETREATED' NET BUT NOT PERMANENT . . . 22 (SKIP TO 132) OTHER . . . . . 96 DK BRAND 98	LONG-LASTING INSECTICIDE-TREATED NET (LLIN) PERMANET/MAMA NET/TUZANET OLYSET/NET PROTECT . . . 11 OTHER LLIN DK BRAND . . . 16 (SKIP TO 133A) 'PRETREATED' NET BUT NOT PERMANENT . . . 22 (SKIP TO 132) OTHER . . . . . 96 DK BRAND 98	LONG-LASTING INSECTICIDE-TREATED NET (LLIN) PERMANET/MAMA NET/TUZANET OLYSET/NET PROTECT . . . 11 OTHER LLIN DK BRAND . . . 16 (SKIP TO 133A) 'PRETREATED' NET BUT NOT PERMANENT . . . 22 (SKIP TO 132) OTHER . . . . . 96 DK BRAND 98
131	When you got the net, was it already treated with an insecticide to kill or repel mosquitoes?	YES . . . . . 1 NO . . . . . 2 NOT SURE 8	YES . . . . . 1 NO . . . . . 2 NOT SURE 8	YES . . . . . 1 NO . . . . . 2 NOT SURE 8
132	Since you got the net, was it ever soaked or dipped in a liquid to kill or repel mosquitoes?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 133A) NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 133A) NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 133A) NOT SURE 8
133	How many months ago was the net last soaked or dipped? IF LESS THAN ONE MONTH AGO, RECORD '00'.	MONTHS AGO . . . ☐☐ MORE THAN 24 MONTHS AGO . . . 95 NOT SURE 98	MONTHS AGO . . . ☐☐ MORE THAN 24 MONTHS AGO . . . 95 NOT SURE 98	MONTHS AGO . . . ☐☐ MORE THAN 24 MONTHS AGO . . . 95 NOT SURE 98

		NET #1	NET #2	NET #3
133A	How did you obtain the net?	DURING IMMUNIZATION OF CHILDREN ... 11 DURING IMMUNIZATION CAMPAIGN 12 DURING ANC VISIT 13 FROM A COMMUNITY HEALTH WORKER ..... 14 FROM PHARMACY 15 FROM SHOP 16 OTHER _____ 96 SPECIFY	DURING IMMUNIZATION OF CHILDREN ... 11 DURING IMMUNIZATION CAMPAIGN 12 DURING ANC VISIT 13 FROM A COMMUNITY HEALTH WORKER ..... 14 FROM PHARMACY 15 FROM SHOP 16 OTHER _____ 96 SPECIFY	DURING IMMUNIZATION OF CHILDREN ... 11 DURING IMMUNIZATION CAMPAIGN 12 DURING ANC VISIT 13 FROM A COMMUNITY HEALTH WORKER ..... 14 FROM PHARMACY 15 FROM SHOP 16 OTHER _____ 96 SPECIFY
133B	**OBSERVE CONDITION OF MOSQUITO NET:** DOES IT HAVE HOLES THAT ARE EQUAL TO OR LARGER THAN THE TIP OF YOUR THUMB?	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2
133C	OBSERVE OR ASK THE SHAPE OF THE MOSQUITO NET.	CONICAL ..... 1 RECTANGLE 2	YES ..... 1 NO 2	YES ..... 1 NO 2
134	Did anyone sleep under this mosquito net last night?	YES ..... 1 NO ..... 2 (SKIP TO 136) ← NOT SURE 8	YES ..... 1 NO ..... 2 (SKIP TO 136) ← NOT SURE 8	YES ..... 1 NO ..... 2 (SKIP TO 136) ← NOT SURE 8
135	Who slept under this mosquito net last night? RECORD THE PERSON'S NAME AND 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. ..... ☐☐

		NET #1	NET #2	NET #3
136		GO BACK TO 128 FOR NEXT NET; OR, IF NO MORE NETS, GO TO 137.	GO BACK TO 128 FOR NEXT NET; OR, IF NO MORE NETS, GO TO 137.	GO TO 128 IN FIRST COLUMN OF A NEW QUESTIONNAIRE; OR, IF NO MORE NETS, GO TO 137.

137	Please show me where members of your household most often wash their hands.	OBSERVED . . . . . 1 NOT OBSERVED, NOT IN DWELLING/YARD/PLOT . . . . . 2 NOT OBSERVED, NO PERMISSION TO SEE . . . . . 3 NOT OBSERVED, OTHER REASON . . . . . 4 (SKIP TO 140)
138	OBSERVATION ONLY: OBSERVE PRESENCE OF WATER AT THE SPECIFIC PLACE FOR HANDWASHING.	WATER IS AVAILABLE . . . . . 1 WATER IS NOT AVAILABLE 2
139	OBSERVATION ONLY: OBSERVE PRESENCE OF SOAP, DETERGENT, OR OTHER CLEANSING AGENT.	SOAP OR DETERGENT (BAR, LIQUID, POWDER, PASTE) . . . . . A ASH, MUD, SAND . . . . . B NONE C
140	ASK RESPONDENT FOR A TEASPOONFUL OF COOKING SALT. TEST SALT FOR IODINE.	IODINE PRESENT . . . . . 1 NO IODINE . . . . . 2 NO SALT IN HOUSEHOLD . . . . . 3 SALT NOT TESTED _____ 6 (SPECIFY REASON)

141

FOR HOUSEHOLD SELECTED FOR MALE INTERVIEW, HIV, MALARIA TEST, ANTHROPOMETRIC AND SECTION 12 OF WOMEN QUESTIONNAIRE

LOOK AT THE LAST DIGIT OF THE HOUSEHOLD STRUCTURE NUMBER ON THE COVER PAGE. THIS IS THE COLUMN NUMBER YOU SHOULD CIRCLE. CHECK THE TOTAL NUMBER OF ELIGIBLE WOMEN ON THE COVER SHEET OF THE HOUSEHOLD QUESTIONNAIRE. THIS IS THE ROW NUMBER YOU SHOULD CIRCLE. FIND THE BOX WHERE THE CIRCLED ROW AND THE CIRCLED COLUMN MEET AND CIRCLE THE NUMBER THAT APPEARS IN THE BOX. THIS IS THE NUMBER OF THE ELIGIBLE WOMAN WHO WILL BE ASKED THE HOUSEHOLD RELATIONS QUESTIONS. THEN, GO TO COLUMN (9) IN THE HOUSEHOLD SCHEDULE AND PUT A * NEXT TO THE HOUSEHOLD LINE NUMBER OF THE SELECTED ELIGIBLE WOMAN AND RECORD THIS HOUSEHOLD LINE NUMBER IN THE TWO BOXES AT THE BOTTOM OF THIS TABLE.

FOR EXAMPLE, IF THE HOUSEHOLD STRUCTURE NUMBER IS '716', GO TO COLUMN 6 AND CIRCLE THE COLUMN NUMBER ('6'). IF THERE ARE THREE ELIGIBLE WOMEN IN THE HOUSEHOLD, GO TO ROW 3 AND CIRCLE THE ROW NUMBER ('3'). DRAW LINES FROM COLUMN 6 AND ROW 3 AND FIND THE BOX WHERE THE TWO MEET, AND CIRCLE THE NUMBER IN IT ('3'). THIS MEANS YOU HAVE TO SELECT THE THIRD ELIGIBLE WOMAN. SUPPOSE THE HOUSEHOLD LINE NUMBERS OF THE THREE ELIGIBLE WOMEN ARE '02', '03', AND '07'; THEN THE ELIGIBLE WOMAN FOR THE HOUSEHOLD RELATIONS QUESTIONS IS THE THIRD ELIGIBLE WOMAN, I.E., THE WOMAN WITH HOUSEHOLD LINE NUMBER '07'. PUT A * NEXT TO THIS WOMAN'S LINE NUMBER IN COLUMN (9) OF THE HOUSEHOLD SCHEDULE AND ALSO ENTER THE TWO DIGIT LINE NUMBER IN THE TWO BOXES AT THE BOTTOM OF THIS TABLE.

Total number of eligible women	**Last digit of the household structure number**									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**0**
1	1	1	1	1	1	1	1	1	1	1
2	2	1	2	1	2	1	2	1	2	1
3	1	2	3	1	2	3	1	2	3	1
4	1	2	3	4	1	2	3	4	1	2
5	4	5	1	2	3	4	5	1	2	3
6	4	5	6	1	2	3	4	5	6	1
7	3	4	5	6	7	1	2	3	4	5
8	3	4	5	6	7	8	1	2	3	4
9	2	3	4	5	6	7	8	9	1	2
10	1	2	3	4	5	6	7	8	9	10

HOUSEHOLD LINE NUMBER OF WOMAN SELECTED FOR HOUSEHOLD RELATIONS SECTION

INPATIENT HEALTH EXPENDITURES

142	RECORD THE TIME	HOURS . . . . . MINUTES		
142A	CHECK HHQ24: ONE OR MORE INPATIENTS ↓ NO INPATIENTS → 160			
143	CHECK HHQ24: ENTER THE LINE NUMBER AND NAME OF EACH HOUSEHOLD MEMBER WHO WAS AN INPATIENT. Now I would like to ask some questions about the household members who stayed overnight in a health facility in the last six months.			
144	LINE NUMBER FROM HHQ24 IN HOUSEHOLD SCHEDULE	INPATIENT LINE NUMBER	INPATIENT LINE NUMBER	INPATIENT LINE NUMBER
145	NAME FROM HHQ1 IN HOUSEHOLD SCHEDULE	INPATIENT NAME _____	INPATIENT NAME _____	INPATIENT NAME _____
146	Where did (NAME) most recently stay overnight for health care?	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OTHER PUBLIC FACILITY _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY 33 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OTHER PUBLIC FACILITY _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY 33 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OTHER PUBLIC FACILITY _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY 33 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)
147	What was the main reason for (NAME) to seek care this most recent time?	PREGNANCY/ DELIVERY . . . . . 1 DELIVERY COMPLICATIONS 2 ILLNESS . . . . . 3 ACCIDENT . . . . . 4 OTHER _____ 6 (SPECIFY)	PREGNANCY/ DELIVERY . . . . . 1 DELIVERY COMPLICATIONS 2 ILLNESS . . . . . 3 ACCIDENT . . . . . 4 OTHER _____ 6 (SPECIFY)	PREGNANCY/ DELIVERY . . . . . 1 DELIVERY COMPLICATIONS 2 ILLNESS . . . . . 3 ACCIDENT . . . . . 4 OTHER _____ 6 (SPECIFY)
148	How much money in total did (NAME) spend on treatment and services received during the most recent overnight stay? We want to know about all the costs for the stay, including any charges for laboratory tests, drugs, or other items.	TOTAL COST NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 149)	TOTAL COST NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 149)	TOTAL COST NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 149)

	NAME FROM HHQ1 IN HOUSEHOLD SCHEDULE	INPATIENT NAME _____	INPATIENT NAME _____	INPATIENT NAME _____
148A	How much of the total cost did (NAME) spend on the following items: Consultation fees? Ticket moderators? Drugs? Lab. Tests? Other diagnostic tests? Anything else (SPECIFY)? Total	CONS. TICK. DRUG LAB. DIAG _____ TOTAL	CONS. TICK. DRUG LAB. DIAG _____ TOTAL	CONS. TICK. DRUG LAB. DIAG _____ TOTAL
148B	CHECK THE TOTAL IN 148A: IF IT EQUALS THE TOTAL COST IN 148 GO 148C; IF NOT GO BACK TO 148 AND CORRECT IT.			
148C	From which of the following sources did you raise money to pay for the most recent treatment? Please specify how much was contributed from each source: Income? Borrowing from friend/family? Borrowing from other sources? Assistance from friend/family? Assistance from other sources? Selling assets? Total	INCO. B.FAMIL _____ A. FAMIL _____ ASSET. TOTAL	INCO. B.FAMIL _____ A. FAMIL _____ ASSET. TOTAL	INCO. B.FAMIL _____ A. FAMIL _____ ASSET. TOTAL
148D	CHECK THE TOTAL IN 148C: IF IT EQUALS THE TOTAL COST IN 148 GO TO 149; IF NOT GO BACK TO 148C AND CORRECT IT.			
149	Did (NAME) stay overnight at a medical facility another time in the last six months?	YES . . . . . 1 NO . . . . . 2 (GO BACK TO 146 IN NEXT COLUMN; OR, IF NO MORE INPATIENTS, GO TO 160)	YES . . . . . 1 NO . . . . . 2 (GO BACK TO 146 IN NEXT COLUMN; OR, IF NO MORE INPATIENTS, GO TO 160)	YES . . . . . 1 NO . . . . . 2 (GO TO 146 IN FIRST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE INPATIENTS, GO TO 160)

	NAME FROM HHQ1 IN HOUSEHOLD SCHEDULE	INPATIENT NAME _____	INPATIENT NAME _____	INPATIENT NAME _____
150	Where did (NAME) stay the next-to-last time he/she stayed overnight for health care?	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OTHER PUBLIC FACILITY _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY 33 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OTHER PUBLIC FACILITY _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY 33 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OTHER PUBLIC FACILITY _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY 33 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)
151	What was the main reason for (NAME) to seek care this next-to-last time?	PREGNANCY/ DELIVERY . . . . . 1 DELIVERY COMPLICATIONS 2 ILLNESS . . . . . 3 ACCIDENT . . . . . 4 OTHER _____ 6 (SPECIFY)	PREGNANCY/ DELIVERY . . . . . 1 DELIVERY COMPLICATIONS 2 ILLNESS . . . . . 3 ACCIDENT . . . . . 4 OTHER _____ 6 (SPECIFY)	PREGNANCY/ DELIVERY . . . . . 1 DELIVERY COMPLICATIONS 2 ILLNESS . . . . . 3 ACCIDENT . . . . . 4 OTHER _____ 6 (SPECIFY)
152	How much money in total did (NAME) spend on treatment and services received during the next-to-last overnight stay? We want to know about all the costs for the stay, including any charges for laboratory tests, drugs, or other items.	TOTAL COST ☐☐☐☐☐☐ NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 153)	TOTAL COST ☐☐☐☐☐☐ NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 153)	TOTAL COST ☐☐☐☐☐☐ NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 153)
152A	How much of the total cost did (NAME) spend on the following items: Consultation fees? Ticket moderators? Drugs? Lab. Tests? Other diagnostic tests? Anything else (SPECIFY)? Total	 CONS. ☐☐☐☐☐☐ TICK. ☐☐☐☐☐☐ DRUG ☐☐☐☐☐☐ LAB. ☐☐☐☐☐☐ DIAG ☐☐☐☐☐☐ _____ ☐☐☐☐☐☐ TOTAL ☐☐☐☐☐☐	 CONS. ☐☐☐☐☐☐ TICK. ☐☐☐☐☐☐ DRUG ☐☐☐☐☐☐ LAB. ☐☐☐☐☐☐ DIAG ☐☐☐☐☐☐ _____ ☐☐☐☐☐☐ TOTAL ☐☐☐☐☐☐	 CONS. ☐☐☐☐☐☐ TICK. ☐☐☐☐☐☐ DRUG ☐☐☐☐☐☐ LAB. ☐☐☐☐☐☐ DIAG ☐☐☐☐☐☐ _____ ☐☐☐☐☐☐ TOTAL ☐☐☐☐☐☐

	NAME FROM HHQ1 IN HOUSEHOLD SCHEDULE	INPATIENT NAME _____	INPATIENT NAME _____	INPATIENT NAME _____
152B	CHECK THE TOTAL IN 152A: IF IT EQUALS THE TOTAL COST IN 152 GO TO 152C; IF NOT GO BACK TO 152 AND CORRECT IT.			
152C	From which of the following sources did you raise money to pay for the next-to -last treatment? Please specify how much was contributed from each source: Income? Borrowing from friend/family? Borrowing from other sources? Assistance from friend/family? Assistance from other sources? Selling assets? Total	INCO. B.FAMIL _____ A. FAMIL _____ ASSET. TOTAL	INCO. B.FAMIL _____ A. FAMIL _____ ASSET. TOTAL	INCO. B.FAMIL _____ A. FAMIL _____ ASSET. TOTAL
152D	CHECK THE TOTAL IN 152C: IF IT EQUALS THE TOTAL COST IN 152 GO TO 153; IF NOT GO BACK TO 152C AND CORRECT IT.			
153	Besides the two stays you have told me about, did (NAME) stay overnight in a medical facility another time in the last six months?	YES . . . . . 1 NO . . . . . 2 (GO BACK TO 146 IN NEXT COLUMN; OR, IF NO MORE INPATIENTS, GO TO 160)	YES . . . . . 1 NO . . . . . 2 (GO BACK TO 146 IN NEXT COLUMN; OR, IF NO MORE INPATIENTS, GO TO 160)	YES . . . . . 1 NO . . . . . 2 (GO TO 146 IN FIRST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE INPATIENTS, GO TO 160)
154	Where did (NAME) stay the second-to-last time he/she stayed overnight for health care?	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OTHER PUBLIC FACILITY _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY 33 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OTHER PUBLIC FACILITY _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY 33 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OTHER PUBLIC FACILITY _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY 33 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)

	NAME FROM HHQ1 IN HOUSEHOLD SCHEDULE	INPATIENT NAME _____	INPATIENT NAME _____	INPATIENT NAME _____
155	What was the main reason for (NAME) to seek care this second-to-last time?	PREGNANCY/ DELIVERY . . . . . 1 DELIVERY COMPLICATIONS 2 ILLNESS . . . . . 3 ACCIDENT . . . . . 4 OTHER 6 _____ (SPECIFY)	PREGNANCY/ DELIVERY . . . . . 1 DELIVERY COMPLICATIONS 2 ILLNESS . . . . . 3 ACCIDENT . . . . . 4 OTHER 6 _____ (SPECIFY)	PREGNANCY/ DELIVERY . . . . . 1 DELIVERY COMPLICATIONS 2 ILLNESS . . . . . 3 ACCIDENT . . . . . 4 OTHER 6 _____ (SPECIFY)
156	How much money in total did (NAME) spend on treatment and services received during the second-to-last overnight stay? We want to know about all the costs for the stay, including any charges for laboratory tests, drugs, or other items.	TOTAL COST ☐☐☐☐☐☐ NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 157)	TOTAL COST ☐☐☐☐☐☐ NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 157)	TOTAL COST ☐☐☐☐☐☐ NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 157)
156A	How much of the total cost did (NAME) spend on the following items?			
	Consultation fees?	CONS. ☐☐☐☐☐☐	CONS. ☐☐☐☐☐☐	CONS. ☐☐☐☐☐☐
	Ticket moderators?	TICK. ☐☐☐☐☐☐	TICK. ☐☐☐☐☐☐	TICK. ☐☐☐☐☐☐
	Drugs?	DRUG ☐☐☐☐☐☐	DRUG ☐☐☐☐☐☐	DRUG ☐☐☐☐☐☐
	Lab. Tests?	LAB. ☐☐☐☐☐☐	LAB. ☐☐☐☐☐☐	LAB. ☐☐☐☐☐☐
	Other diagnostic tests?	DIAG ☐☐☐☐☐☐	DIAG ☐☐☐☐☐☐	DIAG ☐☐☐☐☐☐
	Anything else (SPECIFY)?	_____ ☐☐☐☐☐☐	_____ ☐☐☐☐☐☐	_____ ☐☐☐☐☐☐
	Total	TOTAL ☐☐☐☐☐☐	TOTAL ☐☐☐☐☐☐	TOTAL ☐☐☐☐☐☐
156B	CHECK THE TOTAL IN 156A: IF IT EQUALS THE TOTAL COST IN 156 GO TO 156C; IF NOT GO BACK TO 156 AND CORRECT IT.			
156C	From which of the following sources did you raise money to pay for the second-to-last treatment? Please specify how much was contributed from each source:			
	Income?	INCO. ☐☐☐☐☐☐	INCO. ☐☐☐☐☐☐	INCO. ☐☐☐☐☐☐
	Borrowing from friend/family?	B.FAMIL ☐☐☐☐☐☐	B.FAMIL ☐☐☐☐☐☐	B.FAMIL ☐☐☐☐☐☐
	Borrowing from other sources?	_____ ☐☐☐☐☐☐	_____ ☐☐☐☐☐☐	_____ ☐☐☐☐☐☐
	Assistance from friend/family?	A. FAMIL ☐☐☐☐☐☐	A. FAMIL ☐☐☐☐☐☐	A. FAMIL ☐☐☐☐☐☐
	Assistance from other sources?	_____ ☐☐☐☐☐☐	_____ ☐☐☐☐☐☐	_____ ☐☐☐☐☐☐
	Selling assets?	ASSET. ☐☐☐☐☐☐	ASSET. ☐☐☐☐☐☐	ASSET. ☐☐☐☐☐☐
	Total	TOTAL ☐☐☐☐☐☐	TOTAL ☐☐☐☐☐☐	TOTAL ☐☐☐☐☐☐

	NAME FROM HHQ1 IN HOUSEHOLD SCHEDULE	INPATIENT NAME _____	INPATIENT NAME _____	INPATIENT NAME _____
156D	CHECK THE TOTAL IN 156C: IF IT EQUALS THE TOTAL COST IN 156 GO TO 157; IF NOT GO BACK TO 156C AND CORRECT IT.			
157	Besides the three stays you have told me about, did (NAME) stay overnight in a medical facility another time in the last six months?	YES . . . . . 1 NO . . . . . 2 (GO BACK TO 146 IN NEXT COLUMN; OR, IF NO MORE INPATIENTS, GO TO 160)	YES . . . . . 1 NO . . . . . 2 (GO BACK TO 146 IN NEXT COLUMN; OR, IF NO MORE INPATIENTS, GO TO 160)	YES . . . . . 1 NO . . . . . 2 (GO TO 146 IN FIRST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE INPATIENTS, GO TO 160)
158	In total, how many times did (NAME) stay overnight in a medical facility in the last six months?	NUMBER OF INPATIENT VISITS ☐☐	NUMBER OF INPATIENT VISITS ☐☐	NUMBER OF INPATIENT VISITS ☐☐
159		GO BACK TO 146 IN NEXT COLUMN; OR, IF NO MORE INPATIENTS, GO TO 160	GO BACK TO 146 IN NEXT COLUMN; OR, IF NO MORE INPATIENTS, GO TO 160	GO TO 146 IN FIRST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE INPATIENTS, GO TO 160

OUTPATIENT HEALTH EXPENDITURES

160	CHECK HHQ27: ONE OR MORE OUTPATIENTS ↓ NO OUTPATIENTS → 178	
161	CHECK HHQ27: ENTER THE LINE NUMBER AND NAME OF EACH HOUSEHOLD MEMBER WHO WAS AN OUTPATIENT. Now I would like to ask some questions about the household members who consulted a provider for health care in the last four weeks, without having stayed overnight.	

162	LINE NUMBER FROM HHQ27 IN HOUSEHOLD SCHEDULE	OUTPATIENT LINE NUMBER ☐☐	OUTPATIENT LINE NUMBER ☐☐	OUTPATIENT LINE NUMBER ☐☐
163	NAME FROM HHQ1 IN HOUSEHOLD SCHEDULE	OUTPATIENT NAME _____	OUTPATIENT NAME _____	OUTPATIENT NAME _____
164	From what type of health provider did (NAME) get care most recently without staying overnight?	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OUTREACH 25 COMM. HEALTH WORKER 26 OTHER PUBLIC FACILITY _____ 27 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY . 33 PHARMACY . . . 34 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER SOURCE KIOSK . . . . . 41 TRADITIONAL PRACTITIONER 42 CHURCH . . . . . 43 FRIEND/RELAT. 44 OTHER _____ 96 (SPECIFY)	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OUTREACH 25 COMM. HEALTH WORKER 26 OTHER PUBLIC FACILITY _____ 27 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY . 33 PHARMACY . . . 34 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER SOURCE KIOSK . . . . . 41 TRADITIONAL PRACTITIONER 42 CHURCH . . . . . 43 FRIEND/RELAT. 44 OTHER _____ 96 (SPECIFY)	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OUTREACH 25 COMM. HEALTH WORKER 26 OTHER PUBLIC FACILITY _____ 27 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY . 33 PHARMACY . . . 34 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER SOURCE KIOSK . . . . . 41 TRADITIONAL PRACTITIONER 42 CHURCH . . . . . 43 FRIEND/RELAT. 44 OTHER _____ 96 (SPECIFY)

163	NAME FROM HHQ1 IN HOUSEHOLD SCHEDULE	OUTPATIENT NAME _____	OUTPATIENT NAME _____	OUTPATIENT NAME _____
165	What was the main reason for (NAME) to seek care this most recent time?	RESPIRATORY ILLNESS . . . . . 01 TUBERCULOSIS . . . 02 DIARRHEA . . . . . 03 INTESTINAL WORMS 04 MALARIA . . . . . 05 FEVER . . . . . 06 SKIN DISEASE . . . . . 07 STD . . . . . 08 HIV/AIDS . . . . . 09 VCT . . . . . 10 FAMILY PLANNING . 11 DIABETES . . . . . 12 EYE INFECTION . . . 13 DENTAL . . . . . 14 ACCIDENT/INJURY . 15 REGULAR CHECK-UP . . . . . 16 VACCINATION . . . . . 17 DELIVERY . . . . . 18 ANTENATAL CARE 19 POSTNATAL CARE . . . . . 20 PHYSIOTHERAPY 21 OTHER _____ 96 (SPECIFY)	RESPIRATORY ILLNESS . . . . . 01 TUBERCULOSIS . . . 02 DIARRHEA . . . . . 03 INTESTINAL WORMS 04 MALARIA . . . . . 05 FEVER . . . . . 06 SKIN DISEASE . . . . . 07 STD . . . . . 08 HIV/AIDS . . . . . 09 VCT . . . . . 10 FAMILY PLANNING . 11 DIABETES . . . . . 12 EYE INFECTION . . . 13 DENTAL . . . . . 14 ACCIDENT/INJURY . 15 REGULAR CHECK-UP . . . . . 16 VACCINATION . . . . . 17 DELIVERY . . . . . 18 ANTENATAL CARE 19 POSTNATAL CARE . . . . . 20 PHYSIOTHERAPY 21 OTHER _____ 96 (SPECIFY)	RESPIRATORY ILLNESS . . . . . 01 TUBERCULOSIS . . . 02 DIARRHEA . . . . . 03 INTESTINAL WORMS 04 MALARIA . . . . . 05 FEVER . . . . . 06 SKIN DISEASE . . . . . 07 STD . . . . . 08 HIV/AIDS . . . . . 09 VCT . . . . . 10 FAMILY PLANNING . 11 DIABETES . . . . . 12 EYE INFECTION . . . 13 DENTAL . . . . . 14 ACCIDENT/INJURY . 15 REGULAR CHECK-UP . . . . . 16 VACCINATION . . . . . 17 DELIVERY . . . . . 18 ANTENATAL CARE 19 POSTNATAL CARE . . . . . 20 PHYSIOTHERAPY 21 OTHER _____ 96 (SPECIFY)
166	How much money in total did (NAME) spend on treatment and services received during the most recent consultation? Please include the consulting fee and any expenses for other items including drugs and tests.	TOTAL COST ☐☐☐☐☐☐ NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 167)	TOTAL COST ☐☐☐☐☐☐ NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 167)	TOTAL COST ☐☐☐☐☐☐ NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 167)
166A	How much of the total cost did (NAME) spend on the following items: Consultation fees? Ticket moderators? Drugs? Lab. Tests? Other diagnostic tests? Anything else (SPECIFY)? Total	CONS. ☐☐☐☐☐☐ TICK. ☐☐☐☐☐☐ DRUG ☐☐☐☐☐☐ LAB. ☐☐☐☐☐☐ DIAG ☐☐☐☐☐☐ _____ ☐☐☐☐☐☐ TOTAL ☐☐☐☐☐☐	CONS. ☐☐☐☐☐☐ TICK. ☐☐☐☐☐☐ DRUG ☐☐☐☐☐☐ LAB. ☐☐☐☐☐☐ DIAG ☐☐☐☐☐☐ _____ ☐☐☐☐☐☐ TOTAL ☐☐☐☐☐☐	CONS. ☐☐☐☐☐☐ TICK. ☐☐☐☐☐☐ DRUG ☐☐☐☐☐☐ LAB. ☐☐☐☐☐☐ DIAG ☐☐☐☐☐☐ _____ ☐☐☐☐☐☐ TOTAL ☐☐☐☐☐☐
166B	CHECK THE TOTAL IN 166A: IF IT EQUALS THE TOTAL COST IN 166 GO TO 166C; IF NOT GO BACK TO 166 AND CORRECT IT.			

163	NAME FROM HHQ1 IN HOUSEHOLD SCHEDULE	OUTPATIENT NAME _____	OUTPATIENT NAME _____	OUTPATIENT NAME _____
166C	From which of the following sources did you raise money to pay for the most recent consultation? Please specify how much was contributed from each source:			
	Income?	INCO.	INCO.	INCO.
	Borrowing from friend/family?	B.FAMIL	B.FAMIL	B.FAMIL
	Borrowing from other sources?	_____	_____	_____
	Assistance from friend/family?	A. FAMIL	A. FAMIL	A. FAMIL
	Assistance from other sources?	_____	_____	_____
	Selling assets?	ASSET.	ASSET.	ASSET.
	Total	TOTAL	TOTAL	TOTAL
166D	CHECK THE TOTAL IN 166C: IF IT EQUALS THE TOTAL COST IN 166 GO 167; IF NOT GO BACK TO 166C AND CORRECT IT.			
167	Did (NAME) get care another time in the last four weeks without staying overnight?	YES . . . . . 1 NO . . . . . 2 (GO BACK TO 164 IN NEXT COLUMN; OR, IF NO MORE OUTPATIENTS, GO TO 178)	YES . . . . . 1 NO . . . . . 2 (GO BACK TO 164 IN NEXT COLUMN; OR, IF NO MORE OUTPATIENTS, GO TO 178)	YES . . . . . 1 NO . . . . . 2 (GO TO 164 IN FIRST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE OUTPATIENTS, GO TO 178)

163	NAME FROM HHQ1 IN HOUSEHOLD SCHEDULE	OUTPATIENT NAME _____	OUTPATIENT NAME _____	OUTPATIENT NAME _____
168	From what type of health provider did (NAME) get care the next-to-last time without staying overnight?	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OUTREACH 25 COMM. HEALTH WORKER 26 OTHER PUBLIC FACILITY _____ 27 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY . 33 PHARMACY . . . 34 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER SOURCE KIOSK . . . . . 41 TRADITIONAL PRACTITIONER 42 FRIEND RELATIVE. . . . 44 OTHER _____ 96 (SPECIFY)	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OUTREACH 25 COMM. HEALTH WORKER 26 OTHER PUBLIC FACILITY _____ 27 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY . 33 PHARMACY . . . 34 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER SOURCE KIOSK . . . . . 41 TRADITIONAL PRACTITIONER 42 FRIEND RELATIVE. . . . 44 OTHER _____ 96 (SPECIFY)	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OUTREACH 25 COMM. HEALTH WORKER 26 OTHER PUBLIC FACILITY _____ 27 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY . 33 PHARMACY . . . 34 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER SOURCE KIOSK . . . . . 41 TRADITIONAL PRACTITIONER 42 FRIEND RELATIVE. . . . 44 OTHER _____ 96 (SPECIFY)

163	NAME FROM HHQ1 IN HOUSEHOLD SCHEDULE	OUTPATIENT NAME _____	OUTPATIENT NAME _____	OUTPATIENT NAME _____
169	What was the main reason for (NAME) to seek care this next-to-last time?	RESPIRATORY ILLNESS . . . . . 01 TUBERCULOSIS . . . 02 DIARRHEA . . . . . 03 INTESTINAL WORMS 04 MALARIA . . . . . 05 FEVER . . . . . 06 SKIN DISEASE . . . . . 07 STD . . . . . 08 HIV/AIDS . . . . . 09 VCT . . . . . 10 FAMILY PLANNING . 11 DIABETES . . . . . 12 EYE INFECTION . . . 13 DENTAL . . . . . 14 ACCIDENT/INJURY . 15 REGULAR CHECK-UP . . . . . 16 VACCINATION . . . . . 17 DELIVERY . . . . . 18 ANTENATAL CARE 19 POSTNATAL CARE . . . . . 20 PHYSIOTHERAPY 21 OTHER _____ 96 (SPECIFY)	RESPIRATORY ILLNESS . . . . . 01 TUBERCULOSIS . . . 02 DIARRHEA . . . . . 03 INTESTINAL WORMS 04 MALARIA . . . . . 05 FEVER . . . . . 06 SKIN DISEASE . . . . . 07 STD . . . . . 08 HIV/AIDS . . . . . 09 VCT . . . . . 10 FAMILY PLANNING . 11 DIABETES . . . . . 12 EYE INFECTION . . . 13 DENTAL . . . . . 14 ACCIDENT/INJURY . 15 REGULAR CHECK-UP . . . . . 16 VACCINATION . . . . . 17 DELIVERY . . . . . 18 ANTENATAL CARE 19 POSTNATAL CARE . . . . . 20 PHYSIOTHERAPY 21 OTHER _____ 96 (SPECIFY)	RESPIRATORY ILLNESS . . . . . 01 TUBERCULOSIS . . . 02 DIARRHEA . . . . . 03 INTESTINAL WORMS 04 MALARIA . . . . . 05 FEVER . . . . . 06 SKIN DISEASE . . . . . 07 STD . . . . . 08 HIV/AIDS . . . . . 09 VCT . . . . . 10 FAMILY PLANNING . 11 DIABETES . . . . . 12 EYE INFECTION . . . 13 DENTAL . . . . . 14 ACCIDENT/INJURY . 15 REGULAR CHECK-UP . . . . . 16 VACCINATION . . . . . 17 DELIVERY . . . . . 18 ANTENATAL CARE 19 POSTNATAL CARE . . . . . 20 PHYSIOTHERAPY 21 OTHER _____ 96 (SPECIFY)
170	How much money in total did (NAME) spend on treatment and services received during the next-to-last consultation? Please include the consulting fee and any expenses for other items including drugs and tests.	TOTAL COST [ ][ ][ ][ ][ ][ ] NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 171)	TOTAL COST [ ][ ][ ][ ][ ][ ] NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 171)	TOTAL COST [ ][ ][ ][ ][ ][ ] NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 171)
170A	How much of the total cost did (NAME) spend on the following items: Consultation fees? Ticket moderators? Drugs? Lab. Tests? Other diagnostic tests? Anything else (SPECIFY)? Total	CONS. [ ][ ][ ][ ][ ][ ] TICK. [ ][ ][ ][ ][ ][ ] DRUG [ ][ ][ ][ ][ ][ ] LAB. [ ][ ][ ][ ][ ][ ] DIAG [ ][ ][ ][ ][ ][ ] _____ [ ][ ][ ][ ][ ][ ] TOTAL [ ][ ][ ][ ][ ][ ]	CONS. [ ][ ][ ][ ][ ][ ] TICK. [ ][ ][ ][ ][ ][ ] DRUG [ ][ ][ ][ ][ ][ ] LAB. [ ][ ][ ][ ][ ][ ] DIAG [ ][ ][ ][ ][ ][ ] _____ [ ][ ][ ][ ][ ][ ] TOTAL [ ][ ][ ][ ][ ][ ]	CONS. [ ][ ][ ][ ][ ][ ] TICK. [ ][ ][ ][ ][ ][ ] DRUG [ ][ ][ ][ ][ ][ ] LAB. [ ][ ][ ][ ][ ][ ] DIAG [ ][ ][ ][ ][ ][ ] _____ [ ][ ][ ][ ][ ][ ] TOTAL [ ][ ][ ][ ][ ][ ]
170B	CHECK THE TOTAL IN 170A: IF IT EQUALS THE TOTAL COST IN 170 GO TO 170C; IF NOT GO BACK TO 170 AND CORRECT IT.			

163	NAME FROM HHQ1 IN HOUSEHOLD SCHEDULE	OUTPATIENT NAME _____	OUTPATIENT NAME _____	OUTPATIENT NAME _____
170C	From which of the following sources did you raise money to pay for the next-to -last consultation? Please specify how much was contributed from each source:			
	Income?	INCO.	INCO.	INCO.
	Borrowing from friend/family?	B.FAMIL	B.FAMIL	B.FAMIL
	Borrowing from other sources?	_____	_____	_____
	Assistance from friend/family?	A. FAMIL	A. FAMIL	A. FAMIL
	Assistance from other sources?	_____	_____	_____
	Selling asset?	ASSET.	ASSET.	ASSET.
	Total	TOTAL	TOTAL	TOTAL
170D	CHECK THE TOTAL IN 170C: IF IT EQUALS THE TOTAL COST IN 170 GO 171; IF NOT GO BACK TO 170C AND CORRECT IT.			
171	Besides the two visits you have told me about, did (NAME) get care another time in the last four weeks without staying overnight?	YES . . . . . 1 NO . . . . . 2 (GO BACK TO 164 IN NEXT COLUMN; OR, IF NO MORE OUTPATIENTS, GO TO 178)	YES . . . . . 1 NO . . . . . 2 (GO BACK TO 164 IN NEXT COLUMN; OR, IF NO MORE OUTPATIENTS, GO TO 178)	YES . . . . . 1 NO . . . . . 2 (GO TO 164 IN FIRST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE OUTPATIENTS, GO TO 178)

163	NAME FROM HHQ1 IN HOUSEHOLD SCHEDULE	OUTPATIENT NAME _____	OUTPATIENT NAME _____	OUTPATIENT NAME _____
172	From what type of health provider did (NAME) get care the second-to-last time without staying overnight?	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OUTREACH 25 COMM. HEALTH WORKER 26 OTHER PUBLIC FACILITY _____ 27 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY . 33 PHARMACY . . . 34 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER SOURCE KIOSK . . . . . 41 TRADITIONAL PRACTITIONER 42 FRIEND RELATIVE. 44 OTHER _____ 96 (SPECIFY)	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OUTREACH 25 COMM. HEALTH WORKER 26 OTHER PUBLIC FACILITY _____ 27 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY . 33 PHARMACY . . . 34 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER SOURCE KIOSK . . . . . 41 TRADITIONAL PRACTITIONER 42 FRIEND RELATIVE. 44 OTHER _____ 96 (SPECIFY)	PUBLIC /AGREE SECTOR REF. HOSPITAL 21 DISTRICT HOSPITAL . . . 22 HEALTH CENTER . . . . . 23 HEALTH POST . . . . . 24 OUTREACH 25 COMM. HEALTH WORKER 26 OTHER PUBLIC FACILITY _____ 27 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . 31 CLINIC . . . . . 32 DISPENSARY . 33 PHARMACY . . . 34 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER SOURCE KIOSK . . . . . 41 TRADITIONAL PRACTITIONER 42 FRIEND RELATIVE. 44 OTHER _____ 96 (SPECIFY)

163	NAME FROM HHQ1 IN HOUSEHOLD SCHEDULE	OUTPATIENT NAME _____	OUTPATIENT NAME _____	OUTPATIENT NAME _____
173	What was the main reason for (NAME) to seek care this second-to-last time?	RESPIRATORY ILLNESS . . . . . 01 TUBERCULOSIS . . . 02 DIARRHEA . . . . . 03 INTESTINAL WORMS 04 MALARIA . . . . . 05 FEVER . . . . . 06 SKIN DISEASE . . . . . 07 STD . . . . . 08 HIV/AIDS . . . . . 09 VCT . . . . . 10 FAMILY PLANNING . 11 DIABETES . . . . . 12 EYE INFECTION . . . 13 DENTAL . . . . . 14 ACCIDENT/INJURY . 15 REGULAR CHECK-UP . . . . . 16 VACCINATION . . . . . 17 DELIVERY . . . . . 18 ANTENATAL CARE 19 POSTNATAL CARE . . . . . 20 PHYSIOTHERAPY 21 OTHER _____ 96 (SPECIFY)	RESPIRATORY ILLNESS . . . . . 01 TUBERCULOSIS . . . 02 DIARRHEA . . . . . 03 INTESTINAL WORMS 04 MALARIA . . . . . 05 FEVER . . . . . 06 SKIN DISEASE . . . . . 07 STD . . . . . 08 HIV/AIDS . . . . . 09 VCT . . . . . 10 FAMILY PLANNING . 11 DIABETES . . . . . 12 EYE INFECTION . . . 13 DENTAL . . . . . 14 ACCIDENT/INJURY . 15 REGULAR CHECK-UP . . . . . 16 VACCINATION . . . . . 17 DELIVERY . . . . . 18 ANTENATAL CARE 19 POSTNATAL CARE . . . . . 20 PHYSIOTHERAPY 21 OTHER _____ 96 (SPECIFY)	RESPIRATORY ILLNESS . . . . . 01 TUBERCULOSIS . . . 02 DIARRHEA . . . . . 03 INTESTINAL WORMS 04 MALARIA . . . . . 05 FEVER . . . . . 06 SKIN DISEASE . . . . . 07 STD . . . . . 08 HIV/AIDS . . . . . 09 VCT . . . . . 10 FAMILY PLANNING . 11 DIABETES . . . . . 12 EYE INFECTION . . . 13 DENTAL . . . . . 14 ACCIDENT/INJURY . 15 REGULAR CHECK-UP . . . . . 16 VACCINATION . . . . . 17 DELIVERY . . . . . 18 ANTENATAL CARE 19 POSTNATAL CARE . . . . . 20 PHYSIOTHERAPY 21 OTHER _____ 96 (SPECIFY)
174	How much money in total did (NAME) spend on treatment and services received during the second-to-last consultation? Please include the consulting fee and any expenses for other items including drugs and tests.	TOTAL COST ☐☐☐☐☐☐ NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 175)	TOTAL COST ☐☐☐☐☐☐ NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 175)	TOTAL COST ☐☐☐☐☐☐ NO COST/ FREE . . . . . 000000 IN KIND . . . . . 999995 DON'T KNOW 999998 (GO TO 175)
174A	How much of the total cost did (NAME) spend on the following items: Consultation fees? Tcket moderators? Drugs? Lab. Tests? Other diagnostic tests? Anything else (specify)? Total	CONS. ☐☐☐☐☐☐ TICK. ☐☐☐☐☐☐ DRUG ☐☐☐☐☐☐ LAB. ☐☐☐☐☐☐ DIAG ☐☐☐☐☐☐ _____ ☐☐☐☐☐☐ TOTAL ☐☐☐☐☐☐	CONS. ☐☐☐☐☐☐ TICK. ☐☐☐☐☐☐ DRUG ☐☐☐☐☐☐ LAB. ☐☐☐☐☐☐ DIAG ☐☐☐☐☐☐ _____ ☐☐☐☐☐☐ TOTAL ☐☐☐☐☐☐	CONS. ☐☐☐☐☐☐ TICK. ☐☐☐☐☐☐ DRUG ☐☐☐☐☐☐ LAB. ☐☐☐☐☐☐ DIAG ☐☐☐☐☐☐ _____ ☐☐☐☐☐☐ TOTAL ☐☐☐☐☐☐
174B	CHECK THE TOTAL IN 174A: IF IT EQUALS THE TOTAL COST IN 174 GO 174C; IF NOT GO BACK TO 174 AND CORRECT IT.			

163	NAME FROM HHQ1 IN HOUSEHOLD SCHEDULE	OUTPATIENT NAME _____	OUTPATIENT NAME _____	OUTPATIENT NAME _____
174C	From which of the following sources did you raise money to pay for the second-to-last treatment? Please specify how much was contributed from each source: Income? Borrowing from friend/family? Borrowing from other sources? Assistance from friend/family? Assistance from other sources? Selling asset? Total	 INCO. ☐☐☐☐☐☐ B.FAMIL ☐☐☐☐☐☐ _____ ☐☐☐☐☐☐ A. FAMIL ☐☐☐☐☐☐ _____ ☐☐☐☐☐☐ ASSET. ☐☐☐☐☐☐ TOTAL ☐☐☐☐☐☐	 INCO. ☐☐☐☐☐☐ B.FAMIL ☐☐☐☐☐☐ _____ ☐☐☐☐☐☐ A. FAMIL ☐☐☐☐☐☐ _____ ☐☐☐☐☐☐ ASSET. ☐☐☐☐☐☐ TOTAL ☐☐☐☐☐☐	 INCO. ☐☐☐☐☐☐ B.FAMIL ☐☐☐☐☐☐ _____ ☐☐☐☐☐☐ A. FAMIL ☐☐☐☐☐☐ _____ ☐☐☐☐☐☐ ASSET. ☐☐☐☐☐☐ TOTAL ☐☐☐☐☐☐
174D	CHECK THE TOTAL IN 174C: IF IT EQUALS THE TOTAL COST IN 174 GO 175; IF NOT GO BACK TO 174C AND CORRECT IT.			
175	Besides the three visits you have told me about, did (NAME) get care another time in the last four weeks without staying overnight?	YES . . . . . 1 NO . . . . . 2 (GO BACK TO 164 IN NEXT COLUMN; OR, IF NO MORE OUTPATIENTS, GO TO 178)	YES . . . . . 1 NO . . . . . 2 (GO BACK TO 164 IN NEXT COLUMN; OR, IF NO MORE OUTPATIENTS, GO TO 178)	YES . . . . . 1 NO . . . . . 2 (GO TO 164 IN FIRST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE OUTPATIENTS, GO TO 178)
176	In total, how many times did (NAME) get care from a health provider in the last four weeks, without staying overnight?	NUMBER OF OUTPATIENT VISITS ☐☐	NUMBER OF OUTPATIENT VISITS ☐☐	NUMBER OF OUTPATIENT VISITS ☐☐
177		GO BACK TO 164 IN NEXT COLUMN; OR, IF NO MORE OUTPATIENTS, GO TO 178	GO BACK TO 164 IN NEXT COLUMN; OR, IF NO MORE OUTPATIENTS, GO TO 178	GO TO 164 IN FIRST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE OUTPATIENTS, GO TO 178
178	(Not including the costs for the health care consultations you told me about), how much did all members of your household spend on health-related items in the last four weeks? We want to include all health-related items such as drugs, vitamins, herbal remedies, family planning methods, and so on.	SPENT ON HEALTH LAST FOUR WEEKS . . . . . ☐☐☐☐☐☐		
178A	RECORD THE TIME	HOURS . . . . . ☐☐ MINUTES . . . . . ☐☐		

WEIGHT, HEIGHT, AND HEMOGLOBIN MEASUREMENTS, AND MALARIA TESTING FOR CHILDREN AGE 0-5

CHECK HOUSEHOLD COVER PAGE TO SEE IF HOUSEHOLD IS SELECTED FOR MALE INTERVIEW, ANEMIA, HIV, MALARIA AND ANTHROPOMETRY

201	CHECK COLUMN 11 IN HOUSEHOLD SCHEDULE. RECORD THE LINE NUMBER AND NAME FOR ALL ELIGIBLE CHILDREN 0-5 YEARS IN QUESTION 202. IF MORE THAN SIX CHILDREN, USE ADDITIONAL QUESTIONNAIRE(S).			
		CHILD 1	CHILD 2	CHILD 3
202	LINE NUMBER FROM COLUMN 11 NAME FROM COLUMN 2	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____
203	IF MOTHER INTERVIEWED, COPY MONTH AND YEAR OF BIRTH FROM BIRTH HISTORY AND ASK DAY; IF MOTHER NOT INTERVIEWED, ASK: What is (NAME'S) birth date?	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐
204	CHECK 203: CHILD BORN IN JANUARY 2005 OR LATER?	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214)
205	WEIGHT IN KILOGRAMS	KG. ☐☐.☐☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	KG. ☐☐.☐☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	KG. ☐☐.☐☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996
206	HEIGHT IN CENTIMETERS	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996
207	MEASURED LYING DOWN OR STANDING UP?	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED 3	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED 3	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED 3
208	CHECK 203: IS CHILD AGE 0-5 MONTHS, I.E., WAS CHILD BORN IN MONTH OF INTERVIEW OR FIVE PREVIOUS MONTHS?	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214) OLDER 2	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214) OLDER 2	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214) OLDER 2
209	LINE NUMBER OF PARENT/ OTHER ADULT RESPONSIBLE FOR THE CHILD (FROM COLUMN 1 OF HOUSEHOLD SCHEDULE) RECORD '00' IF NOT LISTED.	LINE NUMBER . . . . . ☐☐	LINE NUMBER . . . . . ☐☐	LINE NUMBER . . . . . ☐☐
210	READ **ANEMIA** CONSENT TO PARENT OR OTHER ADULT RESPONSIBLE FOR CHILD. CIRCLE CODE AND SIGN.	GRANTED . . . . . 1 (SIGN) REFUSED 2	GRANTED . . . . . 1 (SIGN) REFUSED 2	GRANTED . . . . . 1 (SIGN) REFUSED 2
211	RECORD HEMOGLOBIN LEVEL HERE AND IN THE ANEMIA PAMPHLET.	G/DL ☐☐.☐ NOT PRESENT . . . . .994 REFUSED . . . . . .995 OTHER 996	G/DL ☐☐.☐ NOT PRESENT . . . . .994 REFUSED . . . . . .995 OTHER 996	G/DL ☐☐.☐ NOT PRESENT . . . . .994 REFUSED . . . . . .995 OTHER 996
212	READ **MALARIA** CONSENT TO PARENT OR OTHER ADULT RESPONSIBLE FOR CHILD. CIRCLE CODE AND SIGN.	GRANTED 1 (SIGN) REFUSED 2	GRANTED 1 (SIGN) REFUSED 2	GRANTED 1 (SIGN) REFUSED 2
212A	RECORD RESULT CODE OF **MALARIA** TEST	TESTED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER . . . . . 6 (GO TO 203 FOR NEXT CHILD OR IF NO MORE CHILDREN, GO TO 214)	TESTED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER . . . . . 6 (GO TO 203 FOR NEXT CHILD OR IF NO MORE CHILDREN, GO TO 214)	TESTED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER . . . . . 6 (GO TO 203 FOR NEXT CHILD OR IF NO MORE CHILDREN, GO TO 214)

WEIGHT, HEIGHT, AND HEMOGLOBIN MEASUREMENTS, AND MALARIA TESTING FOR CHILDREN AGE 0-5

212B	BAR CODE LABEL PUT THE 2ND BAR CODE ON THE SLIDE AND THE 3RD ON TRANSMITTAL FORM.	PUT THE 1ST BAR CODE HERE	PUT THE 1ST BAR CODE HERE	PUT THE 1ST BAR CODE HERE
212C	RESULT OF **MALARIA** TEST	POSITIVE . . . . . 1 NEGATIVE . . . . . 2 (GO TO 203 FOR NEXT CHILD OR IF NO MORE CHILDREN, GO TO 214) OTHER 6	POSITIVE . . . . . 1 NEGATIVE . . . . . 2 (GO TO 203 FOR NEXT CHILD OR IF NO MORE CHILDREN, GO TO 214) OTHER 6	POSITIVE . . . . . 1 NEGATIVE . . . . . 2 (GO TO 203 FOR NEXT CHILD OR IF NO MORE CHILDREN, GO TO 214) OTHER 6
212D	READ INFORMATION FOR MALARIA TREATMENT AND CONSENT STATEMENT TO PARENT OR OTHER ADULT RESPONSIBLE FOR THE CHILD. ASK ABOUT ANY TREATMENT THE CHILD HAS ALREADY RECEIVED.	ACCEPTED MEDICINE 1 _____ (SIGN) REFUSED . . . . . 2 ALREADY HAS ACT . 3 NOT ELIGIBLE . . . . . 4 OTHER 6	ACCEPTED MEDICINE 1 _____ (SIGN) REFUSED . . . . . 2 ALREADY HAS ACT . 3 NOT ELIGIBLE . . . . . 4 OTHER 6	ACCEPTED MEDICINE 1 _____ (SIGN) REFUSED . . . . . 2 ALREADY HAS ACT . 3 NOT ELIGIBLE . . . . . 4 OTHER 6
213	GO BACK TO 203 IN NEXT COLUMN OF THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF THE NEXT PAGE; IF NO MORE CHILDREN, GO TO 214.			

WEIGHT, HEIGHT, AND HEMOGLOBIN MEASUREMENTS, AND MALARIA TESTING FOR CHILDREN AGE 0-5

		CHILD 4	CHILD 5	CHILD 6
202	LINE NUMBER FROM COLUMN 11 NAME FROM COLUMN 2	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____
203	IF MOTHER INTERVIEWED, COPY MONTH AND YEAR OF BIRTH FROM BIRTH HISTORY AND ASK DAY; IF MOTHER NOT INTERVIEWED, ASK: What is (NAME'S) birth date?	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐
204	CHECK 203: CHILD BORN IN JANUARY 2005 OR LATER?	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 IN FIRST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE CHILDREN, GO TO 214)
205	WEIGHT IN KILOGRAMS	KG. ☐☐.☐☐ NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996	KG. ☐☐.☐☐ NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996	KG. ☐☐.☐☐ NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996
206	HEIGHT IN CENTIMETERS	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996
207	MEASURED LYING DOWN OR STANDING UP?	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED 3	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED 3	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED 3
208	CHECK 203: IS CHILD AGE 0-5 MONTHS, I.E., WAS CHILD BORN IN MONTH OF INTERVIEW OR FIVE PREVIOUS MONTHS?	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214) OLDER 2	0-5 MONTHS . . . . . 1 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, GO TO 214) OLDER 2	0-5 MONTHS . . . . . 1 (GO TO 203 IN FIRST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE CHILDREN, GO TO 214) OLDER 2
209	LINE NUMBER OF PARENT/ OTHER ADULT RESPONSIBLE FOR THE CHILD (FROM COLUMN 1 OF HOUSEHOLD SCHEDULE) RECORD '00' IF NOT LISTED.	LINE NUMBER . . . . . ☐☐	LINE NUMBER . . . . . ☐☐	LINE NUMBER . . . . . ☐☐
210	READ **ANEMIA** CONSENT TO PARENT OR OTHER ADULT RESPONSIBLE FOR CHILD. CIRCLE CODE AND SIGN.	GRANTED . . . . . 1 _____ (SIGN) REFUSED 2	GRANTED . . . . . 1 _____ (SIGN) REFUSED 2	GRANTED . . . . . 1 _____ (SIGN) REFUSED 2
211	RECORD HEMOGLOBIN LEVEL HERE AND IN THE ANEMIA PAMPHLET.	G/DL ☐☐.☐ NOT PRESENT . . . . .994 REFUSED . . . . . .995 OTHER 996	G/DL ☐☐.☐ NOT PRESENT . . . . .994 REFUSED . . . . . .995 OTHER 996	G/DL ☐☐.☐ NOT PRESENT . . . . .994 REFUSED . . . . . .995 OTHER 996
212	READ **MALARIA** CONSENT TO PARENT OR OTHER ADULT RESPONSIBLE FOR CHILD. CIRCLE CODE AND SIGN.	GRANTED 1 _____ (SIGN) REFUSED 2	GRANTED 1 _____ (SIGN) REFUSED 2	GRANTED 1 _____ (SIGN) REFUSED 2
212A	RECORD RESULT CODE OF **MALARIA** TEST	TESTED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER . . . . . 6 (GO TO 203 FOR NEXT CHILD OR IF NO MORE CHILDREN, GO TO 214)	TESTED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER . . . . . 6 (GO TO 203 FOR NEXT CHILD OR IF NO MORE CHILDREN, GO TO 214)	TESTED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER . . . . . 6 (GO TO 203 FOR NEXT CHILD OR IF NO MORE CHILDREN, GO TO 214)

WEIGHT, HEIGHT, AND HEMOGLOBIN MEASUREMENTS, AND MALARIA TESTING FOR CHILDREN AGE 0-5

212B	BAR CODE LABEL PUT THE 2ND BAR CODE ON THE SLIDE AND THE 3RD ON TRANSMITTAL FORM.	PUT THE 1ST BAR CODE HERE	PUT THE 1ST BAR CODE HERE	PUT THE 1ST BAR CODE HERE
212C	RESULT OF **MALARIA** TEST	POSITIVE . . . . . 1 NEGATIVE . . . . . 2 (GO TO 203 FOR NEXT CHILD OR IF NO MORE CHILDREN, GO TO 214) OTHER 6	POSITIVE . . . . . 1 NEGATIVE . . . . . 2 (GO TO 203 FOR NEXT CHILD OR IF NO MORE CHILDREN, GO TO 214) OTHER 6	POSITIVE . . . . . 1 NEGATIVE . . . . . 2 (GO TO 203 FOR NEXT CHILD OR IF NO MORE CHILDREN, GO TO 214) OTHER 6
212D	READ INFORMATION FOR MALARIA TREATMENT AND CONSENT STATEMENT TO PARENT OR OTHER ADULT RESPONSIBLE FOR THE CHILD. ASK ABOUT ANY TREATMENT THE CHILD HAS ALREADY RECEIVED.	ACCEPTED MEDICINE 1 (SIGN) REFUSED . . . . . 2 ALREADY HAS ACT . 3 NOT ELIGIBLE . . . . . 4 OTHER 6	ACCEPTED MEDICINE 1 (SIGN) REFUSED . . . . . 2 ALREADY HAS ACT . 3 NOT ELIGIBLE . . . . . 4 OTHER 6	ACCEPTED MEDICINE 1 (SIGN) REFUSED . . . . . 2 ALREADY HAS ACT . 3 NOT ELIGIBLE . . . . . 4 OTHER 6
213	GO BACK TO 203 IN NEXT COLUMN OF THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF THE NEXT PAGE; IF NO MORE CHILDREN, GO TO 214.			

CONSENT STATEMENT FOR ANEMIA TEST

As part of this survey, we are asking people all over the country to take an anemia test. Anemia is a serious health problem that usually results from poor nutrition, infection, or chronic disease. This survey will assist the government to develop programs to prevent and treat anemia.

We ask that all children born in 2005 or later take part in anemia testing in this survey and give a few drops of blood from a finger or heel. The equipment used to take the blood is clean and completely safe. It has never been used before and will be thrown away after each test.

The blood will be tested for anemia immediately, and the result will be told to you right away. The result will be kept strictly confidential and will not be shared with anyone other than members of our survey team.

Do you have any questions?

You can say yes to the test, or you can say no. It is up to you to decide.
Will you allow (NAME OF CHILD/NAMES OF CHILDREN) to participate in the anemia test?

CONSENT STATEMENT FOR MALARIA TEST

As part of this survey, we are asking that children all over the country take a test to see if they have **malaria**. Malaria is a serious illness caused by a parasite transmitted by a mosquito bite. This survey will help the government to develop programs to prevent malaria.

We request that all children born in 2005 or later participate in the malaria testing part of this survey and give a few drops of blood from a finger. The equipment used in taking the blood is clean and completely safe. It has never been used before and will be thrown away after each test.

The blood will be tested for malaria immediately and the result will be told to you right away. The result will be kept confidential.

Do you have any questions about the malaria test?

You can say yes to the test or you can say no. It is up to you to decide.
Will you allow (NAME(S) OF CHILD(REN) to participate in the malaria test?

TREATMENT FOR CHILDREN WITH POSITIVE MALARIA TESTS

IF MALARIA TEST IS POSITIVE: The malaria test shows that your child has malaria. We can give you free medicine. The medicine is called ACT. ACT is very effective and in a few days it should get rid of the fever and other symptoms.

BEFORE PROVIDING ACT, FIRST ASK IF THE CHILD IS ALREADY TAKING OTHER DRUGS AND IF SO, ASK TO SEE THEM. IF CHILD IS ALREADY TAKING ACT, CHECK ON THE DOSE ALREADY AVAILABLE. BE CAREFUL NOT TO OVERTREAT.

You do not have to give the child the medicine. This is up to you. Please tell me whether you accept the medicine or not.

TREATMENT WITH ACT
Arthemeter (20mg)+Lumefantrine(120mg)
A 3-day treatment schedule with a total of 6 doses is recommended as below

Weight (in Kg)	Treatment
05.0-14.9 kg	One tablet as an initial dose, 1 tablet again after 8 hours and then 1 tablet twice daily (morning and evening) for the following two days (total course of 6 tablets).
15.0-24.9 kg	Two tablets as an initial dose, 2 tablets again after 8 hours and then 2 tablets twice daily (morning and evening) for the following two days (total course of 12 tablets).
25.0-34.9 kg	Three tablets as an initial dose, 3 tablets again after 8 hours and then 3 tablets twice daily (morning and evening) for the following two days (total course of 18 tablets).
35 kg and above	Four tablets as a single initial dose, 4 tablets again after 8 hours and then 4 tablets twice daily (morning and evening) for the following two days (total course of 24 tablets).

WEIGHT, HEIGHT MEASUREMENT, MALARIA AND HIV TESTING FOR WOMEN AGE 15-49

214	CHECK COLUMN 9 IN HOUSEHOLD SCHEDULE. RECORD THE LINE NUMBER AND NAME FOR ALL ELIGIBLE WOMEN IN 215. IF THERE ARE MORE THAN THREE WOMEN, USE ADDITIONAL QUESTIONNAIRE(S).			
		WOMAN 1	WOMAN 2	WOMAN 3
215	LINE NUMBER FROM COLUMN 9 NAME FROM COLUMN 2	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____
216	WEIGHT IN KILOGRAMS	KG. ☐☐☐.☐☐ NOT PRESENT . . . . . 99994 REFUSED . . . . . 99995 OTHER 99996	KG. ☐☐☐.☐☐ NOT PRESENT . . . . . 99994 REFUSED . . . . . 99995 OTHER 99996	KG. ☐☐☐.☐☐ NOT PRESENT . . . . . 99994 REFUSED . . . . . 99995 OTHER 99996
217	HEIGHT IN CENTIMETERS	CM. ☐☐☐.☐ NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996
218	AGE: CHECK COLUMN 7.	15-17 YEARS . . . . . 1 18-49 YEARS . . . . . 2 (GO TO 223) ↵	15-17 YEARS . . . . . 1 18-49 YEARS . . . . . 2 (GO TO 223) ↵	15-17 YEARS . . . . . 1 18-49 YEARS . . . . . 2 (GO TO 223) ↵
219	MARITAL STATUS: CHECK COLUMN 8.	CODE 4 (NEVER IN UNION) . . . 1 OTHER . . . . . 2 (GO TO 223) ↵	CODE 4 (NEVER IN UNION) . . . 1 OTHER . . . . . 2 (GO TO 223) ↵	CODE 4 (NEVER IN UNION) . . . 1 OTHER . . . . . 2 (GO TO 223) ↵
220	RECORD LINE NUMBER OF PARENT/OTHER ADULT RESPONSIBLE FOR ADOLESCENT. RECORD '00' IF NOT LISTED.	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT ☐☐	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT ☐☐	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT ☐☐
221	ASK CONSENT FOR ANEMIA TEST FROM PARENT/ OTHER ADULT IDENTIFIED IN 220 AS RESPONSIBLE FOR NEVER IN UNION WOMEN AGE 15-17.	As part of this survey, we are asking people all over the country to take an anemia test. Anemia is a serious health problem that usually results from poor nutrition, infection, or chronic disease. This survey will assist the government to develop programs to prevent and treat anemia. For the anemia testing, we will need a few drops of blood from a finger. The equipment used to take the blood is clean and completely safe. It has never been used before and will be thrown away after each test. The blood will be tested for anemia immediately, and the result will be told to you and (NAME OF ADOLESCENT) right away. The result will be kept strictly confidential and will not be shared with anyone other than members of our survey team. Do you have any questions? You can say yes to the test for (NAME OF ADOLESCENT), or you can say no. It is up to you to decide. Will you allow (NAME OF ADOLESCENT) to take the anemia test?		
222	CIRCLE THE APPROPRIATE CODE AND SIGN YOUR NAME.	GRANTED . . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . . 2 _____ (SIGN) (IF REFUSED, GO TO 224D)	GRANTED . . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . . 2 _____ (SIGN) (IF REFUSED, GO TO 224D)	GRANTED . . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . . 2 _____ (SIGN) (IF REFUSED, GO TO 224D)
223	ASK CONSENT FOR ANEMIA TEST FROM RESPONDENT.	As part of this survey, we are asking people all over the country to take an anemia test. Anemia is a serious health problem that usually results from poor nutrition, infection, or chronic disease. This survey will assist the government to develop programs to prevent and treat anemia. For the anemia testing, we will need a few drops of blood from a finger. The equipment used to take the blood is clean and completely safe. It has never been used before and will be thrown away after each test. The blood will be tested for anemia immediately, and the result will be told to you right away. The result will be kept strictly confidential and will not be shared with anyone other than members of our survey team. Do you have any questions? You can say yes to the test, or you can say no. It is up to you to decide. Will you take the anemia test?		

224	CIRCLE THE APPROPRIATE CODE AND SIGN YOUR NAME.	GRANTED . . . . . 1 RESPONDENT REFUSED . . . . . 2 (SIGN)	GRANTED . . . . . 1 RESPONDENT REFUSED . . . . . 2 (SIGN)	GRANTED . . . . . 1 RESPONDENT REFUSED . . . . . 2 (SIGN)
224A	AGE: CHECK 218.	15-17 YEARS . . . . . 1 18-49 YEARS . . . . . 2 (GO TO 224F)	15-17 YEARS . . . . . 1 18-49 YEARS . . . . . 2 (GO TO 224F)	15-17 YEARS . . . . . 1 18-49 YEARS . . . . . 2 (GO TO 224F)
224B	MARITAL STATUS: CHECK 219.	CODE 4 (NEVER IN UNION) . . . 1 OTHER . . . . . 2 (GO TO 224F)	CODE 4 (NEVER IN UNION) . . . 1 OTHER . . . . . 2 (GO TO 224F)	CODE 4 (NEVER IN UNION) . . . 1 OTHER . . . . . 2 (GO TO 224F)

		WOMAN 1	WOMAN 2	WOMAN 3
	LINE NUMBER FROM COLUMN 9 NAME FROM COLUMN 2	LINE NUMBER . . . . . [ ][ ] NAME _____	LINE NUMBER . . . . . [ ][ ] NAME _____	LINE NUMBER . . . . . [ ][ ] NAME _____
224D	ASK CONSENT FOR MALARIA TEST FROM PARENT/ OTHER ADULT IDENTIFIED IN 220 AS RESPONSIBLE FOR NEVER IN UNION WOMEN AGE 15-17.	As part of this survey, we are asking people all over the country to take a Malaria test. Malaria is a serious health problem that caused by a parasite transmitted by a mosquito bite This survey will assist the government to develop programs to prevent and treat Malaria. For the Malaria testing, we will need a few drops of blood from a finger. The equipment used to take the blood is clean and completely safe. It has never been used before and will be thrown away after each test. The blood will be tested for Malaria immediately, and the result will be told to you and to (NAME OF ADOLESCENT) right away. The result will be kept strictly confidential and will not be shared with anyone other than members of our survey team. Do you have any questions? You can say yes to the test for (NAME OF ADOLESCENT), or you can say no. It is up to you to decide. Will you allow (NAME OF ADOLESCENT) to take the Malaria test?		
224E	CIRCLE THE APPROPRIATE CODE AND SIGN YOUR NAME.	GRANTED . . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . . 2 (SIGN) (IF REFUSED, GO TO 228)	GRANTED . . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . . 2 (SIGN) (IF REFUSED, GO TO 228)	GRANTED . . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . . 2 (SIGN) (IF REFUSED, GO TO 228)
224F	ASK CONSENT FOR MALARIA TEST FROM RESPONDENT.	As part of this survey, we are asking people all over the country to take a Malaria test. Malaria is a serious health problem that caused by a parasite transmitted by a mosquito bite This survey will assist the government to develop programs to prevent and treat Malaria. For the Malaria testing, we will need a few drops of blood from a finger. The equipment used to take the blood is clean and completely safe. It has never been used before and will be thrown away after each test. The blood will be tested for Malaria immediately, and the result will be told to you right away. The result will be kept strictly confidential and will not be shared with anyone other than members of our survey team. Do you have any questions? You can say yes to the test, or you can say no. It is up to you to decide. Will you take the Malaria test?		
224G	CIRCLE THE APPROPRIATE CODE AND SIGN YOUR NAME.	GRANTED . . . . . 1 RESPONDENT REFUSED . . . . . 2 (SIGN)	GRANTED . . . . . 1 RESPONDENT REFUSED . . . . . 2 (SIGN)	GRANTED . . . . . 1 RESPONDENT REFUSED . . . . . 2 (SIGN)
225	PREGNANCY STATUS: CHECK 226 IN WOMAN'S QUESTIONNAIRE OR ASK: Are you pregnant?	YES . . . . . 1 NO . . . . . 2 DK 8	YES . . . . . 1 NO . . . . . 2 DK 8	YES . . . . . 1 NO . . . . . 2 DK 8
226	AGE: CHECK 218.	15-17 YEARS . . . . . 1 18-49 YEARS . . . . . 2 (GO TO 230)	15-17 YEARS . . . . . 1 18-49 YEARS . . . . . 2 (GO TO 230)	15-17 YEARS . . . . . 1 18-49 YEARS . . . . . 2 (GO TO 230)
227	MARITAL STATUS: CHECK 219.	CODE 4 (NEVER IN UNION) . . . 1 OTHER . . . . . 2 (GO TO 230)	CODE 4 (NEVER IN UNION) . . . 1 OTHER . . . . . 2 (GO TO 230)	CODE 4 (NEVER IN UNION) . . . 1 OTHER . . . . . 2 (GO TO 230)

		WOMAN 1	WOMAN 2	WOMAN 3
	LINE NUMBER FROM COLUMN 9 NAME FROM COLUMN 2	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____
228	ASK CONSENT FOR DBS COLLECTION FROM PARENT/ OTHER ADULT IDENTIFIED IN 220 AS RESPONSIBLE FOR NEVER IN UNION WOMEN AGE 15-17.	As part of the survey we also are asking people all over the country to take an HIV test. HIV is the virus that causes AIDS. AIDS is a very serious illness. The HIV test is being done to see how big the AIDS problem is in Rwanda. For the HIV test, we need a few (more) drops of blood from a finger. Again the equipment used to take the blood is clean and completely safe. It has never been used before and will be thrown away after each test. No names will be attached so we will not be able to tell you the test results. No one else will be able to know (NAME OF ADOLESCENT's) test results either. If (NAME OF ADOLESCENT) wants to know her HIV status, I can provide a list of [nearby] facilities offering counseling and testing for HIV. I will also give her a voucher for free services that can be used at any of these facilities. Do you have any questions? You can say yes to the test, or you can say no. It is up to you to decide. Will you allow (NAME OF ADOLESCENT) to take the HIV test?		
229	CIRCLE THE APPROPRIATE CODE AND SIGN YOUR NAME.	GRANTED . . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . . 2 _____ (SIGN) (IF REFUSED, GO TO 239)	GRANTED . . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . . 2 _____ (SIGN) (IF REFUSED, GO TO 239)	GRANTED . . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . . 2 _____ (SIGN) (IF REFUSED, GO TO 239)
230	ASK CONSENT FOR DBS COLLECTION FROM RESPONDENT.	As part of the survey we also are asking people all over the country to take an HIV test. HIV is the virus that causes AIDS. AIDS is a very serious illness. The HIV test is being done to see how big the AIDS problem is in Rwanda. For the HIV test, we need a few (more) drops of blood from a finger. Again the equipment used to take the blood is clean and completely safe. It has never been used before and will be thrown away after each test. No names will be attached so we will not be able to tell you the test results. No one else will be able to know your test results either. If you want to know whether you have HIV, I can provide you with a list of [nearby] facilities offering counseling and testing for HIV. I will also give you a voucher for free services for you (and for your partner if you want) that you can use at any of these facilities. Do you have any questions? You can say yes to the test, or you can say no. It is up to you to decide. Will you take the HIV test?		
231	CIRCLE THE APPROPRIATE CODE, SIGN YOUR NAME, AND ENTER YOUR INTERVIEWER NUMBER.	GRANTED . . . . . 1 RESPONDENT REFUSED . . . . . 2 _____ (SIGN) ☐☐☐ (IF REFUSED, GO TO 239)	GRANTED . . . . . 1 RESPONDENT REFUSED . . . . . 2 _____ (SIGN) ☐☐☐ (IF REFUSED, GO TO 239)	GRANTED . . . . . 1 RESPONDENT REFUSED . . . . . 2 _____ (SIGN) ☐☐☐ (IF REFUSED, GO TO 239)

		WOMAN 1	WOMAN 2	WOMAN 3
	LINE NUMBER FROM COLUMN 9 NAME FROM COLUMN 2	LINE NUMBER . . . . . NAME _____	LINE NUMBER . . . . . NAME _____	LINE NUMBER . . . . . NAME _____
239	PREPARE EQUIPMENT AND SUPPLIES ONLY FOR THE TEST(S) FOR WHICH CONSENT HAS BEEN OBTAINED AND PROCEED WITH THE TEST(S).			
240	RECORD HEMOGLOBIN LEVEL HERE AND IN ANEMIA PAMPHLET.	G/DL . . . . . . NOT PRESENT . . . . . 994 REFUSED . . . . . 995 OTHER 996	G/DL . . . . . . NOT PRESENT . . . . . 994 REFUSED . . . . . 995 OTHER 996	G/DL . . . . . . NOT PRESENT . . . . . 994 REFUSED . . . . . 995 OTHER 996
240A	RECORD RESULT CODE OF MALARIA TEST	TESTED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER . . . . . 6 (SKIP TO 241)	TESTED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER . . . . . 6 (SKIP TO 241)	TESTED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER . . . . . 6 (SKIP TO 241)
240B	RESULT OF **MALARIA** TEST	POSITIVE . . . . . 1 NEGATIVE . . . . . 2 OTHER 6	POSITIVE . . . . . 1 NEGATIVE . . . . . 2 OTHER 6	POSITIVE . . . . . 1 NEGATIVE . . . . . 2 OTHER 6
240C	RECORD RESULT CODE OF DBS COLLECTION	COLLECTED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	COLLECTED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	COLLECTED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
241	BAR CODE LABEL	PUT THE 1ST BAR CODE LABEL HERE. NOT PRESENT . . . . . 99994 REFUSED . . . . . 99995 OTHER . . . . . 99996 PUT THE 2ND BAR CODE ON THE RESPONDENT'S FILTER PAPER THE 3RD ON THE BLOOD SLIDE FOR MALARIA TEST AND THE 4TH ON THE TRANSMITTAL FORM.	PUT THE 1ST BAR CODE LABEL HERE. NOT PRESENT . . . . . 99994 REFUSED . . . . . 99995 OTHER . . . . . 99996 PUT THE 2ND BAR CODE ON THE RESPONDENT'S FILTER PAPER THE 3RD ON THE BLOOD SLIDE FOR MALARIA TEST AND THE 4TH ON THE TRANSMITTAL FORM.	PUT THE 1ST BAR CODE LABEL HERE. NOT PRESENT . . . . . 99994 REFUSED . . . . . 99995 OTHER . . . . . 99996 PUT THE 2ND BAR CODE ON THE RESPONDENT'S FILTER PAPER THE 3RD ON THE BLOOD SLIDE FOR MALARIA TEST AND THE 4TH ON THE TRANSMITTAL FORM.
242	GO BACK TO 216 IN NEXT COLUMN OF THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF AN ADDITIONAL QUESTIONNAIRE; IF NO MORE WOMEN, GO TO 243.			

WEIGHT, HEIGHT MEASUREMENT AND HIV TESTING FOR MEN AGE 15-59

243	CHECK COLUMN 10 IN HOUSEHOLD SCHEDULE. RECORD THE LINE NUMBER AND NAME FOR ALL ELIGIBLE MEN IN 244. IF THERE ARE MORE THAN THREE MEN, USE ADDITIONAL QUESTIONNAIRE(S).			
		MAN 1	MAN 2	MAN 3
244	LINE NUMBER FROM COLUMN 10 NAME FROM COLUMN 2	LINE NUMBER . . . . . [ ][ ] NAME _____	LINE NUMBER . . . . . [ ][ ] NAME _____	LINE NUMBER . . . . . [ ][ ] NAME _____
245	WEIGHT IN KILOGRAMS	KG. [ ][ ][ ] . [ ][ ] NOT PRESENT . . . . . 99994 REFUSED . . . . . 99995 OTHER 99996	KG. [ ][ ][ ] . [ ][ ] NOT PRESENT . . . . . 99994 REFUSED . . . . . 99995 OTHER 99996	KG. [ ][ ][ ] . [ ][ ] NOT PRESENT . . . . . 99994 REFUSED . . . . . 99995 OTHER 99996
246	HEIGHT IN CENTIMETERS	CM. . . . . [ ][ ][ ] . [ ] NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. . . . . [ ][ ][ ] . [ ] NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. . . . . [ ][ ][ ] . [ ] NOT PRESENT . . . . . 9994 REFUSED . . . . . 9995 OTHER 9996
247	AGE: CHECK COLUMN 7.	15-17 YEARS . . . . . 1 18-59 YEARS . . . . . 2 (GO TO 258)	15-17 YEARS . . . . . 1 18-59 YEARS . . . . . 2 (GO TO 258)	15-17 YEARS . . . . . 1 18-59 YEARS . . . . . 2 (GO TO 258)
248	MARITAL STATUS: CHECK COLUMN 8.	CODE 4 (NEVER IN UNION) . . . . . 1 OTHER . . . . . 2 (GO TO 258)	CODE 4 (NEVER IN UNION) . . . . . 1 OTHER . . . . . 2 (GO TO 258)	CODE 4 (NEVER IN UNION) . . . . . 1 OTHER . . . . . 2 (GO TO 258)
249	RECORD LINE NUMBER OF PARENT/OTHER ADULT RESPONSIBLE FOR ADOLESCENT. RECORD '00' IF NOT LISTED.	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT [ ][ ]	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT [ ][ ]	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT [ ][ ]
256	ASK CONSENT FOR DBS COLLECTION FROM PARENT/ OTHER ADULT IDENTIFIED IN 249 AS RESPONSIBLE FOR NEVER IN UNION MEN AGE 15-17.	As part of the survey we also are asking people all over the country to take an HIV test. HIV is the virus that causes AIDS. AIDS is a very serious illness. The HIV test is being done to see how big the AIDS problem is in Rwanda. For the HIV test, we need a few (more) drops of blood from a finger. Again the equipment used to take the blood is clean and completely safe. It has never been used before and will be thrown away after each test. No names will be attached so we will not be able to tell you the test results. No one else will be able to know (NAME OF ADOLESCENT)'s test results either. If (NAME OF ADOLESCENT) wants to know his HIV status, I can provide him with a list of [nearby] facilities offering counseling and testing for HIV. I will also give him a voucher for free services that can be used at any of these facilities. Do you have any questions? You can say yes to the test for (NAME OF ADOLESCENT), or you can say no. It is up to you to decide. Will you allow (NAME OF ADOLESCENT) to take the HIV test?		
257	CIRCLE THE APPROPRIATE CODE AND SIGN YOUR NAME.	GRANTED . . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . . 2 _____ (SIGN) (IF REFUSED, GO TO 267)	GRANTED . . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . . 2 _____ (SIGN) (IF REFUSED, GO TO 267)	GRANTED . . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . . 2 _____ (SIGN) (IF REFUSED, GO TO 267)

258	ASK CONSENT FOR DBS COLLECTION FROM RESPONDENT	As part of the survey we also are asking people all over the country to take an HIV test. HIV is the virus that causes AIDS. AIDS is a very serious illness. The HIV test is being done to see how big the AIDS problem is in Rwanda. For the HIV test, we need a few more drops of blood from a finger. Again the equipment used in taking the blood is clean and completely safe. It has never been used before and will be thrown away after each test. No names will be attached so we will not be able to tell you the test results. No one else will be able to know your test results either. If you want to know whether you have HIV, I can provide you with a list of [nearby] facilities offering counseling and testing for HIV. I will also give you a voucher for free services for you (and for your partner if you want) that you can use at any of these facilities. Do you have any questions? You can say yes to the test, or you can say no. It is up to you to decide. Will you take the HIV test?		
259	CIRCLE THE APPROPRIATE CODE, SIGN YOUR NAME, AND ENTER YOUR INTERVIEWER NUMBER.	GRANTED . . . . . 1 RESPONDENT REFUSED . . . . . 2 (SIGN) (IF REFUSED, GO TO 267)	GRANTED . . . . . 1 RESPONDENT REFUSED . . . . . 2 (SIGN) (IF REFUSED, GO TO 267)	GRANTED . . . . . 1 RESPONDENT REFUSED . . . . . 2 (SIGN) (IF REFUSED, GO TO 267)
267	PREPARE EQUIPMENT AND SUPPLIES ONLY FOR THE TEST(S) FOR WHICH CONSENT HAS BEEN OBTAINED AND PROCEED WITH THE TEST(S).			
269	BAR CODE LABEL	PUT THE 1ST BAR CODE LABEL HERE. NOT PRESENT . . . . . 99994 REFUSED . . . . . 99995 OTHER . . . . . 99996 PUT THE 2ND BAR CODE LABEL ON THE RESPONDENT'S FILTER PAPER AND THE 3RD ON THE TRANSMITTAL FORM.	PUT THE 1ST BAR CODE LABEL HERE. NOT PRESENT . . . . . 99994 REFUSED . . . . . 99995 OTHER . . . . . 99996 PUT THE 2ND BAR CODE LABEL ON THE RESPONDENT'S FILTER PAPER AND THE 3RD ON THE TRANSMITTAL FORM.	PUT THE 1ST BAR CODE LABEL HERE. NOT PRESENT . . . . . 99994 REFUSED . . . . . 99995 OTHER . . . . . 99996 PUT THE 2ND BAR CODE LABEL ON THE RESPONDENT'S FILTER PAPER AND THE 3RD ON THE TRANSMITTAL FORM.
270	GO BACK TO 245 IN NEXT COLUMN OF THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF AN ADDITIONAL QUESTIONNAIRE; IF NO MORE MEN, END INTERVIEW.			

RWANDA DEMOGRAPHIC AND HEALTH SURVEYS 2010
WOMAN'S QUESTIONNAIRE

MINECOFIN

MINISTRY OF HEALTH

NATIONAL INSTITUTE OF STATISTICS

IDENTIFICATION

PLACE NAME _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBER . . . . . | | | |

HOUSEHOLD STRUCTURE NUMBER . . . . . | | | |

HOUSEHOLD NUMBER . . . . . | | | |

NAME AND LINE NUMBER OF WOMAN _____ | | |

CHECK COVER PAGE OF THE HOUSEHOLD QUESTIONNAIRE: HOUSEHOLD SELECTED FOR MALE INTERVIEW, HIV, MALARIA TEST, ANTHROPOMETRIC MEASUREMENTS AND SECTION 12 OF THE WOMAN'S QUESTIONNAIRE	YES = 1 NO = 2 ☐
CHECK Q. 141 IN HOUSEHOLD QUESTIONNAIRE: IS WOMAN SELECTED FOR QUESTIONS ON RELATIONSHIP IN THE HOUSEHOLD (SECTION 12)?	YES = 1 NO = 2 ☐

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY ☐☐ MONTH ☐☐
				YEAR 2 0 1 ☐
INTERVIEWER'S NAME				INT. NUMBER ☐☐☐
RESULT*				RESULT ☐
NEXT VISIT: DATE				TOTAL NUMBER OF VISITS ☐
TIME				

*RESULT CODES:

1	COMPLETED	4	REFUSED		
2	NOT AT HOME	5	PARTLY COMPLETED	7	OTHER _____ (SPECIFY)
3	POSTPONED	6	INCAPACITATED		

LANGUAGE OF INTERVIEW: KINYARWANDA . . . . . 1 OTHER _____ 6 SPECIFY	TRANSLATOR USED? YES . . . . . 1 NO 2

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____ ☐☐☐	NAME _____ ☐☐☐	☐☐	☐☐

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION AND CONSENT

INFORMED CONSENT

Hello. My name is _____. I am working with the National Institute of Statistics of Rwanda. We are conducting a survey about health all over Rwanda. The information we collect will help the government to plan health services. Your household was selected for the survey. The questions usually take about 30 to 60 minutes. All of the answers you give will be confidential and will not be shared with anyone other than members of our survey team. You don't have to be in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time.

In case you need more information about the survey, you may contact the person listed on the card that has already been given to your household.

Do you have any questions? 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	In what month and year were you born?	MONTH . . . . . ☐☐ DON'T KNOW MONTH . . . . . 98 YEAR . . . . . ☐☐☐☐ DON'T KNOW YEAR 9998	
103	How old were you at your last birthday? COMPARE AND CORRECT 102 AND/OR 103 IF INCONSISTENT.	AGE IN COMPLETED YEARS ☐☐	
104	Have you ever attended school?	YES . . . . . 1 NO 2	→ 108
105	What is the highest level of school you attended: primary, post-primary, secondary, or higher?	PRIMARY . . . . . 1 POST-PRIMARY/VOCATIONAL . . . . . 2 SECONDARY . . . . . 3 TERTIARY . . . . . 4 PRE-PRIMARY 6	
106	What is the highest (grade/form/year) you completed at that level? IF COMPLETED LESS THAN ONE YEAR AT THAT LEVEL, RECORD '00'.	GRADE/FORM/YEAR . . . . . ☐☐	
107	CHECK 105: PRIMARY OR LESS ☐ ↓ POST-PRIMARY/ VOCATIONAL SECONDARY OR TERTIARY ☐ →		→ 110

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
108	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	
109	CHECK 108: CODE '2', '3' OR '4' CIRCLED ☐ CODE '1' OR '5' CIRCLED ☐ → 111		
110	Do you read a newspaper or magazine at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
111	Do you listen to the radio at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
112	Do you watch television at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
113	What is your religion?	CATHOLIC . . . . . 1 PROTESTANT . . . . . 2 ADVENTIST . . . . . 3 MUSLIM . . . . . 4 TRADITIONAL . . . . . 5 OTHER _____ 6 SPECIFY NO RELIGION 7	
115	In the last 12 months, how many times have you been away from home for one or more nights?	NUMBER OF TIMES . . . . . ☐☐ NONE . . . . . 00 → 201	
116	In the last 12 months, have you been away from home for more than one month at a time?	YES . . . . . 1 NO 2	

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 . . . [ ][ ]	
205A	Where do your sons or daughters who do not live with you live? CIRCLE ALL MENTIONED.	BOARDING SCHOOL . . . . . A RELATIVE . . . . . B IN THE STREET . . . . . C WORK _____ D SPECIFY MARRIED . . . . . E OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
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 BIRTHS . . . . . [ ][ ]	
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 ROWS.
(IF THERE ARE MORE THAN 12 BIRTHS, USE AN ADDITIONAL QUESTIONNAIRE, STARTING WITH THE SECOND ROW).

212 What name was given to your next baby? RECORD NAME. BIRTH HISTORY NUMBER	213 Is (NAME) a boy or a girl?	214 Were any of these births twins?	215 In what month and year was (NAME) born? PROBE: When is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED 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), including any children who died after birth?
01	BOY 1 GIRL 2	SING 1 MULT 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER (NEXT BIRTH)	DAYS . . . 1 MONTHS 2 YEARS . . 3	
02	BOY 1 GIRL 2	SING 1 MULT 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
03	BOY 1 GIRL 2	SING 1 MULT 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
04	BOY 1 GIRL 2	SING 1 MULT 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
05	BOY 1 GIRL 2	SING 1 MULT 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
06	BOY 1 GIRL 2	SING 1 MULT 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
07	BOY 1 GIRL 2	SING 1 MULT 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH

212 What name was given to your (first/next) baby? RECORD NAME. BIRTH HISTORY NUMBER	213 Is (NAME) a boy or a girl?	214 Were any of these births twins?	215 In what month and year was (NAME) born? PROBE: When is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED 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), including any children who died after birth?
08	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
09	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
10	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
11	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
12	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	HOUSEHOLD LINE NUMBER ☐☐ (GO TO 221)	DAYS . . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH

222	Have you had any live births since the birth of (NAME OF LAST BIRTH)? IF YES, RECORD BIRTH(S) IN TABLE.	YES . . . . . 1 NO 2
223	COMPARE 208 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND MARK: NUMBERS ARE SAME ↓ NUMBERS ARE DIFFERENT → (PROBE AND RECONCILE)	
224	CHECK 215: ENTER THE NUMBER OF BIRTHS IN 2005 OR LATER.	NUMBER OF BIRTHS . . . . . ☐ NONE . . . . . 8 → 226

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
225	**C** FOR EACH BIRTH SINCE JANUARY 2005, ENTER 'B' IN THE MONTH OF BIRTH IN THE CALENDAR. WRITE THE NAME OF THE CHILD TO THE LEFT OF THE 'B' CODE. 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.)		
226	Are you pregnant now?	YES . . . . . 1 NO . . . . . 2 UNSURE 8	→ 230
227	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS. **C** ENTER 'P's IN THE CALENDAR, BEGINNING WITH THE MONTH OF INTERVIEW AND FOR THE TOTAL NUMBER OF COMPLETED MONTHS.	MONTHS . . . . . ☐☐	
228	When you got pregnant, did you want to get pregnant at that time?	YES . . . . . 1 NO 2	→ 230
229	Did you want to have a baby later on or did you not want any (more) children?	LATER . . . . . 1 NO MORE 2	
230	Have you ever had a pregnancy that miscarried, was aborted, or ended in a stillbirth?	YES . . . . . 1 NO 2	→ 238
231	When did the last such pregnancy end?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	
232	CHECK 231: LAST PREGNANCY ENDED IN JAN. 2005 OR LATER ☐ ↓ LAST PREGNANCY ENDED BEFORE JAN. 2005 ☐ →		→ 238
233	How many months pregnant were you when the last such pregnancy ended? **C** 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 . . . . . ☐☐	
234	Since January 2005, have you had any other pregnancies that did not result in a live birth?	YES . . . . . 1 NO 2	→ 236
235	ASK THE DATE AND THE DURATION OF PREGNANCY FOR EACH EARLIER NON-LIVE BIRTH PREGNANCY BACK TO JANUARY 2005. **C** ENTER 'T' IN THE CALENDAR IN THE MONTH THAT EACH PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.		
236	Did you have any miscarriages, abortions or stillbirths that ended before 2005?	YES . . . . . 1 NO 2	→ 238
237	When did the last such pregnancy that terminated before 2005 end?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
238	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	
239	From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 301
240	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

301	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. Have you ever heard of (METHOD)?		
01	**Female Sterilization**. PROBE: Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
02	**Male Sterilization**. PROBE: Men can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
03	**IUD** PROBE: Women can have a loop or coil placed inside them (uterus) by a doctor or a nurse.	YES . . . . . 1 NO 2	
04	**Injectables**. PROBE: Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES . . . . . 1 NO 2	
05	**Implants/Jadelle**. PROBE: Women can have one or more 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	
06	**Pill**. PROBE: Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2	
07	**Condom**. PROBE: Men can put a rubber sheath on their penis before sexual intercourse.	YES . . . . . 1 NO 2	
08	**Female Condom**. PROBE: Women can place a sheath in their vagina before sexual intercourse.	YES . . . . . 1 NO 2	
09	**Lactational Amenorrhea Method** (LAM)	YES . . . . . 1 NO 2	
10	**Rhythm Method**. PROBE: 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	
11	**Standard Days Methods (SDM).** PROBE: The woman know days of the month when she can get pregnant by using beads or calendar	YES . . . . . 1 NO 2	
12	**Withdrawal**. PROBE: Men can be careful and pull out before climax.	YES . . . . . 1 NO 2	
13	**Emergency Contraception**. PROBE: As an emergency measure, within three days after they have unprotected sexual intercourse, women can take special pills to prevent pregnancy.	YES . . . . . 1 NO 2	
14	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES . . . . . 1 _____ (SPECIFY) _____ (SPECIFY) NO 2	
302	CHECK 226: NOT PREGNANT OR UNSURE ☐ PREGNANT ☐ → 311		

303	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES . . . . . 1 NO 2	→ 311

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
304	Which method are you using? CIRCLE ALL MENTIONED. IF MORE THAN ONE METHOD MENTIONED, FOLLOW SKIP INSTRUCTION FOR HIGHEST METHOD IN LIST.	FEMALE STERILIZATION . . . . . A MALE STERILIZATION . . . . . B IUD . . . . . C INJECTABLES . . . . . D IMPLANTS/JADELLE . . . . . E PILL . . . . . F CONDOM . . . . . G FEMALE CONDOM . . . . . H DIAPHRAGM . . . . . I FOAM/JELLY . . . . . J LACTATIONAL AMEN. METHOD . . . . . K RHYTHM METHOD . . . . . L STANDARD DAYS METHOD . . . . . M WITHDRAWAL . . . . . N OTHER MODERN METHOD . . . . . X OTHER TRADITIONAL METHOD . . . Y	A → 307 B → 307 C → 308A D → 308A E → 308A F → 306 G → 306 H → 308A I → 308A J → 308A K → 308A L → 308A M → 308A N → 308A X → 308A Y → 308A
305	What is the brand name of the pills you are using? IF DON'T KNOW THE BRAND, ASK TO SEE THE PACKAGE.	MICROGYNON . . . . . 01 LOFEMENAL . . . . . 02 OVRETTE . . . . . 03 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→ 308A
306	What is the brand name of the condoms you are using? IF DON'T KNOW THE BRAND, ASK TO SEE THE PACKAGE.	PRUDENCE . . . . . 01 PLEASURE PLUS . . . . . 02 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→ 308A
307	In what facility did the sterilization take place? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC/AGREE SECTOR REFERAL HOSPITAL . . . . . 11 DISTRICT HOSPITAL . . . . . 12 HEALTH CENTER . . . . . 13 HEALTH POST . . . . . 14 OUTREACH . . . . . 15 OTHER PUBLIC HEALTH FACILITY _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . . . 21 CLINIC . . . . . 22 DISPENSARY . . . . . 23 OTHER PRIVATE HEALTH FACILITY _____ 26 (SPECIFY) OTHER _____ 96 (SPECIFY) DON'T KNOW 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
308	In what month and year was the sterilization performed?		
308A	Since what month and year have you been using (CURRENT METHOD) without stopping? PROBE: For how long have you been using (CURRENT METHOD) now without stopping?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	
309	CHECK 308/308A, 215 AND 231: ANY BIRTH OR PREGNANCY TERMINATION AFTER MONTH AND YEAR OF START OF USE OF CONTRACEPTION IN 308/308A GO BACK TO 308/308A, PROBE AND RECORD MONTH AND YEAR AT START OF CONTINUOUS USE OF CURRENT METHOD (MUST BE AFTER LAST BIRTH OR PREGNANCY TERMINATION).	YES ☐ NO ☐	
310	CHECK 308/308A: YEAR IS 2005 OR LATER ☐ **C** ENTER CODE FOR METHOD USED IN MONTH OF INTERVIEW IN THE CALENDAR AND IN EACH MONTH BACK TO THE DATE STARTED USING. YEAR IS 2004 OR EARLIER ☐ **C** ENTER CODE FOR METHOD USED IN MONTH OF INTERVIEW IN THE CALENDAR AND EACH MONTH BACK TO JANUARY 2005. THEN SKIP TO → 322		
311	I would like to ask you some questions about the times you or your partner may have used a method to avoid getting pregnant during the last few years. USE CALENDAR TO PROBE FOR EARLIER PERIODS OF USE AND NONUSE, STARTING WITH MOST RECENT USE, BACK TO JANUARY 2005. USE NAMES OF CHILDREN, DATES OF BIRTH, AND PERIODS OF PREGNANCY AS REFERENCE POINTS. **C** **IN COLUMN 1**, ENTER METHOD USE CODE OR '0' FOR NONUSE IN EACH BLANK MONTH. ILLUSTRATIVE QUESTIONS: * When was the last time you used a method? Which method was that? * When did you start using that method? How long after the birth of (NAME)? * How long did you use the method then? **IN COLUMN 2**, ENTER CODES FOR DISCONTINUATION NEXT TO THE LAST MONTH OF USE. NUMBER OF CODES IN COLUMN 2 MUST BE SAME AS NUMBER OF INTERRUPTIONS OF METHOD USE IN COLUMN 1. ASK WHY SHE STOPPED USING THE METHOD. IF A PREGNANCY FOLLOWED, ASK WHETHER SHE BECAME PREGNANT UNINTENTIONALLY WHILE USING THE METHOD OR DELIBERATELY STOPPED TO GET PREGNANT. ILLUSTRATIVE QUESTIONS: * Why did you stop using the (METHOD)? Did you become pregnant while using (METHOD), or did you stop to get pregnant, or did you stop for some other reason? * IF DELIBERATELY STOPPED TO BECOME PREGNANT, ASK: How many months did it take you to get pregnant after you stopped using (METHOD)? AND ENTER '0' IN EACH SUCH MONTH IN COLUMN 1.		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
312	CHECK THE CALENDAR FOR USE OF ANY CONTRACEPTIVE METHOD IN ANY MONTH NO METHOD USED ☐ ANY METHOD USED ☐		→ 314
313	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES . . . . . 1 NO 2	→ 324
314	CHECK 304: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 304, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	NO CODE CIRCLED . . . . . 00 FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 IUD . . . . . 03 INJECTABLES . . . . . 04 IMPLANTS/JADELLE . . . . . 05 PILL . . . . . 06 CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 DIAPHRAGM . . . . . 09 FOAM/JELLY . . . . . 10 LACTATIONAL AMEN. METHOD . . . . . 11 RHYTHM METHOD . . . . . 12 STANDARD DAYS METHOD . . . . . 13 WITHDRAWAL . . . . . 14 OTHER MODERN METHOD . . . . . 95 OTHER TRADITIONAL METHOD 96	→ 324 → 317A → 326 → 315A → 326
315	You first started using (CURRENT METHOD) in (DATE FROM 308/308A). Where did you get it at that time?	PUBLIC/AGREE SECTOR REFERAL HOSPITAL . . . . . 11 DISTRICT HOSPITAL . . . . . 12 HEALTH CENTER . . . . . 13 HEALTH POST . . . . . 14 OUTREACH . . . . . 15 COMMUNITY HEALTH WORKER . . . 16 OTHER PUBLIC HEALTH FACILITY _____ 17 (SPECIFY)	
315A	Where did you learn how to use the rhythm/lactational amenorhea method/standard days method?	PRIVATE MEDICAL SECTOR POLYCLINIC . . . . . 21 CLINIC . . . . . 22 DISPENSARY . . . . . 23 PHARMACY . . . . . 24 FAMILY PLANING CLINIC . . . . . 25 OTHER PRIVATE HEALTH FACILITY _____ 26 (SPECIFY)	
	PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	OTHER SOURCES KIOSK . . . . . 31 CHURCH . . . . . 32 FRIEND/RELATIVE . . . . . 33 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
316	CHECK 304: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 304, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	IUD . . . . . 03 INJECTABLES . . . . . 04 IMPLANTS/JADELLE . . . . . 05 PILL . . . . . 06 CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 DIAPHRAGM . . . . . 09 FOAM/JELLY . . . . . 10 LACTATIONAL AMEN. METHOD . . . . . 11 RHYTHM METHOD . . . . . 12 STANDARD DAYS METHOD 13	→ 323 → 320 → 326
317	At that time, were you told about side effects or problems you might have with the method?	YES . . . . . 1 NO 2	→ 319
317A	When you got sterilized, were you told about side effects or problems you might have with the method?		
318	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	→ 320
319	Were you told what to do if you experienced side effects or problems?	YES . . . . . 1 NO 2	
320	CHECK 317: 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 314) from (SOURCE OF METHOD FROM 307 OR 315), were you told about other methods of family planning that you could use?	YES . . . . . 1 NO 2	→ 322
321	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	
322	CHECK 304: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 304, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 IUD . . . . . 03 INJECTABLES . . . . . 04 IMPLANTS/JADELLE . . . . . 05 PILL . . . . . 06 CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 DIAPHRAGM . . . . . 09 FOAM/JELLY . . . . . 10 LACTATIONAL AMEN. METHOD . . . . . 11 RHYTHM METHOD . . . . . 12 STANDARD DAYS METHOD . . . . . 13 WITHDRAWAL . . . . . 14 OTHER MODERN METHOD . . . . . 95 OTHER TRADITIONAL METHOD . . . 96	→ 326 → 326 → 326

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
323	Where did you obtain (CURRENT METHOD) the last time? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC/AGREE SECTOR REFERAL HOSPITAL . . . . . 11 DISTRICT HOSPITAL . . . . . 12 HEALTH CENTER . . . . . 13 HEALTH POST . . . . . 14 OUTREACH . . . . . 15 COMMUNITY HEALTH WORKER . . . 16 OTHER PUBLIC HEALTH FACILITY _____ 17 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . . . 21 CLINIC . . . . . 22 DISPENSARY . . . . . 23 PHARMACY . . . . . 24 FAMILY PLANING CLINIC . . . . . 25 OTHER PRIVATE HEALTH FACILITY _____ 26 (SPECIFY) OTHER SOURCES KIOSK . . . . . 31 CHURCH . . . . . 32 FRIEND/RELATIVE . . . . . 33 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→ 326
324	Do you know of a place where you can obtain a method of family planning?	YES . . . . . 1 NO 2	→ 326
325	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC/AGREE SECTOR REFERAL HOSPITAL . . . . . A DISTRICT HOSPITAL . . . . . B HEALTH CENTER . . . . . C HEALTH POST . . . . . D OUTREACH . . . . . E COMMUNITY HEALTH WORKER . . . F OTHER PUBLIC HEALTH FACILITY _____ G (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . . . H CLINIC . . . . . I DISPENSARY . . . . . J PHARMACY . . . . . K FAMILY PLANING CLINIC . . . . . L OTHER PRIVATE HEALTH FACILITY _____ M (SPECIFY) OTHER SOURCES KIOSK . . . . . N CHURCH . . . . . O FRIEND/RELATIVE . . . . . P OTHER _____ X (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
326	In the last 12 months, were you visited by a fieldworker who talked to you about family planning?	YES . . . . . 1 NO 2	
327	In the last 12 months, have you visited a health facility for care for yourself (or your children)?	YES . . . . . 1 NO 2	→ 401
328	Did any staff member at the health facility speak to you about family planning methods?	YES . . . . . 1 NO 2	

SECTION 4. PREGNANCY AND POSTNATAL CARE

401	CHECK 224: ONE OR MORE BIRTHS IN 2005 OR LATER ☐ ↓ NO BIRTHS IN 2005 OR LATER ☐ → 556			
402	CHECK 215: ENTER IN THE TABLE THE BIRTH HISTORY NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 2005 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES). Now I would like to ask some questions about your children born in the last five years. (We will talk about each separately.)			
403	BIRTH HISTORY NUMBER FROM 212 IN BIRTH HISTORY	LAST BIRTH BIRTH HISTORY NUMBER ☐☐	NEXT-TO-LAST BIRTH BIRTH HISTORY NUMBER ☐☐	SECOND-FROM-LAST BIRTH BIRTH HISTORY NUMBER ☐☐
404	FROM 212 AND 216	NAME _____ LIVING ☐ DEAD ☐ ↓	NAME _____ LIVING ☐ DEAD ☐ ↓	NAME _____ LIVING ☐ DEAD ☐ ↓
405	When you got pregnant with (NAME), did you want to get pregnant at that time?	YES . . . . . 1 (SKIP TO 408) ← NO 2	YES . . . . . 1 (SKIP TO 430) ← NO 2	YES . . . . . 1 (SKIP TO 430) ← NO 2
406	Did you want to have a baby later on, or did you not want any (more) children?	LATER . . . . . 1 NO MORE . . . . . 2 (SKIP TO 408) ←	LATER . . . . . 1 NO MORE . . . . . 2 (SKIP TO 430) ←	LATER . . . . . 1 NO MORE . . . . . 2 (SKIP TO 430) ←
407	How much longer did you want to wait?	MONTHS . .1 ☐☐ YEARS . . 2 ☐☐ DON'T KNOW . . . 998	MONTHS . .1 ☐☐ YEARS . . 2 ☐☐ DON'T KNOW . . . 998	MONTHS . .1 ☐☐ YEARS . . 2 ☐☐ DON'T KNOW . . . 998
408	Did you see anyone for antenatal care for this pregnancy?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 415) ←		
409	Whom did you see? Anyone else? PROBE TO IDENTIFY EACH TYPE OF PERSON AND RECORD ALL MENTIONED.	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MED. ASST B MIDWIFE . . . . . C OTHER PERSON TRADITIONAL BIRTH ATTENDANT D COMMUNITY HEALTH WORKER E COMMUNITY HEALTH MOTHER AND CHILD . . . F OTHER _____ X (SPECIFY)		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
410	Where did you receive antenatal care for this pregnancy? Anywhere else? PROBE TO IDENTIFY TYPE(S) OF SOURCE(S). IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	HOME YOUR HOME . . . A OTHER HOME . . . B PUBLIC/AGREE SECTOR REF. HOSPITAL C DIST. HOSPITAL D HEALTH CENTER . . . . . E HEALTH POST . . . . . F OTHER PUBLIC FACILITY _____ G (SPECIFY) PRIVATE MED. SECTOR POLYCLINIC . . . H CLINIC . . . . . I DISPENSARY J OTHER PRIVATE MED. FACILITY _____ K (SPECIFY) OTHER_____ X (SPECIFY)		
411	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS . . . ☐☐ DON'T KNOW 98		
412	How many times did you receive antenatal care during this pregnancy?	NUMBER OF TIMES ☐☐ DON'T KNOW . . . . . 98 (SKIP TO 413)		
412A	CHECK 412:	2 OR MORE TIMES ☐ LESS THAN 2 TIMES ☐ (SKIP TO 413)		
412B	How many months pregnant were you when you received your second antenatal care for this pregnancy?	MONTHS . . . ☐☐ DON'T KNOW 98		
412C	CHECK 412:	3 OR MORE TIMES ☐ LESS THAN 3 TIMES ☐ (SKIP TO 413)		
412D	How many months pregnant were you when you received your third antenatal care for this pregnancy?	MONTHS . . . ☐☐ DON'T KNOW 98		
412E	CHECK 412:	4 OR MORE TIMES ☐ LESS THAN 4 TIMES ☐ (SKIP TO 413)		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
412F	How many months pregnant were you when you received your fourth antenatal care for this pregnancy?	MONTHS . . . ☐☐ DON'T KNOW 98		
413	As part of your antenatal care during this pregnancy, were any of the following done at least once: Was your blood pressure measured? Did you give a urine sample? Did you give a blood sample?	YES NO BP . . . . . 1 2 URINE . . . . . 1 2 BLOOD . . . 1 2		
414	During (any of) your antenatal care visit(s), were you told about things to look out for that might suggest problems with the pregnancy?	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 418) DON'T KNOW 8		
416	During this pregnancy, how many times did you get a tetanus injection?	TIMES . . . . . ☐ DON'T KNOW 8		
417	CHECK 416:	2 OR MORE TIMES ☐ (SKIP TO 421) OTHER ☐		
418	At any time before this pregnancy, did you receive any tetanus injections?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 421) DON'T KNOW . . . 8		
419	Before this pregnancy, how many times did you receive a tetanus injection? IF 7 OR MORE TIMES, RECORD '7'.	TIMES . . . . . ☐ DON'T KNOW 8		
420	How many years ago did you receive the last tetanus injection before this pregnancy?	YEARS AGO . . . . . ☐☐		
421	During this pregnancy, were you given or did you buy any iron tablets? SHOW TABLETS/SYRUP.	YES . . . . . 1 NO . . . . . 2 (SKIP TO 423) DON'T KNOW 8		
422	During the whole pregnancy, for how many days did you take the iron tablets? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS.	DAYS ☐☐☐ DON'T KNOW . . . 998		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
423	During this pregnancy, did you take any drug for intestinal worms?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
424	During this pregnancy, did you take any antimalarial drugs?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 430) ← DON'T KNOW 8		
425	What drugs did you take? RECORD ALL MENTIONED. IF TYPE OF DRUG IS NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT.	COARTEM . . . . . A QUININE . . . . . B OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z		
425A	Where did you get the antimalarial drug? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC/AGREE SECTOR REF. HOSPITAL . A DIST. HOSPITAL . B HEALTH CENTER C HEALTH POST . . . D OUTREACH . . . E COMMUNITY HEALTH WORKER . . . F OTHER PUBLIC FACILITY _____ G (SPECIFY) PRIVATE MED. SECTOR POLYCLINIC . . . H CLINIC . . . . . I DISPENSARY . . . J PHARMACY . . . K OTHER PRIVATE MED. FACILITY _____ L (SPECIFY) OTHER SOURCE KIOSK . . . . . M TRADITIONAL PRACTITIONER N CHURCH . . . . . O FRIEND/RELATIVE P OTHER _____ X (SPECIFY)		
430	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	VERY LARGE . . . . . 1 LARGER THAN AVERAGE . . . . . 2 AVERAGE . . . . . 3 SMALLER THAN AVERAGE . . . . . 4 VERY SMALL . . . . . 5 DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
431	Was (NAME) weighed at birth?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 433) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 433) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 433) DON'T KNOW 8
432	How much did (NAME) weigh? RECORD WEIGHT IN KILOGRAMS FROM HEALTH CARD, IF AVAILABLE.	KG FROM CARD 1 ☐☐.☐☐☐ KG FROM RECALL 2 ☐☐.☐☐☐ DON'T KNOW 99.998	KG FROM CARD 1 ☐☐.☐☐☐ KG FROM RECALL 2 ☐☐.☐☐☐ DON'T KNOW 99.998	KG FROM CARD 1 ☐☐.☐☐☐ KG FROM RECALL 2 ☐☐.☐☐☐ DON'T KNOW 99.998
433	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MED. ASST B MIDWIFE . . . . . C OTHER PERSON TRADITIONAL BIRTH ATTENDANT D COMMUNITY HEALTH WORKER E COMMUNITY HEALTH MOTHER AND CHILD . . . F OTHER_____ X (SPECIFY) NO ONE . . . . . Y	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MED. ASST B MIDWIFE . . . . . C OTHER PERSON TRADITIONAL BIRTH ATTENDANT D COMMUNITY HEALTH WORKER E COMMUNITY HEALTH MOTHER AND CHILD . . . F OTHER_____ X (SPECIFY) NO ONE . . . . . Y	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MED. ASST B MIDWIFE . . . . . C OTHER PERSON TRADITIONAL BIRTH ATTENDANT D COMMUNITY HEALTH WORKER E COMMUNITY HEALTH MOTHER AND CHILD . . . F OTHER_____ X (SPECIFY) NO ONE . . . . . Y
434	Where did you give birth to (NAME)? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	HOME YOUR HOME . . . 11 (SKIP TO 438) OTHER HOME . . . 12 PUBLIC/AGREE SECTOR REF. HOSPITAL 21 DIST. HOSPITAL 22 HEALTH CENTER 23 HEALTH POST 24 OTHER PUBLIC FACILITY _____ 26 (SPECIFY) PRIVATE MED. SECTOR POLYCLINIC 31 CLINIC . . . . . 32 DISPENSARY 33 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER_____ 96 (SPECIFY) (SKIP TO 438)	HOME YOUR HOME . . . 11 (SKIP TO 448) OTHER HOME . . . 12 PUBLIC/AGREE SECTOR REF. HOSPITAL 21 DIST. HOSPITAL 22 HEALTH CENTER 23 HEALTH POST 24 OTHER PUBLIC FACILITY _____ 26 (SPECIFY) PRIVATE MED. SECTOR POLYCLINIC 31 CLINIC . . . . . 32 DISPENSARY 33 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER_____ 96 (SPECIFY) (SKIP TO 448)	HOME YOUR HOME . . . 11 (SKIP TO 448) OTHER HOME . . . 12 PUBLIC/AGREE SECTOR REF. HOSPITAL 21 DIST. HOSPITAL 22 HEALTH CENTER 23 HEALTH POST 24 OTHER PUBLIC FACILITY _____ 26 (SPECIFY) PRIVATE MED. SECTOR POLYCLINIC 31 CLINIC . . . . . 32 DISPENSARY 33 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER_____ 96 (SPECIFY) (SKIP TO 448)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
435	Was (NAME) delivered by caesarean, that is, did they cut your belly open to take the baby out?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 436)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 448)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 448)
435A	How did you travel to the health facility to deliver (NAME) by caesarean?	AMBULANCE . . . . . 1 PRIVATE CAR . . . 2 OTHER _____ 6 SPECIFY	AMBULANCE . . . . . 1 PRIVATE CAR . . . 2 OTHER _____ 6 SPECIFY	AMBULANCE . . . . . 1 PRIVATE CAR . . . 2 OTHER _____ 6 SPECIFY
436	After you gave birth to (NAME), did anyone check on your health while you were still in the facility?	YES . . . . . 1 (SKIP TO 439) NO 2		
437	Did anyone check on your health after you left the facility?	YES . . . . . 1 (SKIP TO 439) NO . . . . . 2 (SKIP TO 446)		
438	After you gave birth to (NAME), did anyone check on your health?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 442)		
439	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR . . . . . 11 NURSE/MED. ASST 12 MIDWIFE . . . . . 13 OTHER PERSON TRADITIONAL BIRTH ATTENDANT 21 COMMUNITY HEALTH WORKER 22 COMMUNITY HEALTH MOTHER AND CHILD . . . 23 OTHER _____ 96 (SPECIFY)		
440	How long after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 DAYS 2 WEEKS 3 DON'T KNOW . . . 998		
441	CHECK 437:	YES NOT ASKED (SKIP TO 446)		
442	In the two months after (NAME) was born, did any health care provider or a traditional birth attendant check on his/her health?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 446) DON'T KNOW 8		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
443	How many hours, days or weeks after the birth of (NAME) did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HRS AFTER BIRTH . . 1 DAYS AFTER BIRTH . . 2 WKS AFTER BIRTH . . 3 [ ][ ] DON'T KNOW . . . 998		
444	Who checked on (NAME)'s health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR . . . . . 11 NURSE/MED. ASST 12 MIDWIFE . . . . . 13 OTHER PERSON TRADITIONAL BIRTH ATTENDANT 21 COMMUNITY HEALTH WORKER 22 COMMUNITY HEALTH MOTHER AND CHILD . . . 23 OTHER _____ 96 (SPECIFY)		
445	Where did this first check of (NAME) take place? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	HOME YOUR HOME . . . 11 OTHER HOME . . . 12 PUBLIC/AGREE SECTOR REF. HOSPITAL 21 DIST. HOSPITAL 22 HEALTH CENTER 23 HEALTH POST 24 OTHER PUBLIC FACILITY _____ 26 (SPECIFY) PRIVATE MED. SECTOR POLYCLINIC 31 CLINIC . . . . . 32 DISPENSARY 33 OTHER PRIVATE MED. FACILITY _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)		
446	In the first two months after delivery, did you receive a vitamin A dose (like this/any of these)? SHOW COMMON TYPES OF AMPULES/CAPSULES/SYRUPS.	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
447	Has your menstrual period returned since the birth of (NAME)?	YES . . . . . 1 (SKIP TO 449) NO . . . . . 2 (SKIP TO 450)		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
448	Did your period return between the birth of (NAME) and your next pregnancy?		YES . . . . . 1 NO . . . . . 2 (SKIP TO 452)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 452)
449	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	MONTHS . . . ☐☐ DON'T KNOW 98
450	CHECK 226: IS RESPONDENT PREGNANT?	NOT PREGNANT ☐ PREGNANT OR UNSURE ☐ (SKIP TO 452)		
451	Have you had sexual intercourse since the birth of (NAME)?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 453)		
452	For how many months after the birth of (NAME) did you not have sexual intercourse?	DAYS . . . 1 ☐☐ MONTHS . . . 2 ☐☐ DON'T KNOW 98	DAYS . . . 1 ☐☐ MONTHS . . . 2 ☐☐ DON'T KNOW 98	DAYS . . . 1 ☐☐ MONTHS . . . 2 ☐☐ DON'T KNOW 98
453	Did you ever breastfeed (NAME)?	YES . . . . . 1 (SKIP TO 455) NO 2	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
454	CHECK 404: IS CHILD LIVING?	LIVING ☐ (SKIP TO 460) DEAD ☐ (GO TO 460A)		
455	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 ☐☐		
456	In the first three days after delivery, was (NAME) given anything to drink other than breast milk?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 458)		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
457	What was (NAME) given to drink? 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 COFFEE . . . . . I HONEY . . . . . J OTHER _____ X (SPECIFY)		
458	CHECK 404: IS CHILD LIVING?	LIVING / DEAD (GO TO 460A)	LIVING / DEAD (GO TO 460A)	LIVING / DEAD (GO TO 460A)
459	Are you still breastfeeding (NAME)?	YES . . . . . 1 NO 2		
460	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	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
460A	CHECK 434: WAS CHILD DELIVERED AT HOME?	YES / NO (SKIP TO 461)	YES / NO (SKIP TO 461)	YES / NO (SKIP TO 461)
460B	Why you did not deliver (NAME) at a health facility?	FACILITY COST TOO MUCH . . . . . 01 TOO FAR/NO TRANSPORT . . . 02 DON'T TRUST FACILITY . . . . . 03 NO FEMALE PROVIDER . . . . . 04 HUSBAND FAMILY DON'T ALLOW . 05 NOT NECESSARY/ EASY TO DELIVERY/COMFORTABLE POSITION . 06 CUSTOMARY TO DELIVER AT HOME . . . . . 07 OTHER _____ 96 SPECIFY	FACILITY COST TOO MUCH . . . . . 01 TOO FAR/NO TRANSPORT . . . 02 DON'T TRUST FACILITY . . . . . 03 NO FEMALE PROVIDER . . . . . 04 HUSBAND FAMILY DON'T ALLOW . 05 NOT NECESSARY/ EASY TO DELIVERY/COMFORTABLE POSITION . 06 CUSTOMARY TO DELIVER AT HOME . . . . . 07 OTHER _____ 96 SPECIFY	FACILITY COST TOO MUCH . . . . . 01 TOO FAR/NO TRANSPORT . . . 02 DON'T TRUST FACILITY . . . . . 03 NO FEMALE PROVIDER . . . . . 04 HUSBAND FAMILY DON'T ALLOW . 05 NOT NECESSARY/ EASY TO DELIVERY/COMFORTABLE POSITION . 06 CUSTOMARY TO DELIVER AT HOME . . . . . 07 OTHER _____ 96 SPECIFY
461		GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501.	GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501.	GO BACK TO 405 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 501.

SECTION 5. CHILD IMMUNIZATION, HEALTH AND NUTRITION

501 ENTER IN THE TABLE THE BIRTH HISTORY NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 2005 OR LATER.
ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH.
(IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES).

		LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
502	BIRTH HISTORY NUMBER FROM 212 IN BIRTH HISTORY	BIRTH HISTORY NUMBER	BIRTH HISTORY NUMBER	BIRTH HISTORY NUMBER . . . . .
503	FROM 212 AND 216	NAME _____ LIVING / DEAD → (GO TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 553)	NAME _____ LIVING / DEAD → (GO TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 553)	NAME _____ LIVING / DEAD → (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE, OR IF NO MORE BIRTHS, GO TO 553)
504	Do you have a card where (NAME)'s vaccinations are written down? IF YES: May I see it please?	YES, SEEN . . . . . 1 (SKIP TO 506) ← YES, NOT SEEN . . . . . 2 (SKIP TO 509) ← NO CARD 3	YES, SEEN . . . . . 1 (SKIP TO 506) ← YES, NOT SEEN . . . . . 2 (SKIP TO 509) ← NO CARD 3	YES, SEEN . . . . . 1 (SKIP TO 506) ← YES, NOT SEEN . . . . . 2 (SKIP TO 509) ← NO CARD 3
505	Did you ever have a vaccination card for (NAME)?	YES . . . . . 1 (SKIP TO 509) ← NO 2	YES . . . . . 1 (SKIP TO 509) ← NO 2	YES . . . . . 1 (SKIP TO 509) ← NO 2

506 (1) COPY DATES FROM THE CARD.
(2) WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A DOSE WAS GIVEN, BUT NO DATE IS RECORDED.

	LAST BIRTH DAY	LAST BIRTH MONTH	LAST BIRTH YEAR		NEXT-TO-LAST BIRTH DAY	NEXT-TO-LAST BIRTH MONTH	NEXT-TO-LAST BIRTH YEAR		SECOND-FROM-LAST BIRTH DAY	SECOND-FROM-LAST BIRTH MONTH	SECOND-FROM-LAST BIRTH YEAR
BCG				BCG				BCG			
POLIO 0 (POLIO GIVEN AT BIRTH)				P0				P0			
POLIO 1				P1				P1			
POLIO 2				P2				P2			
POLIO 3				P3				P3			
PENTAVALENT 1				D1				D1			
PENTAVALENT 2				D2				D2			
PENTAVALENT 3				D3				D3			
PNEUMO. 1				PC1				PC1			
PNEUMO. 2				PC2				PC2			
PNEUMO. 3				PC3				PC3			
MEASLES				MEA				MEA			
VITAMIN A (MOST RECENT)				VIT A				VIT A			

		LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
507	CHECK 506:	BCG TO MEASLES ALL RECORDED → (GO TO 511) / OTHER	BCG TO MEASLES ALL RECORDED → (GO TO 511) / OTHER	BCG TO MEASLES ALL RECORDED → (GO TO 511) / OTHER

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
508	Has (NAME) had any vaccinations that are not recorded on this card, including vaccinations given in a national immunization day campaign? RECORD 'YES' ONLY IF THE RESPONDENT MENTIONS AT LEAST ONE OF THE VACCINATIONS IN 506 THAT ARE NOT RECORDED AS HAVING BEEN GIVEN.	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 506) (SKIP TO 511) NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 506) (SKIP TO 511) NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 506) (SKIP TO 511) NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8
509	Did (NAME) ever have any vaccinations to prevent him/her from getting diseases, including vaccinations received in a national immunization day campaign?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 511) DON'T KNOW 8
510	Please tell me if (NAME) had any of the following vaccinations:			
510A	A BCG vaccination against tuberculosis, that is, an injection in the arm or shoulder that usually causes a scar?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
510B	Polio vaccine, that is, drops in the mouth?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510E) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510E) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510E) DON'T KNOW 8
510C	Was the first polio vaccine given in the first two weeks after birth or later?	FIRST 2 WEEKS . . . 1 LATER 2	FIRST 2 WEEKS . . . 1 LATER 2	FIRST 2 WEEKS . . . 1 LATER 2
510D	How many times was the polio vaccine given?	NUMBER OF TIMES	NUMBER OF TIMES	NUMBER OF TIMES . . . . .
510E	A DPT vaccination, that is, an injection given in the thigh or buttocks, sometimes at the same time as polio drops?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510G) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510G) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510G) DON'T KNOW 8
510F	How many times was the DPT vaccination given?	NUMBER OF TIMES	NUMBER OF TIMES	NUMBER OF TIMES . . . . .
510G	A PCV vaccination, that is, an injection given in the thigh, sometimes at the same time as polio drops?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510I) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510I) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 510I) DON'T KNOW 8
510H	How many times was the PCV vaccination given?	NUMBER OF TIMES	NUMBER OF TIMES	NUMBER OF TIMES . . . . .

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
510I	A measles injection or an MMR injection - that is, a shot in the arm at the age of 9 months or older - to prevent him/her from getting measles?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
511	Within the last six months, was (NAME) given a vitamin A dose like (this/any of these)? SHOW COMMON TYPES OF AMPULES/CAPSULES/SYRUPS.	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
513	Was (NAME) given any drug for intestinal worms in the last six months?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
514	Has (NAME) had diarrhea in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) DON'T KNOW 8
515	Was there any blood in the stools?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
516	Now I would like to know how much (NAME) was given to drink during the diarrhea (including breastmilk). Was he/she given less than usual to drink, about the same amount, or more than usual to drink? IF LESS, PROBE: Was he/she given 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	MUCH LESS . . . . . 1 SOMEWHAT LESS 2 ABOUT THE SAME 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8
517	When (NAME) had diarrhea, was he/she given less than usual to eat, about the same amount, more than usual, or nothing to eat? IF LESS, PROBE: Was he/she given 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	MUCH LESS . . . . . 1 SOMEWHAT LESS 2 ABOUT THE SAME 3 MORE . . . . . 4 STOPPED FOOD 5 NEVER GAVE FOOD 6 DON'T KNOW 8
517A	CHECK 453: CURRENTLY BREASTFED NOT CURRENTLY BREASTFED SKIP TO 518			
517B	When (NAME) had diarrhea, did you continue to breastfeed him/her?	YES . . . . . 1 NO 2		
518	Did you seek advice or treatment for the diarrhea from any source?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 522)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 522)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 522)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
519	Where did you seek advice or treatment? Anywhere else? PROBE TO IDENTIFY EACH TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC/AGREE SECTOR REF. HOSPITAL A DIST. HOSPITAL B HEALTH CENTER C HEALTH POST D OUTREACH . . . E COMMUNITY HEALTH WORKER . . . F OTHER PUBLIC FACILITY _____ G (SPECIFY) PRIVATE MED. SECTOR POLYCLINIC . . . H CLINIC . . . . . I DISPENSARY J PHARMACY K OTHER PRIVATE MED. FACILITY _____ L (SPECIFY) OTHER SOURCE KIOSK . . . . . M TRADITIONAL PRACTITIONER N CHURCH . . . . . O FRIEND/RELATIVE P OTHER _____ X (SPECIFY)	PUBLIC/AGREE SECTOR REF. HOSPITAL A DIST. HOSPITAL B HEALTH CENTER C HEALTH POST D OUTREACH . . . E COMMUNITY HEALTH WORKER . . . F OTHER PUBLIC FACILITY _____ G (SPECIFY) PRIVATE MED. SECTOR POLYCLINIC . . . H CLINIC . . . . . I DISPENSARY J PHARMACY K OTHER PRIVATE MED. FACILITY _____ L (SPECIFY) OTHER SOURCE KIOSK . . . . . M TRADITIONAL PRACTITIONER N CHURCH . . . . . O FRIEND/RELATIVE P OTHER _____ X (SPECIFY)	PUBLIC/AGREE SECTOR REF. HOSPITAL A DIST. HOSPITAL B HEALTH CENTER C HEALTH POST D OUTREACH . . . E COMMUNITY HEALTH WORKER . . . F OTHER PUBLIC FACILITY _____ G (SPECIFY) PRIVATE MED. SECTOR POLYCLINIC . . . H CLINIC . . . . . I DISPENSARY J PHARMACY K OTHER PRIVATE MED. FACILITY _____ L (SPECIFY) OTHER SOURCE KIOSK . . . . . M TRADITIONAL PRACTITIONER N CHURCH . . . . . O FRIEND/RELATIVE P OTHER _____ X (SPECIFY)
520	CHECK 519:	TWO OR MORE CODES CIRCLED ☐ / ONLY ONE CODE CIRCLED ☐ (SKIP TO 522)	TWO OR MORE CODES CIRCLED ☐ / ONLY ONE CODE CIRCLED ☐ (SKIP TO 522)	TWO OR MORE CODES CIRCLED ☐ / ONLY ONE CODE CIRCLED ☐ (SKIP TO 522)
521	Where did you first seek advice or treatment? USE LETTER CODE FROM 519.	FIRST PLACE . . . ☐	FIRST PLACE . . . ☐	FIRST PLACE . . . ☐
522	Was he/she given any of the following to drink at any time since he/she started having the diarrhea: a) A fluid made from a special packet called ORS PACKET? b) A government-recommended homemade fluid?	YES NO DK FLUID FROM ORS PKT 1 2 8 HOMEMADE FLUID . . . 1 2 8	YES NO DK FLUID FROM ORS PKT 1 2 8 HOMEMADE FLUID . . . 1 2 8	YES NO DK FLUID FROM ORS PKT 1 2 8 HOMEMADE FLUID . . . 1 2 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
523	Was anything (else) given to treat the diarrhea?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 525) DON'T KNOW 8
524	What (else) was given to treat the diarrhea? Anything else? RECORD ALL TREATMENTS GIVEN.	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY B OTHER (NOT ANTI-BIOTIC, ANTI-MOTILITY, OR ZINC) . . . . . C UNKNOWN PILL OR SYRUP . . . D INJECTION ANTIBIOTIC . . . . . E NON-ANTIBIOTIC F UNKNOWN INJECTION . . . G (IV) INTRAVENOUS H HOME REMEDY/ HERBAL MED-ICINE . . . . . I OTHER _____ X (SPECIFY)	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY B OTHER (NOT ANTI-BIOTIC, ANTI-MOTILITY, OR ZINC) . . . . . C UNKNOWN PILL OR SYRUP . . . D INJECTION ANTIBIOTIC . . . . . E NON-ANTIBIOTIC F UNKNOWN INJECTION . . . G (IV) INTRAVENOUS H HOME REMEDY/ HERBAL MED-ICINE . . . . . I OTHER _____ X (SPECIFY)	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY B OTHER (NOT ANTI-BIOTIC, ANTI-MOTILITY, OR ZINC) . . . . . C UNKNOWN PILL OR SYRUP . . . D INJECTION ANTIBIOTIC . . . . . E NON-ANTIBIOTIC F UNKNOWN INJECTION . . . G (IV) INTRAVENOUS H HOME REMEDY/ HERBAL MED-ICINE . . . . . I OTHER _____ X (SPECIFY)
525	Has (NAME) been ill with a fever at any time in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 527) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 527) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 527) DON'T KNOW 8
526	At any time during the illness, did (NAME) have blood taken from his/her finger or heel for testing?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
527	Has (NAME) had an illness with a cough at any time in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 530) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 530) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 530) DON'T KNOW 8
528	When (NAME) had an illness with a cough, did he/she breathe faster than usual with short, rapid breaths or have difficulty breathing?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 531) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 531) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 531) DON'T KNOW 8
529	Was the fast or difficult breathing due to a problem in the chest or to a blocked or runny nose?	CHEST ONLY . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 531)	CHEST ONLY . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 531)	CHEST ONLY . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 531)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
530	CHECK 525: HAD FEVER OR COUGH?	YES ☐ → NO OR DK ☐ → (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 553)	YES ☐ → NO OR DK ☐ → (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 553)	YES ☐ → NO OR DK ☐ → (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 553)
531	Now I would like to know how much (NAME) was given to drink (including breastmilk) during the illness with a (fever/cough). Was he/she given less than usual to drink, about the same amount, or more than usual to drink? IF LESS, PROBE: Was he/she given 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	MUCH LESS . . . . . 1 SOMEWHAT LESS 2 ABOUT THE SAME 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8
532	When (NAME) had a (fever/cough), was he/she given less than usual to eat, about the same amount, more than usual, or nothing to eat? IF LESS, PROBE: Was he/she given 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	MUCH LESS . . . . . 1 SOMEWHAT LESS 2 ABOUT THE SAME 3 MORE . . . . . 4 STOPPED FOOD 5 NEVER GAVE FOOD 6 DON'T KNOW 8
533	Did you seek advice or treatment for the illness from any source?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 537)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 537)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 537)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
534	Where did you seek advice or treatment? Anywhere else? PROBE TO IDENTIFY EACH TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC/AGREE SECTOR REF. HOSPITAL . A DIST. HOSPITAL . B HEALTH CENTER C HEALTH POST . . . D OUTREACH . . . E COMMUNITY HEALTH WORKER . . . F OTHER PUBLIC FACILITY _____ G (SPECIFY) PRIVATE MED. SECTOR POLYCLINIC . . . H CLINIC . . . . . I DISPENSARY J PHARMACY K OTHER PRIVATE MED. FACILITY _____ L (SPECIFY) OTHER SOURCE KIOSK . . . . . M TRADITIONAL PRACTITIONER N CHURCH . . . . . O FRIEND/RELATIVE P OTHER _____ X (SPECIFY)	PUBLIC/AGREE SECTOR REF. HOSPITAL . A DIST. HOSPITAL . B HEALTH CENTER C HEALTH POST . . . D OUTREACH . . . E COMMUNITY HEALTH WORKER . . . F OTHER PUBLIC FACILITY _____ G (SPECIFY) PRIVATE MED. SECTOR POLYCLINIC . . . H CLINIC . . . . . I DISPENSARY J PHARMACY K OTHER PRIVATE MED. FACILITY _____ L (SPECIFY) OTHER SOURCE KIOSK . . . . . M TRADITIONAL PRACTITIONER N CHURCH . . . . . O FRIEND/RELATIVE P OTHER _____ X (SPECIFY)	PUBLIC/AGREE SECTOR REF. HOSPITAL . A DIST. HOSPITAL . B HEALTH CENTER C HEALTH POST . . . D OUTREACH . . . E COMMUNITY HEALTH WORKER . . . F OTHER PUBLIC FACILITY _____ G (SPECIFY) PRIVATE MED. SECTOR POLYCLINIC . . . H CLINIC . . . . . I DISPENSARY J PHARMACY K OTHER PRIVATE MED. FACILITY _____ L (SPECIFY) OTHER SOURCE KIOSK . . . . . M TRADITIONAL PRACTITIONER N CHURCH . . . . . O FRIEND/RELATIVE P OTHER _____ X (SPECIFY)
535	CHECK 534:	TWO OR MORE CODES CIRCLED ☐ ONLY ONE CODE CIRCLED ☐ (SKIP TO 537)	TWO OR MORE CODES CIRCLED ☐ ONLY ONE CODE CIRCLED ☐ (SKIP TO 537)	TWO OR MORE CODES CIRCLED ☐ ONLY ONE CODE CIRCLED ☐ (SKIP TO 537)
536	Where did you first seek advice or treatment? USE LETTER CODE FROM 534.	FIRST PLACE . . . ☐	FIRST PLACE . . . ☐	FIRST PLACE . . . ☐
537	At any time during the illness, did (NAME) take any drugs for the illness?	YES . . . . . 1 NO . . . . . 2 (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 553) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 553) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 553) DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
538	What drugs did (NAME) take? Any other drugs? RECORD ALL MENTIONED.	ANTIMALARIAL DRUGS COARTEM . . . A PRIMO . . . B QUININE . . . . . C OTHER ANTI-MALARIAL _____ . . . D (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . E INJECTION . . . F OTHER DRUGS ASPIRIN . . . . . G ACETA-MINOPHEN . . . H IBUPROFEN . . . I OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	ANTIMALARIAL DRUGS COARTEM . . . A PRIMO . . . B QUININE . . . . . C OTHER ANTI-MALARIAL _____ . . . D (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . E INJECTION . . . F OTHER DRUGS ASPIRIN . . . . . G ACETA-MINOPHEN . . . H IBUPROFEN . . . I OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	ANTIMALARIAL DRUGS COARTEM . . . A PRIMO . . . B QUININE . . . . . C OTHER ANTI-MALARIAL _____ . . . D (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . E INJECTION . . . F OTHER DRUGS ASPIRIN . . . . . G ACETA-MINOPHEN . . . H IBUPROFEN . . . I OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z
539	CHECK 538: ANY CODE A-D CIRCLED?	YES ☐ NO ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 553)	YES ☐ NO ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 553)	YES ☐ NO ☐ (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 553)
540	CHECK 538: COARTEM ('A') GIVEN	CODE 'A' CIRCLED ☐ CODE 'A' NOT CIRCLED ☐ (SKIP TO 542)	CODE 'A' CIRCLED ☐ CODE 'A' NOT CIRCLED ☐ (SKIP TO 542)	CODE 'A' CIRCLED ☐ CODE 'A' NOT CIRCLED ☐ (SKIP TO 542)
541	How long after the fever started did (NAME) first take Coartem?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW . . . 8
542	CHECK 538: PRIMO ('B') GIVEN	CODE 'B' CIRCLED ☐ CODE 'B' NOT CIRCLED ☐ (SKIP TO 544)	CODE 'B' CIRCLED ☐ CODE 'B' NOT CIRCLED ☐ (SKIP TO 544)	CODE 'B' CIRCLED ☐ CODE 'B' NOT CIRCLED ☐ (SKIP TO 544)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
543	How long after the fever started did (NAME) first take Primo?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW . . . 8
544	CHECK 538: QUININE ('C') GIVEN	CODE 'C' CIRCLED / CODE 'C' NOT CIRCLED → (SKIP TO 550)	CODE 'C' CIRCLED / CODE 'C' NOT CIRCLED → (SKIP TO 550)	CODE 'C' CIRCLED / CODE 'C' NOT CIRCLED → (SKIP TO 550)
545	How long after the fever started did (NAME) first take quinine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW . . . 8
550	CHECK 538: OTHER ANTIMALARIAL ('D') GIVEN	CODE 'D' CIRCLED / CODE 'D' NOT CIRCLED → (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 553)	CODE 'D' CIRCLED / CODE 'D' NOT CIRCLED → (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 553)	CODE 'D' CIRCLED / CODE 'D' NOT CIRCLED → (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 553)
551	How long after the fever started did (NAME) first take (OTHER ANTIMALARIAL)?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE OR MORE DAYS AFTER FEVER . . . . . 3 DON'T KNOW . . . 8
552		GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 553.	GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 553.	GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 553.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
553	CHECK 215 AND 218, ALL ROWS: NUMBER OF CHILDREN BORN IN 2005 OR LATER LIVING WITH THE RESPONDENT ONE OR MORE ☐ → RECORD NAME OF YOUNGEST CHILD LIVING WITH HER AND CONTINUE WITH 554 _____ (NAME) NONE ☐ → 556		
554	The last time (NAME FROM 553) passed stools, what was done to dispose of the stools?	CHILD USED TOILET OR LATRINE . . . 01 PUT/RINSED INTO TOILET OR LATRINE . . . . . 02 PUT/RINSED INTO DRAIN OR DITCH . . . . . 03 THROWN INTO GARBAGE . . . . . 04 BURIED . . . . . 05 LEFT IN THE OPEN . . . . . 06 OTHER _____ 96 (SPECIFY)	
555	CHECK 522(a) AND 522(b), ALL COLUMNS: NO CHILD RECEIVED FLUID FROM ORS PACKET OR HOMEMADE FLUID ☐ → ANY CHILD RECEIVED FLUID FROM ORS PACKET OR HOMEMADE FLUID ☐ → 557		
556	Have you ever heard of a special product called ORS PACKET you can get for the treatment of diarrhea?	YES . . . . . 1 NO 2	
557	CHECK 215 AND 218, ALL ROWS: NUMBER OF CHILDREN BORN IN 2008 OR LATER LIVING WITH THE RESPONDENT ONE OR MORE ☐ → RECORD NAME OF YOUNGEST CHILD LIVING WITH HER AND CONTINUE WITH 558 _____ (NAME) NONE ☐ → 601		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
558	Now I would like to ask you about liquids or foods that (NAME FROM 557) had yesterday during the day or at night. I am interested in whether your child had the item I mention even if it was combined with other foods. Did (NAME FROM 557) (drink/eat):	YES NO DK	
	a) Plain water?	**a)** 1 2 8	
	b) Juice or juice drinks?	**b)** 1 2 8	
	c) Soup?	**c)** 1 2 8	
	d) Milk such as tinned, powdered, or fresh animal milk?	**d)** 1 2 8	
	IF YES: How many times did (NAME) drink milk? IF 7 OR MORE TIMES, RECORD '7'.	NUMBER OF TIMES DRANK MILK ☐	
	e) Infant formula?	**e)** 1 2 8	
	IF YES: How many times did (NAME) drink infant formula? IF 7 OR MORE TIMES, RECORD '7'.	NUMBER OF TIMES DRANK FORMULA ☐	
	f) Any other liquids?	**f)** 1 2 8	
	g) Yogurt?	**g)** 1 2 8	
	IF YES: How many times did (NAME) eat yogurt? IF 7 OR MORE TIMES, RECORD '7'.	NUMBER OF TIMES ATE YOGURT ☐	
	h) Any [BRAND NAME OF COMMERCIALLY FORTIFIED BABY FOOD, E.G., Cerelac]? **(17)**	**h)** 1 2 8	
	i) Bread, rice, noodles, porridge, or other foods made from grains?	**i)** 1 2 8	
	j) Pumpkin, carrots, squash or sweet potatoes that are yellow or orange inside?	**j)** 1 2 8	
	k) White potatoes, white yams, manioc, cassava, or any other foods made from roots?	**k)** 1 2 8	
	l) Any dark green, leafy vegetables?	**l)** 1 2 8	
	m) Ripe mangoes, papayas or [INSERT ANY OTHER LOCALLY AVAILABLE VITAMIN A-RICH FRUITS]?	**m)** 1 2 8	
	n) Any other fruits or vegetables?	**n)** 1 2 8	
	o) Liver, kidney, heart or other organ meats?	**o)** 1 2 8	
	p) Any meat, such as beef, pork, lamb, goat, chicken, or duck?	**p)** 1 2 8	
	q) Eggs?	**q)** 1 2 8	
	r) Fresh or dried fish or shellfish?	**r)** 1 2 8	
	s) Any foods made from beans, peas, lentils, or nuts?	**s)** 1 2 8	
	t) Cheese or other food made from milk?	**t)** 1 2 8	
	u) Any other solid, semi-solid, or soft food?	**u)** 1 2 8	
559	CHECK 558 (CATEGORIES "g" THROUGH "u"): ALL "NO" ☐ ↓ AT LEAST ONE "YES" OR ALL DKs ☐ → 561		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
560	Did (NAME) eat any solid, semi-solid, or soft foods yesterday during the day or at night? IF 'YES' PROBE: What kind of solid, semi-solid or soft foods did (NAME) eat?	YES . . . . . 1 (GO BACK TO 558 TO RECORD FOOD EATEN YESTERDAY) NO 2	→ 561A
561	How many times did (NAME FROM 557) eat solid, semisolid, or soft foods yesterday during the day or at night? IF 7 OR MORE TIMES, RECORD '7'.	NUMBER OF TIMES . . . . . ☐ DON'T KNOW 8	
561A	Have you ever heard of any counseling or education on nutrition?	YES . . . . . 1 NO 2	→ 601
561B	Where did you hear about counseling or education on nutrition?	A HEALTH FACILITY . . . . . A COMMUNITY HEALTH WORKER . . . . . B FRIENDS/RELATIVE . . . . . C MAGAZINE/PAPER/RADIO/TV . . . . . D OTHER _____ X SPECIFY	

SECTION 6. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Are you currently married or living together with a man as if married?	YES, CURRENTLY MARRIED . . . . . 1 YES, LIVING WITH A MAN . . . . . 2 NO, NOT IN UNION 3	→ 604
602	Have you ever been married or lived together with a man as if married?	YES, FORMERLY MARRIED . . . . . 1 YES, LIVED WITH A MAN . . . . . 2 NO 3	→ 612
603	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED . . . . . 1 DIVORCED . . . . . 2 SEPARATED 3	→ 609
604	Is your (husband/partner) living with you now or is he staying elsewhere?	LIVING WITH HER . . . . . 1 STAYING ELSEWHERE 2	
605	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.	
606	Does your (husband/partner) have other wives or does he live with other women as if married?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 609
607	Including yourself, in total, how many wives or live-in partners does he have?	TOTAL NUMBER OF WIVES AND LIVE-IN PARTNERS . . . . . DON'T KNOW 98	
608	Are you the first, second, ... wife?	RANK	
609	Have you been married or lived with a man only once or more than once?	ONLY ONCE . . . . . 1 MORE THAN ONCE 2	
610	CHECK 609: 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 I would like to ask about your first (husband/partner). In what month and year did you start living with him?	MONTH . . . . . DON'T KNOW MONTH . . . . . 98 YEAR . . . . . → 612 DON'T KNOW YEAR 9998	
611	How old were you when you first started living with him?	AGE	
612	CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
613	Now I would like to ask some questions about sexual activity in order to gain a better understanding of some important life issues. How old were you when you had sexual intercourse for the very first time?	NEVER HAD SEXUAL INTERCOURSE . . . . . 00 → 628 AGE IN YEARS . . . . . FIRST TIME WHEN STARTED LIVING WITH (FIRST) HUSBAND/PARTNER 95	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
614	Now I would like to ask you some questions about your recent sexual activity. Let me assure you again that your answers are completely confidential and will not be told to anyone. If we should come to any question that you don't want to answer, just let me know and we will go to the next question.		
615	When was the <u>last</u> time you had sexual intercourse? IF LESS THAN 12 MONTHS, ANSWER MUST BE RECORDED IN DAYS, WEEKS OR MONTHS. IF 12 MONTHS (ONE YEAR) OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO . . . . . 1 WEEKS AGO . . . . . 2 MONTHS AGO . . . . . 3 YEARS AGO 4	→ 616 → 627

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
616	When was the last time you had sexual intercourse with this person?		DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3
617	The last time you had sexual intercourse (with this second/third person), was a condom used?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 619)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 619)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 619)
618	Was a condom used every time you had sexual intercourse with this person in the last 12 months?	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
619	What was your relationship to this person with whom you had sexual intercourse? IF BOYFRIEND: Were you living together as if married? IF YES, CIRCLE '2'. IF NO, CIRCLE '3'.	HUSBAND . . . . . 1 LIVE-IN PARTNER . . . 2 BOYFRIEND NOT LIVING WITH RESPONDENT . . . 3 CASUAL ACQUAINTANCE . . . 4 PROSTITUTE . . . . . 5 OTHER _____ 6 (SPECIFY) (SKIP TO 622)	HUSBAND . . . . . 1 LIVE-IN PARTNER . . . 2 BOYFRIEND NOT LIVING WITH RESPONDENT . . . 3 CASUAL ACQUAINTANCE . . . 4 PROSTITUTE . . . . . 5 OTHER _____ 6 (SPECIFY) (SKIP TO 622)	HUSBAND . . . . . 1 LIVE-IN PARTNER . . . 2 BOYFRIEND NOT LIVING WITH RESPONDENT . . . 3 CASUAL ACQUAINTANCE . . . 4 PROSTITUTE . . . . . 5 OTHER _____ 6 (SPECIFY) (SKIP TO 622)
620	CHECK 609:	MARRIED ONLY ONCE / MARRIED MORE THAN ONCE (SKIP TO 622)	MARRIED ONLY ONCE / MARRIED MORE THAN ONCE (SKIP TO 622)	MARRIED ONLY ONCE / MARRIED MORE THAN ONCE (SKIP TO 622)
621	CHECK 613:	FIRST TIME WHEN STARTED LIVING WITH FIRST HUSBAND / OTHER (SKIP TO 623)	FIRST TIME WHEN STARTED LIVING WITH FIRST HUSBAND / OTHER (SKIP TO 623)	FIRST TIME WHEN STARTED LIVING WITH FIRST HUSBAND / OTHER (SKIP TO 623)
622	How long ago did you first have sexual intercourse with this (second/third) person?	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4
623	How many times during the last 12 months did you have sexual intercourse with this person? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF TIMES IS 95 OR MORE, WRITE '95'.	NUMBER OF TIMES	NUMBER OF TIMES	NUMBER OF TIMES
623A	How many times during the last month did you have sexual intercourse with this person?	NUMBER OF TIMES	NUMBER OF TIMES	NUMBER OF TIMES
624	How old is this person?	AGE OF PARTNER DON'T KNOW 98	AGE OF PARTNER DON'T KNOW 98	AGE OF PARTNER DON'T KNOW 98

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
625	Apart from (this person/these two people), have you had sexual intercourse with any other person in the last 12 months?	YES . . . . . 1 (GO BACK TO 616 IN NEXT COLUMN) NO . . . . . 2 (SKIP TO 627)	YES . . . . . 1 (GO BACK TO 616 IN NEXT COLUMN) NO . . . . . 2 (SKIP TO 627)	
626	In total, with how many different people have you had sexual intercourse in the last 12 months? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS 95 OR MORE, WRITE '95'.			NUMBER OF PARTNERS LAST 12 MONTHS . . . ☐☐ DON'T KNOW . . . 98
626A	In total, with how many different people have you had sexual intercourse in the last month? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS 95 OR MORE, WRITE '95'.			NUMBER OF PARTNERS LAST MONTH . . . ☐☐ DON'T KNOW . . . 98

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
627	In total, with how many different people have you had sexual intercourse in your lifetime? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS 95 OR MORE, WRITE '95'.	NUMBER OF PARTNERS IN LIFETIME . . . . . [ ][ ] DON'T KNOW 98	
628	PRESENCE OF OTHERS DURING THIS SECTION	YES NO CHILDREN <10 . . . . . 1 2 MALE ADULTS . . . . . 1 2 FEMALE ADULTS 1 2	
629	Do you know of a place where a person can get condoms?	YES . . . . . 1 NO 2	→ 632
630	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC/AGREE SECTOR REFERAL HOSPITAL . . . . . A DISTRICT HOSPITAL . . . . . B HEALTH CENTER . . . . . C HEALTH POST . . . . . D OUTREACH . . . . . E COMMUNITY HEALTH WORKER F OTHER PUBLIC HEALTH FACILITY _____ G (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . . . H CLINIC . . . . . I DISPENSARY . . . . . J PHARMACY . . . . . K FAMILY PLANING CLINIC . . . . . L OTHER PRIVATE HEALTH FACILITY _____ M (SPECIFY) OTHER SOURCES KIOSK . . . . . N TRADITIONAL BIRTH ATT. . . . . O FRIEND/RELATIVE . . . . . P OTHER _____ X (SPECIFY)	
631	If you wanted to, could you yourself get a condom?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/UNSURE 8	
632	Do you know of a place where a person can get female condoms?	YES . . . . . 1 NO 2	→ 701

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
633	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC/AGREE SECTOR REFERAL HOSPITAL . . . . . A DISTRICT HOSPITAL . . . . . B HEALTH CENTER . . . . . C HEALTH POST . . . . . D OUTREACH . . . . . E COMMUNITY HEALTH WORKER F OTHER PUBLIC HEALTH FACILITY _____ G (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . . . H CLINIC . . . . . I DISPENSARY . . . . . J PHARMACY . . . . . K FAMILY PLANING CLINIC . . . . . L OTHER PRIVATE HEALTH FACILITY _____ M (SPECIFY) OTHER SOURCES KIOSK . . . . . N TRADITIONAL BIRTH ATT. . . . . O FRIEND/RELATIVE . . . . . P OTHER _____ X (SPECIFY)	
634	If you wanted to, could you yourself get a female condom?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/UNSURE 8	

SECTION 7. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	CHECK 304: NEITHER STERILIZED HE OR SHE STERILIZED		→ 712
702	CHECK 226: PREGNANT NOT PREGNANT OR UNSURE		→ 704
703	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 ANOTHER CHILD . . . . . 1 NO MORE/NONE . . . . . 2 UNDECIDED/DON'T KNOW 8	→ 705 → 711
704	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?	HAVE (A/ANOTHER) CHILD . . . . . 1 NO MORE/NONE . . . . . 2 SAYS SHE CAN'T GET PREGNANT 3 UNDECIDED/DON'T KNOW 8	→ 707 → 712 → 710
705	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	→ 710 → 712 → 710
706	CHECK 226: NOT PREGNANT OR UNSURE PREGNANT		→ 711
707	CHECK 303: USING A CONTRACEPTIVE METHOD? NOT CURRENTLY USING CURRENTLY USING		→ 712
708	CHECK 705: NOT ASKED 24 OR MORE MONTHS OR 02 OR MORE YEARS 00-23 MONTHS OR 00-01 YEAR		→ 711

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
709	CHECK 703 AND 704: WANTS TO HAVE A/ANOTHER CHILD → You have said that you do not want (a/another) child soon. Can you tell me why you are not using a method to prevent pregnancy? WANTS NO MORE/ NONE → You have said that you do not want any (more) children. Can you tell me why you are not using a method to prevent pregnancy? Any other reason? RECORD ALL REASONS MENTIONED.	NOT MARRIED . . . . . A FERTILITY-RELATED REASONS NOT HAVING SEX . . . . . B INFREQUENT SEX . . . . . C MENOPAUSAL/HYSTERECTOMY D CAN'T GET PREGNANT . . . . . E NOT MENSTRUATED SINCE LAST BIRTH . . . . . F BREASTFEEDING . . . . . G UP TO GOD/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 SIDE EFFECTS/HEALTH CONCERNS . . . . . O LACK OF ACCESS/TOO FAR . . . . . P COSTS TOO MUCH . . . . . Q PREFERRED METHOD NOT AVAILABLE . . . . . R NO METHOD AVAILABLE . . . . . S INCONVENIENT TO USE . . . . . T INTERFERES WITH BODY'S NORMAL PROCESSES . . . . . U OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
710	CHECK 303: USING A CONTRACEPTIVE METHOD? NOT ASKED NO, NOT CURRENTLY USING YES, CURRENTLY USING → 712		
711	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	
712	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 → 714 NUMBER . . . . . ☐☐ OTHER _____ 96 → 714 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
713	How many of these children would you like to be boys, how many would you like to be girls and for how many would it not matter if it's a boy or a girl?	BOYS GIRLS EITHER NUMBER ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	
714	In the last few months have you: Heard about family planning on the radio? Seen anything about family planning on the television? Read about family planning in a newspaper or magazine?	YES NO RADIO . . . . . 1 2 TELEVISION . . . . . 1 2 NEWSPAPER OR MAGAZINE . . . 1 2	
716	CHECK 601: YES, CURRENTLY MARRIED ☐ ↓ YES, LIVING WITH A MAN ☐ ↓ NO, NOT IN UNION ☐ →		801
717	CHECK 303: USING A CONTRACEPTIVE METHOD? CURRENTLY USING ☐ ↓ NOT CURRENTLY USING OR NOT ASKED ☐ →		720
718	Would you say that using contraception is mainly your decision, mainly your (husband's/partner's) decision, or did you both decide together?	MAINLY RESPONDENT . . . . . 1 MAINLY HUSBAND/PARTNER . . . . . 2 JOINT DECISION . . . . . 3 OTHER _____ 6 (SPECIFY)	
719	CHECK 304: NEITHER STERILIZED ☐ ↓ HE OR SHE STERILIZED ☐ →		801
720	Does your (husband/partner) want 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	

SECTION 8. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	CHECK 601 AND 602: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ ↓ FORMERLY MARRIED/ LIVED WITH A MAN ☐ → 803 NEVER MARRIED AND NEVER LIVED WITH A MAN ☐ → 807		
802	How old was your (husband/partner) on his last birthday?	AGE IN COMPLETED YEARS ☐☐	
803	Did your (last) (husband/partner) ever attend school?	YES . . . . . 1 NO 2	→ 806
804	What was the highest level of school he attended: primary, secondary, or higher?	PRIMARY . . . . . 1 POST-PRIMARY/VOCATIONAL . . . . . 2 SECONDARY . . . . . 3 TERTIARY . . . . . 4 PRE-PRIMARY . . . . . 6 DON'T KNOW 8	→ 806
805	What was the highest (grade/form/year) he completed at that level? IF COMPLETED LESS THAN ONE YEAR AT THAT LEVEL, RECORD '00'.	GRADE . . . . . ☐☐ DON'T KNOW 98	
806	CHECK 801: 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?	_____ ☐☐ _____ _____	
807	Aside from your own housework, have you done any work in the last seven days?	YES . . . . . 1 NO 2	→ 811
808	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. In the last seven days, have you done any of these things or any other work?	YES . . . . . 1 NO 2	→ 811
809	Although you did not work in the last seven days, do you have any job or business from which you were absent for leave, illness, vacation, maternity leave, or any other such reason?	YES . . . . . 1 NO 2	→ 811
810	Have you done any work in the last 12 months?	YES . . . . . 1 NO 2	→ 815
811	What is your occupation, that is, what kind of work do you mainly do?	_____ ☐☐ _____ _____	
812	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	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
813	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	
814	Are you paid 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	
815	CHECK 601: CURRENTLY MARRIED/LIVING WITH A MAN ☐ NOT IN UNION ☐		→ 823
816	CHECK 814: CODE 1 OR 2 CIRCLED ☐ OTHER ☐		→ 819
817	Who usually decides how the money you earn will be used: mainly you, mainly your (husband/partner), or you and your (husband/partner) jointly?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 OTHER _____ 6 (SPECIFY)	
818	Would you say that the money that you earn is more than what your (husband/partner) earns, less than what he earns, or about the same?	MORE THAN HIM . . . . . 1 LESS THAN HIM . . . . . 2 ABOUT THE SAME . . . . . 3 HUSBAND/PARTNER DOESN'T BRING IN ANY MONEY . . . . . 4 DON'T KNOW 8	→ 820
819	Who usually decides how your (husband's/partner's) earnings will be used: you, your (husband/partner), or you and your (husband/partner) jointly?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 HUSBAND/PARTNER HAS NO EARNINGS . . . . . 4 OTHER _____ 6 (SPECIFY)	
820	Who usually makes decisions about health care for yourself: you, your (husband/partner), you and your (husband/partner) jointly, or someone else?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 SOMEONE ELSE IN FAMILY . . . . . 4 OTHER 6	
821	Who usually makes decisions about making major household purchases?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 SOMEONE ELSE IN FAMILY . . . . . 4 OTHER 6	
822	Who usually makes decisions about visits to your family, relatives and friends?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 SOMEONE ELSE HUSBAND/PARTNER JOINTLY . . . 3 SOMEONE ELSE IN FAMILY . . . . . 4 OTHER 6	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
823	Do you own this or any other house either alone or jointly with someone else?	ALONE ONLY . . . . . 1 JOINTLY ONLY . . . . . 2 BOTH ALONE AND JOINTLY . . . . . 3 DOES NOT OWN 4	
824	Do you own any land either alone or jointly with someone else?	ALONE ONLY . . . . . 1 JOINTLY ONLY . . . . . 2 BOTH ALONE AND JOINTLY . . . . . 3 DOES NOT OWN 4	
825	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 3 HUSBAND . . . . . 1 2 3 OTHER MALES . . . . . 1 2 3 OTHER FEMALES . . . 1 2 3	
826	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 has sex with someone else? — SEX WITH SOMEONE 1 2 8 If she burns the food? — BURNS FOOD 1 2 8	
827	In your opinion, is a parent justified in hitting or beating his children for the following reasons:	YES / NO / DK If he disobeys? — DISOBEY . . . . . 1 2 8 If he impolite? — IMPOLITE . . . . . 1 2 8 If he has embarrassed the family? — EMBARR. FAMILY . . . 1 2 8	

SECTION 9. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	YES . . . . . 1 NO 2	→ 937
902	Can people reduce their chance of getting the AIDS virus by having just one uninfected sex partner who has no other sex partners?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
903	Can people get the AIDS virus from mosquito bites?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
904	Can people reduce their chance of getting the AIDS virus by using a condom every time they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
905	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
906	Can people get the AIDS virus because of witchcraft or other supernatural means?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
907	Is it possible for a healthy-looking person to have the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
907A	Can men reduce their chance of getting the AIDS virus by getting circumcised?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
908	Can the virus that causes AIDS be transmitted from a mother to her baby: During pregnancy? During delivery? By breastfeeding?	YES NO DK DURING PREG. . . . . 1 2 8 DURING DELIVERY . . . 1 2 8 BREASTFEEDING . . . 1 2 8	
909	CHECK 908: AT LEAST ONE 'YES' ☐ OTHER ☐		→ 911
910	Are there any special drugs that a doctor or a nurse can give to a woman infected with the AIDS virus to reduce the risk of transmission to the baby?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
910A	CHECK FOR PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
910B	I don't want to know the results, but have you ever been tested to see if you have the AIDS virus for prenuptial purposes?	YES . . . . . 1 NO 2	
910C	CHECK 601: CURRENTLY MARRIED OR LIVING WITH A MAN ☐ FORMERLY MARRIED OR LIVING WITH A MAN ☐ NEVER MARRIED OR NEVER LIVED WITH A MAN ☐		→ 911
910D	I don't want to know the results, but have you ever been tested as couple with your husband/partner to see if you and/or him have the AIDS virus?	YES . . . . . 1 NO 2	→ 911

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
910E	I don't want to know the results, but have you and your husband told each other the results of your tests?	YES . . . . . 1 NO 2	
911	CHECK 208 AND 215: LAST BIRTH SINCE JANUARY 2008 ☐ NO BIRTHS ☐ LAST BIRTH BEFORE JANUARY 2008 ☐		→ 926 → 926
912	CHECK 408 FOR LAST BIRTH: HAD ANTENATAL CARE ☐ NO ANTENATAL CARE ☐		→ 920
913	CHECK FOR PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
914	During any of the antenatal visits for your last birth were you given any information about: Babies getting the AIDS virus from their mother? Things that you can do to prevent getting the AIDS virus? Getting tested for the AIDS virus?	YES NO DK AIDS FROM MOTHER 1 2 8 THINGS TO DO 1 2 8 TESTED FOR AIDS 1 2 8	
915	Were you offered a test for the AIDS virus as part of your antenatal care?	YES . . . . . 1 NO 2	
916	I don't want to know the results, but were you tested for the AIDS virus as part of your antenatal care?	YES . . . . . 1 NO 2	→ 920
917	Where was the test done? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC/AGREE SECTOR REFERAL HOSPITAL . . . . . 11 DISTRICT HOSPITAL . . . . . 12 HEALTH CENTER . . . . . 13 HEALTH POST . . . . . 14 OUTREACH . . . . . 15 COMMUNITY HEALTH WORKER 16 OTHER PUBLIC HEALTH FACILITY _____ (SPECIFY) 17 PRIVATE MEDICAL SECTOR POLYCLINIC . . . . . 21 CLINIC . . . . . 22 DISPENSARY . . . . . 23 PHARMACY . . . . . 24 FAMILY PLANNING CLINIC . . . . . 25 OTHER PRIVATE HEALTH FACILITY _____ (SPECIFY) 26 OTHER SOURCES KIOSK . . . . . 31 TRADITIONAL BIRTH ATT. . . . . 32 FRIEND/RELATIVE . . . . . 33 OTHER _____ (SPECIFY) 96 DON'T KNOW 98	
918	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	→ 924
919	All women are supposed to receive counseling after being tested. After you were tested, did you receive counseling?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 924

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
920	CHECK 434 FOR LAST BIRTH: ANY CODE 21-36 CIRCLED ☐ OTHER ☐		→ 926
921	Between the time you went for delivery but before the baby was born, were you offered a test for the AIDS virus?	YES . . . . . 1 NO 2	
922	I don't want to know the results, but were you tested for the AIDS virus at that time?	YES . . . . . 1 NO 2	→ 926
923	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	
924	Have you been tested for the AIDS virus since that time you were tested during your pregnancy?	YES . . . . . 1 NO 2	→ 927
925	How many months ago was your most recent HIV test?	MONTHS AGO . . . . . ☐☐ TWO OR MORE YEARS 96	→ 932
926	I don't want to know the results, but have you ever been tested to see if you have the AIDS virus?	YES . . . . . 1 NO 2	→ 930
927	How many months ago was your most recent HIV test?	MONTHS AGO . . . . . ☐☐ TWO OR MORE YEARS 96	
928	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	
929	Where was the test done? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC/AGREE SECTOR REFERAL HOSPITAL . . . . . 11 DISTRICT HOSPITAL . . . . . 12 HEALTH CENTER . . . . . 13 HEALTH POST . . . . . 14 OUTREACH . . . . . 15 COMMUNITY HEALTH WORKER 16 OTHER PUBLIC HEALTH FACILITY _____ 17 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . . . 21 CLINIC . . . . . 22 DISPENSARY . . . . . 23 PHARMACY . . . . . 24 FAMILY PLANNING CLINIC . . . . . 25 OTHER PRIVATE HEALTH FACILITY _____ 26 (SPECIFY) OTHER SOURCES KIOSK . . . . . 31 TRADITIONAL BIRTH ATT. . . . . 32 FRIEND/RELATIVE . . . . . 33 CORRECTIONAL FACILITY . . . . . 34 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→ 932

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
930	Do you know of a place where people can go to get tested for the AIDS virus?	YES . . . . . 1 NO 2	→ 932
931	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC/AGREE SECTOR REFERAL HOSPITAL . . . . . A DISTRICT HOSPITAL . . . . . B HEALTH CENTER . . . . . C HEALTH POST . . . . . D OUTREACH . . . . . E COMMUNITY HEALTH WORKER F OTHER PUBLIC HEALTH FACILITY _____ (SPECIFY) G PRIVATE MEDICAL SECTOR POLYCLINIC . . . . . H CLINIC . . . . . I DISPENSARY . . . . . J PHARMACY . . . . . K FAMILY PLANNING CLINIC . . . . . L OTHER PRIVATE HEALTH FACILITY _____ (SPECIFY) M OTHER SOURCES KIOSK . . . . . N TRADITIONAL BIRTH ATT. . . . . O FRIEND/RELATIVE . . . . . P CORRECTIONAL FACILITY . . . . . Q OTHER _____ (SPECIFY) X	
932	Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
933	If a member of your family got infected with the AIDS virus, would you want it to remain a secret or not?	YES, REMAIN A SECRET . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
934	If a member of your family became sick with AIDS, would you be willing to care for her or him in your own household?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
935	In your opinion, if a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in the school?	SHOULD BE ALLOWED . . . . . 1 SHOULD NOT BE ALLOWED . . . . . 2 DK/NOT SURE/DEPENDS 8	
936	Should children age 12-14 be taught about using a condom to avoid getting AIDS?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
937	CHECK 901: HEARD ABOUT AIDS ☐ → Apart from AIDS, have you heard about other infections that can be transmitted through sexual contact? NOT HEARD ABOUT AIDS ☐ → Have you heard about infections that can be transmitted through sexual contact?	YES . . . . . 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
938	CHECK 613: HAS HAD SEXUAL INTERCOURSE ☐ ↓ NEVER HAD SEXUAL INTERCOURSE ☐ → 946		
939	CHECK 937: HEARD ABOUT OTHER SEXUALLY TRANSMITTED INFECTIONS? YES ☐ ↓ NO ☐ → 941		
940	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 disease which you got through sexual contact?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
941	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	
942	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	
943	CHECK 940, 941, AND 942: HAS HAD AN INFECTION (ANY 'YES') ☐ ↓ HAS NOT HAD AN INFECTION OR DOES NOT KNOW ☐ → 946		
944	The last time you had (PROBLEM FROM 940/941/942), did you seek any kind of advice or treatment?	YES . . . . . 1 NO . . . . . 2 → 946	
945	Where did you go? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC/AGREE SECTOR REFERAL HOSPITAL . . . . . A DISTRICT HOSPITAL . . . . . B HEALTH CENTER . . . . . C HEALTH POST . . . . . D OUTREACH . . . . . E COMMUNITY HEALTH WORKER F OTHER PUBLIC HEALTH FACILITY _____ G (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . . . H CLINIC . . . . . I DISPENSARY . . . . . J PHARMACY . . . . . K FAMILY PLANNING CLINIC . . . . . L OTHER PRIVATE HEALTH FACILITY _____ M (SPECIFY) OTHER SOURCES KIOSK . . . . . N TRADITIONAL BIRTH ATT. . . . . O FRIEND/RELATIVE . . . . . P OTHER _____ X (SPECIFY)	
946	If a wife knows her husband has a disease that she can get during sexual intercourse, is she justified in asking that he use a condom when they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
947	Is a wife justified in refusing to have sex with her husband when she knows her husband has sex with other women?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
948	CHECK 601: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ NOT IN UNION ☐ → 951		
949	Can you say no to your (husband/partner) if you do not want to have sexual intercourse?	YES . . . . . 1 NO . . . . . 2 DEPENDS/NOT SURE 8	
950	Could you ask your (husband/partner) to use a condom if you wanted him to?	YES . . . . . 1 NO . . . . . 2 DEPENDS/NOT SURE 8	

951	**A** Have you ever heard about the following campaigns?		**B** How did you hear about (NAME OF CAMPAIGN)?	**C** Who did you talk to about (NAME OF CAMPAIGN)?
	a) Sinigurisha	YES 1 → / NO 2 ↓	a) ☐☐	a) ☐☐
	b) Fata umwana wese nkuwawe	YES 1 → / NO 2 ↓	b) ☐☐	b) ☐☐
	c) World AIDS Day (Ivuga,kwipimisha virus SIDA ku bushake n'ababana, kugirango tugabanya ubwiyongere bw'ikwizwa ry' ubwandu bw'agakoko gatera SIDA)	YES 1 → / NO 2 ↓	c) ☐☐	e) ☐☐
	d) World AIDS Day (Iagakingirizo ni uburyo bwo kwirinda SIDA tukavuge, tukabone, tugakoreshe: ni uburenganzira bwa buri wese.)	YES 1 → / NO 2 ↓	d) ☐☐	d) ☐☐
	e) Tega amatwi wemve on the radio	YES 1 → / NO 2 ↓		e) ☐☐
	f) Zibukira on the radio	YES 1 → / NO 2 ↓		f) ☐☐
	g) Inshuti y'ubuzima on the radio	YES 1 → / NO 2 ↓		g) ☐☐

CODE FOR 951B

01 = TELEVISION
02 = RADIO
03 = BILLBOARDS
04 = POSTERS
05 = PRINT MEDIA
06 = COMMUNITY/CHURCH/UMUGANDA MEETING OR THEATER
07 = SCHOOL/UNIVERSITY
08 = WORKPLACE
96 = OTHER

CODE FOR 951C:

01 = FAMILY MEMBER OR FRIEND
02 = COWORKER/SUPERVISOR AT WORK
03 = COMMUNITY HEALTH WORKER
04 = LOCAL GOVERNMENT LEADER
05 = LOCAL CHURCH LEADER
06 = TEACHER/PROFESSOR
07 = OUTREACH WORKER (NGO WORKER)
08 = NO ONE
96 = OTHER

SECTION 10. OTHER HEALTH ISSUES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1001	Now I would like to ask you some other questions relating to health matters. Have you had an injection for any reason in the last 12 months? IF YES: How many injections have you had? IF NUMBER OF INJECTIONS IS 90 OR MORE, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . ☐☐ NONE 00	1004
1002	Among these injections, how many were administered by a doctor, a nurse, a pharmacist, a dentist, or any other health worker? IF NUMBER OF INJECTIONS IS 90 OR MORE, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . ☐☐ NONE 00	1004
1003	The last time you got an injection from a health worker, did he/she take the syringe and needle from a new, unopened package?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1004	Do you currently smoke cigarettes?	YES . . . . . 1 NO 2	1006
1005	In the last 24 hours, how many cigarettes did you smoke?	NUMBER OF CIGARETTES . . . . . ☐☐	
1006	Do you currently smoke or use any (other) type of tobacco?	YES . . . . . 1 NO 2	1008
1007	What (other) type of tobacco do you currently smoke or use? RECORD ALL MENTIONED.	PIPE . . . . . A CHEWING TOBACCO . . . . . B SNUFF . . . . . C OTHER _____ X (SPECIFY)	
1008	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 PROB-LEM / NOT A BIG PROB-LEM	
	Getting permission to go to the doctor?	PERMISSION TO GO . . . 1 / 2	
	Getting money needed for advice or treatment?	GETTING MONEY . . . . . 1 / 2	
	The distance to the health facility?	DISTANCE . . . . . 1 / 2	
	Not wanting to go alone?	GO ALONE . . . . . 1 / 2	
1011	GO TO THE NEXT SECTION (11)		

SECTION 11. ADULT MORTALITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1101	Now I would like to ask you some questions about your brothers and sisters, that is, all of the children born to your natural mother, including those who are living with you, those living elsewhere and those who have died. How many children did your mother give birth to, including you?	NUMBER OF BIRTHS TO NATURAL MOTHER	
1102	CHECK 1101: TWO OR MORE BIRTHS ☐ ONLY ONE BIRTH (RESPONDENT ONLY) ☐ → 1201		
1103	How many of these births did your mother have before you were born?	NUMBER OF PRECEDING BIRTHS	

		(1)	(2)	(3)	(4)	(5)	(6)
1104	What was the name given to your oldest (next oldest) brother or sister?	_____	_____	_____	_____	_____	_____
1105	Is (NAME) male or female?	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2
1106	Is (NAME) still alive?	YES . . . 1 NO . . . 2 → GO TO 1108 DK . . . 8 → GO TO (2)	YES . . . 1 NO . . . 2 → GO TO 1108 DK . . . 8 → GO TO (3)	YES . . . 1 NO . . . 2 → GO TO 1108 DK . . . 8 → GO TO (4)	YES . . . 1 NO . . . 2 → GO TO 1108 DK . . . 8 → GO TO (5)	YES . . . 1 NO . . . 2 → GO TO 1108 DK . . . 8 → GO TO (6)	YES . . . 1 NO . . . 2 → GO TO 1108 DK . . . 8 → GO TO (7)
1107	How old is (NAME)?	☐☐ GO TO (2)	☐☐ GO TO (3)	☐☐ GO TO (4)	☐☐ GO TO (5)	☐☐ GO TO (6)	☐☐ GO TO (7)
1108	How many years ago did (NAME) die?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
1109	How old was (NAME) when he/she died?	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (2)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (3)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (4)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (5)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (6)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (7)
1110	Was (NAME) pregnant when she died?	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2
1111	Did (NAME) die during childbirth?	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2	YES . . . 1 → GO TO 1113 NO . . . 2
1112	Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2
1113	How many live born children did (NAME) give birth to during her lifetime (before this pregnancy)?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐

GO BACK TO 1104 IN NEXT COLUMN, OR, IF NO MORE BROTHERS OR SISTERS, GO TO THE NEXT SECTION.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP

1104	What was the name given to your oldest (next oldest) brother or sister?	(7) _____	(8) _____	(9) _____	(10) _____	(11) _____	(12) _____
1105	Is (NAME) male or female?	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2
1106	Is (NAME) still alive?	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (8)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (9)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (10)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (11)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (12)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (13)
1107	How old is (NAME)?	☐☐ GO TO (8)	☐☐ GO TO (9)	☐☐ GO TO (10)	☐☐ GO TO (11)	☐☐ GO TO (12)	☐☐ GO TO (13)
1108	How many years ago did (NAME) die?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
1109	How old was (NAME) when he/she died?	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (8)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (9)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (10)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (11)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (12)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (13)
1110	Was (NAME) pregnant when she died?	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2
1111	Did (NAME) die during childbirth?	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2
1112	Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2
1113	How many live born children did (NAME) give birth to during her lifetime (before this pregnancy)?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
1114	GO BACK TO 1104 IN NEXT COLUMN, OR, IF NO MORE BROTHERS OR SISTERS, GO TO THE NEXT SECTION.						

SECTION 12. RELATIONSHIP IN THE HOUSEHOLD

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1201	CHECK COVER PAGE OF THIS QUESTIONNAIRE TO SEE IF WOMAN IS SELECTED FOR THIS SECTION YES ↓ NO →		1214
1202	CHECK FOR PRESENCE OF OTHERS: DO NOT CONTINUE UNTIL EFFECTIVE PRIVACY IS ENSURED. PRIVACY OBTAINED ↓ PRIVACY NOT POSSIBLE →		1214
1203	Now I would like to ask you questions about some other important aspects of a woman's life. I know that some of these questions are very personal. However, your answers are crucial for helping to understand the condition of women in Rwanda. Let me assure you that your answers are completely confidential and will not be told to anyone and no one else will know that you were asked these questions.		
1204	CHECK 601 AND 603 FOR MARITAL STATUS: CURRENTLY MARRIED OR LIVING WITH A MAN ↓ FORMERLY MARRIED OR FORMERLY LIVED WITH A MAN ↓ NEVER MARRIED OR NEVER LIVED WITH A MAN →		1206

1205

	A (Does/did) your (last) husband/partner ever do any of the following things to you:			**B** How often did this happen during the last 12 months: often, only sometimes, or not at all?			
					OFTEN	SOME-TIMES	NOT AT ALL
a)	push you, shake you, or throw something at you?	YES NO	1 → 2 ↓	a)	1	2	3
b)	slap you?	YES NO	1 → 2 ↓	b)	1	2	3
c)	twist your arm or pull your hair?	YES NO	1 → 2 ↓	c)	1	2	3
d)	punch you with his fist or with something that could hurt you?	YES NO	1 → 2 ↓	d)	1	2	3
e)	kick you, drag you or beat you up?	YES NO	1 → 2 ↓	e)	1	2	3
f)	try to choke you or burn you on purpose?	YES NO	1 → 2 ↓	f)	1	2	3
g)	threaten or attack you with a knife, gun, or any other weapon?	YES NO	1 → 2 ↓	g)	1	2	3
h)	physically force you to have sexual intercourse with him even when you did not want to?	YES NO	1 → 2 ↓	h)	1	2	3
i)	force you to perform any sexual acts you did not want to?	YES NO	1 → 2 ↓	i)	1	2	3

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1206	CHECK 601 AND 603: MARRIED/LIVING WITH A MAN/SEPARATED/ DIVORCED/ WIDOWED → From the time you were 15 years old has anyone other than your (current/last) husband/partner hit, slapped, kicked, or done anything else to hurt you physically? NEVER MARRIED/ NEVER LIVED WITH A MAN → From the time you were 15 years old has anyone ever hit, slapped, kicked, or done anything else to hurt you physically?	YES . . . . . 1 NO . . . . . 2 REFUSED/NO ANSWER 3	→ 1208
1207	Who has physically hurt you in this way? Anyone else? RECORD ALL MENTIONED.	MOTHER . . . . . A FATHER . . . . . B STEP-MOTHER . . . . . C STEP-FATHER . . . . . D SISTER . . . . . E BROTHER . . . . . F DAUGHTER . . . . . G SON . . . . . H LATE/EX-HUSBAND/EX-PARTNER . . . . . I CURRENT BOYFRIEND . . . . . J FORMER BOYFRIEND . . . . . K MOTHER-IN-LAW . . . . . L FATHER-IN-LAW . . . . . M OTHER FEMALE RELATIVE/IN-LAW . . . N OTHER MALE RELATIVE/ IN-LAW . . . . . O FEMALE FRIEND/ACQUAINTANCE . . . P MALE FRIEND/ACQUAINTANCE . . . . . Q TEACHER . . . . . R EMPLOYER . . . . . S POLICE/SOLDIER . . . . . T STRANGER . . . . . U OTHER _____ X (SPECIFY)	
1208	At any time in your life, as a child or as an adult, has anyone ever forced you in any way to have sexual intercourse or perform any other sexual acts against your will?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER 3	→ 1211
1209	How old were you the first first time you were forced to have sexual intercourse or perform any other sexual acts against your will?	AGE IN COMPLETED YEARS . . . [ ][ ] DON'T KNOW 98	
1210	Who was the person who was forcing you at that time?	CURRENT HUSBAND/PARTNER . . . . . 01 FORMER HUSBAND/PARTNER . . . . . 02 CURRENT/FORMER BOYFRIEND . . . . . 03 FATHER . . . . . 04 STEP-FATHER . . . . . 05 OTHER RELATIVE . . . . . 06 IN-LAW . . . . . 07 OWN FRIEND/ACQUAINTANCE . . . . . 08 FAMILY FRIEND . . . . . 09 TEACHER . . . . . 10 EMPLOYER/SOMEONE AT WORK . . . 11 POLICE/SOLDIER . . . . . 12 PRIEST/RELIGIOUS LEADER . . . . . 13 STRANGER . . . . . 14 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1211	CHECK 1205, 1206, AND 1208: AT LEAST ONE YES ☐ NOT A SINGLE YES ☐		→ 1214
1212	Have you ever tried to get help to prevent or stop this or these person) from physically or sexually hurting you?	YES . . . . . 1 NO 2	→ 1214
1213	From whom have you sought help? Anyone else? RECORD ALL MENTIONED.	MOTHER . . . . . A FATHER . . . . . B STEP-MOTHER . . . . . C STEP-FATHER . . . . . D SISTER . . . . . E BROTHER . . . . . F DAUGHTER . . . . . G SON . . . . . H LATE/EX-HUSBAND/EX-PARTNER . . . I CURRENT BOYFRIEND . . . . . J FORMER BOYFRIEND . . . . . K MOTHER-IN-LAW . . . . . L FATHER-IN-LAW . . . . . M OTHER FEMALE RELATIVE/IN-LAW . . . N OTHER MALE RELATIVE/ IN-LAW . . . O FEMALE FRIEND/ACQUAINTANCE . . . P MALE FRIEND/ACQUAINTANCE . . . . . Q TEACHER . . . . . R EMPLOYER . . . . . S POLICE/SOLDIER . . . . . T STRANGER . . . . . U OTHER _____ X (SPECIFY)	
1214	INTERVIEWER'S COMMENTS / EXPLANATION FOR NOT COMPLETING THE RELATIONSHIP IN THE HOUSEHOLD MODULE _____ _____ _____ _____ _____		
1215	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 SUPERVISOR: _____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR: _____ DATE: _____

INSTRUCTIONS:
ONLY ONE CODE SHOULD APPEAR IN ANY BOX.
COLUMN 1 REQUIRES A CODE IN EVERY MONTH.

INFORMATION TO BE CODED FOR EACH COLUMN

COLUMN 1: BIRTHS, PREGNANCIES, CONTRACEPTIVE USE

- B BIRTHS
- P PREGNANCIES
- T TERMINATIONS

- 0 NO METHOD
- 1 FEMALE STERILIZATION
- 2 MALE STERILIZATION
- 3 IUD
- 4 INJECTABLES
- 5 IMPLANTS/JADELLE
- 6 PILL
- 7 CONDOM
- 8 FEMALE CONDOM
- 9 DIAPHRAGM
- J FOAM OR JELLY
- K LACTATIONAL AMENORRHEA METHOD
- L RHYTHM METHOD
- M STANDARD DAYS METHOD
- N WITHDRAWAL
- X OTHER MODERN METHOD
- Y OTHER TRADITIONAL METHOD

COLUMN 2: DISCONTINUATION OF CONTRACEPTIVE USE

- 0 INFREQUENT SEX/HUSBAND AWAY
- 1 BECAME PREGNANT WHILE USING
- 2 WANTED TO BECOME PREGNANT
- 3 HUSBAND/PARTNER DISAPPROVED
- 4 WANTED MORE EFFECTIVE METHOD
- 5 SIDE EFFECTS/HEALTH CONCERNS
- 6 LACK OF ACCESS/TOO FAR
- 7 COSTS TOO MUCH
- 8 INCONVENIENT TO USE
- F UP TO GOD/FATALISTIC
- A DIFFICULT TO GET PREGNANT/MENOPAUSAL
- D MARITAL DISSOLUTION/SEPARATION
- X OTHER _____ (SPECIFY)
- Z DON'T KNOW

				1	2	
	06	JUN	01			
2	05	MAY	02			2
0	04	APR	03			0
1	03	MAR	04			1
1	02	FEB	05			1
	01	JAN	06			
	12	DEC	07			
	11	NOV	08			
	10	OCT	09			
	09	SEP	10			
2	08	AUG	11			2
0	07	JUL	12			0
1	06	JUN	13			1
0	05	MAY	14			0
	04	APR	15			
	03	MAR	16			
	02	FEB	17			
	01	JAN	18			
	12	DEC	19			
	11	NOV	20			
	10	OCT	21			
	09	SEP	22			
2	08	AUG	23			2
0	07	JUL	24			0
0	06	JUN	25			0
9	05	MAY	26			9
	04	APR	27			
	03	MAR	28			
	02	FEB	29			
	01	JAN	30			
	12	DEC	31			
	11	NOV	32			
	10	OCT	33			
	09	SEP	34			
2	08	AUG	35			2
0	07	JUL	36			0
0	06	JUN	37			0
8	05	MAY	38			8
	04	APR	39			
	03	MAR	40			
	02	FEB	41			
	01	JAN	42			
	12	DEC	43			
	11	NOV	44			
	10	OCT	45			
	09	SEP	46			
2	08	AUG	47			2
0	07	JUL	48			0
0	06	JUN	49			0
7	05	MAY	50			7
	04	APR	51			
	03	MAR	52			
	02	FEB	53			
	01	JAN	54			
	12	DEC	55			
	11	NOV	56			
	10	OCT	57			
	09	SEP	58			
2	08	AUG	59			2
0	07	JUL	60			0
0	06	JUN	61			0
6	05	MAY	62			6
	04	APR	63			
	03	MAR	64			
	02	FEB	65			
	01	JAN	66			
	12	DEC	67			
	11	NOV	68			
	10	OCT	69			
	09	SEP	70			
2	08	AUG	71			2
0	07	JUL	72			0
0	06	JUN	73			0
5	05	MAY	74			5
	04	APR	75			
	03	MAR	76			
	02	FEB	77			
	01	JAN	78			

February 2010

RWANDA DEMOGRAPHIC AND HEALTH SURVEYS 2010
MAN'S QUESTIONNAIRE

MINECOFIN

MINISTRY OF HEALTH

NATIONAL INSTITUTE OF STATISTICS

IDENTIFICATION

PLACE NAME _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBER . . . . . | | | |

HOUSEHOLD STRUCTURE NUMBER . . . . . | | | |

HOUSEHOLD NUMBER . . . . . | | | |

NAME AND LINE NUMBER OF MAN _____ | | |

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY | | MONTH | | YEAR | | | |
INTERVIEWER'S NAME				INT. NUMBER | | |
RESULT*				RESULT |
NEXT VISIT: DATE				TOTAL NUMBER OF VISITS |
TIME				

*RESULT CODES:

1	COMPLETED	4	REFUSED		
2	NOT AT HOME	5	PARTLY COMPLETED	7	OTHER _____ (SPECIFY)
3	POSTPONED	6	INCAPACITATED		

LANGUAGE OF INTERVIEW:

KINYARWANDA 1

OTHER _____ 6
SPECIFY

TRANSLATOR USED?

YES 1

NO 2

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____ | | |	NAME _____ | | |	| |	| |

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION AND CONSENT

INFORMED CONSENT

Hello. My name is _____. I am working with the National Institute of Statistics of Rwanda. We are conducting a survey about health all over Rwanda.. The information we collect will help the government to plan health services. Your household was selected for the survey. The questions usually take about 20 minutes. All of the answers you give will be confidential and will not be shared with anyone other than members of our survey team. You don't have to be in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time.

In case you need more information about the survey, you may contact the person listed on the card that has already been given to your household.

Do you have any questions? 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	In what month and year were you born?	MONTH . . . . . ☐☐ DON'T KNOW MONTH . . . . . 98 YEAR . . . . . ☐☐☐☐ DON'T KNOW YEAR 9998	
103	How old were you at your last birthday? COMPARE AND CORRECT 102 AND/OR 103 IF INCONSISTENT.	AGE IN COMPLETED YEARS ☐☐	
104	Have you ever attended school?	YES . . . . . 1 NO 2	→ 108
105	What is the highest level of school you attended: primary, secondary, or higher?	PRIMARY . . . . . 1 POST-PRIMARY/VOCATIONAL . . . . . 2 SECONDARY . . . . . 3 TERTIARY . . . . . 4 PRE-PRIMARY 6	
106	What is the highest (grade/form/year) you completed at that level? IF COMPLETED LESS THAN ONE YEAR AT THAT LEVEL, RECORD '00'.	GRADE/FORM/YEAR . . . . . ☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
107	CHECK 105: PRIMARY OR LESS ☐ ↓ POST-PRIMARY/VOCATIONAL SECONDARY OR HIGHER ☐ → 110		
108	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	
109	CHECK 108: CODE '2', '3' OR '4' CIRCLED ☐ ↓ CODE '1' OR '5' CIRCLED ☐ → 111		
110	Do you read a newspaper or magazine, at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
111	Do you listen to the radio, at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
112	Do you watch television, at least once a week, less than once a week or not at all?	AT LEAST ONCE A WEEK . . . . . 1 LESS THAN ONCE A WEEK . . . . . 2 NOT AT ALL 3	
113	What is your religion?	CATHOLIC . . . . . 1 PROTESTANT . . . . . 2 ADVENTIST . . . . . 3 MUSLIM . . . . . 4 TRADITIONAL . . . . . 5 OTHER _____ 6 SPECIFY NO RELIGION 7	
115	In the last 12 months, how many times have you been away from home for one or more nights?	NUMBER OF TIMES . . . . . ☐☐ NONE 00	→ 201
116	In the last 12 months, have you been away from home for more than one month at a time?	YES . . . . . 1 NO 2	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about any children you have had during your life. I am interested in all of the children that are biologically yours, even if they are not legally yours or do not have your last name. 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, RECORD '00'.	SONS AT HOME . . . . . [ ][ ] DAUGHTERS AT HOME . . . . . [ ][ ]	
204	Do you have any sons or daughters that 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, RECORD '00'.	SONS ELSEWHERE . . . . . [ ][ ] DAUGHTERS ELSEWHERE . . . [ ][ ]	
205A	Where do your sons or daughters who do not live with you live?	BOARDING SCHOOL . . . . . A RELATIVE . . . . . B IN THE STREET . . . . . C WORK _____ D SPECIFY MARRIED . . . . . E OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
206	Have you ever fathered a son or a daughter 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, RECORD '00'.	BOYS DEAD . . . . . [ ][ ] GIRLS DEAD . . . . . [ ][ ]	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL CHILDREN . . . . . [ ][ ]	
209	CHECK 208: HAS HAD MORE THAN ONE CHILD → (continue) HAS HAD ONLY ONE CHILD → 212 HAS NOT HAD ANY CHILDREN → 301		
210	Did all of the children you have fathered have the same biological mother?	YES . . . . . 1 NO 2	→ 212
211	In all, how many women have you fathered children with?	NUMBER OF WOMEN . . . . . [ ][ ]	
212	How old were you when your (first) child was born?	AGE IN YEARS . . . . . [ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
213	CHECK 203 AND 205: AT LEAST ONE LIVING CHILD ☐ ↓ NO LIVING CHILDREN ☐ → 301		
214	How old is your (youngest) child?	AGE IN YEARS . . . . . ☐☐	
215	CHECK 214: (YOUNGEST) CHILD IS AGE 0-2 YEARS ☐ ↓ OTHER ☐ → 301		
216	What is the name of your (youngest) child? WRITE NAME OF (YOUNGEST) CHILD _____ (NAME OF (YOUNGEST) CHILD)		
217	When (NAME)'s mother was pregnant with (NAME), did she have any antenatal check-ups?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 219
218	Were you ever present during any of those antenatal check-ups?	PRESENT . . . . . 1 NOT PRESENT 2	
219	Was (NAME) born in a hospital or health facility?	HOSPITAL/HEALTH FACILITY . . . . . 1 OTHER 2	
220	When a child has diarrhea, how much should he or she be given to drink: more than usual, about the same as usual, less than usual, or nothing to drink at all?	MORE THAN USUAL . . . . . 1 ABOUT THE SAME . . . . . 2 LESS THAN USUAL . . . . . 3 NOTHING TO DRINK . . . . . 4 DON'T KNOW 8	

SECTION 3. CONTRACEPTION

301	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. Have you ever heard of (METHOD)?		
01	**Female Sterilization**. PROBE: Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
02	**Male Sterilization**. PROBE: Men can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
03	**IUD**. PROBE: Women can have a loop or coil placed inside them by a doctor or a nurse.	YES . . . . . 1 NO 2	
04	**Injectables**. PROBE: Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES . . . . . 1 NO 2	
05	**Implants/Jadelle**. PROBE: Women can have one or more 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	
06	**Pill**. PROBE: Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2	
07	**Condom**. PROBE: Men can put a rubber sheath on their penis before sexual intercourse.	YES . . . . . 1 NO 2	
08	**Female Condom**. PROBE: Women can place a sheath in their vagina before sexual intercourse.	YES . . . . . 1 NO 2	
09	**Lactational Amenorrhea Method** (LAM)	YES . . . . . 1 NO 2	
10	**Rhythm Method**. PROBE: 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	
11	**Standard Days Methods (SDM).** PROBE: The woman know days of the month when she can get pregnant by using beads or calendar	YES . . . . . 1 NO 2	
12	**Withdrawal**. PROBE: Men can be careful and pull out before climax.	YES . . . . . 1 NO 2	
13	**Emergency Contraception**. PROBE: As an emergency measure, within three days after they have unprotected sexual intercourse, women can take special pills to prevent pregnancy.	YES . . . . . 1 NO 2	
14	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
302	In the last few months have you: Heard about family planning on the radio? Seen anything about family planning on the television? Read about family planning in a newspaper or magazine?	YES NO RADIO . . . . . 1 2 TELEVISION . . . . . 1 2 NEWSPAPER OR MAGAZINE 1 2	
303	In the last few months, have you discussed family planning with a health worker or health professional?	YES . . . . . 1 NO 2	
304	Now I would like to ask you about a woman's risk of pregnancy. From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant when she has sexual relations?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 306
305	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	
306	I will now read you some statements about contraception. Please tell me if you agree or disagree with each one. a) Contraception is a woman's business and a man should not have to worry about it. b) Women who use contraception may become promiscuous.	AGREE / DISAGREE / DK CONTRACEPTION WOMAN'S BUSINESS 1 2 8 WOMEN MAY BECOME PROMISCUOUS 1 2 8	
307	CHECK 301 (07) KNOWS MALE CONDOM: YES ↓ NO →		→ 311
308	Do you know of a place where a person can get condoms?	YES . . . . . 1 NO 2	→ 311
309	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC/AGREE SECTOR REFERAL HOSPITAL . . . . . A DISTRICT HOSPITAL . . . . . B HEALTH CENTER . . . . . C HEALTH POST . . . . . D OUTREACH . . . . . E COMMUNITY HEALTH WORKER F OTHER PUBLIC HEALTH FACILITY _____ G (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . . . H CLINIC . . . . . I DISPENSARY . . . . . J PHARMACY . . . . . K FAMILY PLANNING CLINIC . . . . . L OTHER PRIVATE HEALTH FACILITY _____ M (SPECIFY) OTHER SOURCES KIOSK . . . . . N TRADITIONAL BIRTH ATT. . . . . O FRIEND/RELATIVE . . . . . P OTHER _____ X (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
310	If you wanted to, could you yourself get a condom?	YES . . . . . 1 NO 2	
311	CHECK 301 (08) KNOWS FEMALE CONDOM: YES ☐ NO ☐ → 401		
312	Do you know of a place where a person can get female condoms?	YES . . . . . 1 NO 2	→ 401
313	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC/AGREE SECTOR REFERAL HOSPITAL . . . . . A DISTRICT HOSPITAL . . . . . B HEALTH CENTER . . . . . C HEALTH POST . . . . . D OUTREACH . . . . . E COMMUNITY HEALTH WORKER F OTHER PUBLIC HEALTH FACILITY _____ (SPECIFY) G PRIVATE MEDICAL SECTOR POLYCLINIC . . . . . H CLINIC . . . . . I DISPENSARY . . . . . J PHARMACY . . . . . K FAMILY PLANNING CLINIC . . . . . L OTHER PRIVATE HEALTH FACILITY _____ (SPECIFY) M OTHER SOURCES KIOSK . . . . . N TRADITIONAL BIRTH ATT. . . . . O FRIEND/RELATIVE . . . . . P OTHER _____ (SPECIFY) X	
314	If you wanted to, could you yourself get a female condom?	YES . . . . . 1 NO 2	

SECTION 4. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
401	Are you currently married or living together with a woman as if married?	YES, CURRENTLY MARRIED . . . . . 1 YES, LIVING WITH A WOMAN . . . . . 2 NO, NOT IN UNION 3	→ 404
402	Have you ever been married or lived together with a woman as if married?	YES, FORMERLY MARRIED . . . . . 1 YES, LIVED WITH A WOMAN . . . . . 2 NO 3	→ 413
403	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED . . . . . 1 DIVORCED . . . . . 2 SEPARATED 3	→ 410
404	Is your (wife/partner) living with you now or is she staying elsewhere?	LIVING WITH HIM . . . . . 1 STAYING ELSEWHERE 2	
405	Do you have other wives or do you live with other women as if married?	YES (MORE THAN ONE) . . . . . 1 NO (ONLY ONE) 2	→ 407
406	Altogether, how many wives or live-in partners do you have?	TOTAL NUMBER OF WIVES AND LIVE-IN PARTNERS . . . ☐☐	
407	CHECK 405: ONE WIFE/ PARTNER ☐ → Please tell me the name of your wife (the woman you are living with as if married). MORE THAN ONE WIFE/ PARTNER ☐ → Please tell me the name of each of your wives or each woman you are living with as if married. RECORD THE NAME AND THE LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE FOR EACH WIFE AND LIVE-IN PARTNER. IF A WOMAN IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'.	NAME / LINE NUMBER _____ ☐☐ _____ ☐☐ _____ ☐☐ _____ ☐☐	408 How old was (NAME) on her last birthday? AGE ☐☐ ☐☐ ☐☐ ☐☐
408	ASK 408 FOR EACH PERSON.		
409	CHECK 407: ONE WIFE/ PARTNER ☐ → MORE THAN ONE WIFE/ PARTNER ☐ →		→ 411A
410	Have you been married or lived with a woman only once or more than once?	ONLY ONCE . . . . . 1 MORE THAN ONCE 2	→ 411A

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
411	In what month and year did you start living with your (wife/partner)?	MONTH	
411A	Now I would like to ask about your first (wife/partner). In what month and year did you start living with her?	DON'T KNOW MONTH . . . . . 98 YEAR	→ 413
		DON'T KNOW YEAR 9998	
412	How old were you when you first started living with her?	AGE	
413	CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
414	Now I would like to ask some questions about sexual activity in order to gain a better understanding of some important life issues.	NEVER HAD SEXUAL INTERCOURSE 00	→ 501
	How old were you when you had sexual intercourse for the very first time?	AGE IN YEARS	
		FIRST TIME WHEN STARTED LIVING WITH (FIRST) WIFE/PARTNER 95	
415	Now I would like to ask you some questions about your recent sexual activity. Let me assure you again that your answers are completely confidential and will not be told to anyone. If we should come to any question that you don't want to answer, just let me know and we will go to the next question.		
416	When was the <u>last</u> time you had sexual intercourse? IF LESS THAN 12 MONTHS, ANSWER MUST BE RECORDED IN DAYS, WEEKS OR MONTHS. IF 12 MONTHS (ONE YEAR) OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO . . . . . 1 WEEKS AGO . . . . . 2 MONTHS AGO 3	→ 417
		YEARS AGO 4	→ 434

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
417	When was the last time you had sexual intercourse with this person?		DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3
418	The last time you had sexual intercourse (with this second/third person), was a condom used?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 420)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 420)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 420)
419	Was a condom used every time you had sexual intercourse with this person in the last 12 months?	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
420	What was your relationship to this person with whom you had sexual intercourse? IF GIRLFRIEND: Were you living together as if married? IF YES, CIRCLE '2'. IF NO, CIRCLE '3'.	WIFE . . . . . 1 LIVE-IN PARTNER . . . 2 GIRLFRIEND NOT LIVING WITH RESPONDENT . . . 3 CASUAL ACQUAINTANCE . . . 4 PROSTITUTE . . . . . 5 OTHER _____ 6 (SPECIFY) (SKIP TO 423)	WIFE . . . . . 1 LIVE-IN PARTNER . . . 2 GIRLFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . . 4 PROSTITUTE . . . . . 5 OTHER _____ 6 (SPECIFY) (SKIP TO 423)	WIFE . . . . . 1 LIVE-IN PARTNER . . . 2 GIRLFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . . 4 PROSTITUTE . . . . . 5 OTHER _____ 6 (SPECIFY) (SKIP TO 423)
421	CHECK 410:	MARRIED ONLY ONCE / MARRIED MORE THAN ONCE OR 410 NOT FILLED (SKIP TO 423)	MARRIED ONLY ONCE / MARRIED MORE THAN ONCE OR 410 NOT FILLED (SKIP TO 423)	MARRIED ONLY ONCE / MARRIED MORE THAN ONCE OR 410 NOT FILLED (SKIP TO 423)
422	CHECK 414:	FIRST TIME WHEN STARTED LIVING WITH FIRST WIFE (SKIP TO 424) / OTHER	FIRST TIME WHEN STARTED LIVING WITH FIRST WIFE (SKIP TO 424) / OTHER	FIRST TIME WHEN STARTED LIVING WITH FIRST WIFE (SKIP TO 424) / OTHER
423	How long ago did you first have sexual intercourse with this (second/third) person?	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4	DAYS AGO 1 WEEKS AGO 2 MONTHS AGO 3 YEARS AGO 4
424	How many times during the last 12 months did you have sexual intercourse with this person? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF TIMES IS 95 OR MORE, WRITE '95'.	NUMBER OF TIMES	NUMBER OF TIMES	NUMBER OF TIMES
424A	How many times during the last month did you have sexual intercourse with this person?	NUMBER OF TIMES	NUMBER OF TIMES	NUMBER OF TIMES

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
425	How old is this person?	AGE OF PARTNER ☐☐ DON'T KNOW 98	AGE OF PARTNER ☐☐ DON'T KNOW 98	AGE OF PARTNER ☐☐ DON'T KNOW 98
426	Apart from (this person/these two people), have you had sexual intercourse with any other person in the last 12 months?	YES . . . . . 1 (GO BACK TO 417 IN NEXT COLUMN) NO . . . . . 2 (SKIP TO 428)	YES . . . . . 1 (GO BACK TO 417 IN NEXT COLUMN) NO . . . . . 2 (SKIP TO 428)	
427	In total, with how many different people have you had sexual intercourse in the last 12 months? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS 95 OR MORE, WRITE '95'.			NUMBER OF PARTNERS LAST 12 MONTHS . . . ☐☐ DON'T KNOW . . . 98
427A	In total, with how many different people have you had sexual intercourse in the last month? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS 95 OR MORE, WRITE '95'.			NUMBER OF PARTNERS LAST MONTHS . . . ☐☐ DON'T KNOW . . . 98

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
428	CHECK 420 (ALL COLUMNS): AT LEAST ONE PARTNER IS A PROSTITUTE ☐ NO PARTNERS ARE PROSTITUTES ☐ → 430		
429	CHECK 420 AND 418 (ALL COLUMNS): CONDOM USED WITH EVERY PROSTITUTE ☐ → 433 OTHER ☐ → 434		
430	In the last 12 months, did you pay anyone in exchange for having sexual intercourse?	YES . . . . . 1 NO 2	→ 432
431	Have you ever paid anyone in exchange for having sexual intercourse?	YES . . . . . 1 NO 2	→ 434
432	The last time you paid someone in exchange for having sexual intercourse, was a condom used?	YES . . . . . 1 NO 2	→ 434
433	Was a condom used during sexual intercourse every time you paid someone in exchange for having sexual intercourse in the last 12 months?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
434	In total, with how many different people have you had sexual intercourse in your lifetime? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS 95 OR MORE, WRITE '95'.	NUMBER OF PARTNERS IN LIFETIME . . . . . ☐☐ DON'T KNOW 98	
435	CHECK 418, MOST RECENT PARTNER (FIRST COLUMN): NOT ASKED ☐ → 438 CONDOM USED ☐ NO CONDOM USED ☐ → 438		
436	You told me that a condom was used the last time you had sex. What is the brand name of the condom used at that time? IF BRAND NOT KNOWN, ASK TO SEE THE PACKAGE.	PRUDENCE . . . . . 01 PLEASURE PLUS . . . . . 02 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
437	From where did you obtain the condom the last time? PROBE TO IDENTIFY TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC/AGREE SECTOR REFERAL HOSPITAL . . . . . 11 DISTRICT HOSPITAL . . . . . 12 HEALTH CENTER . . . . . 13 HEALTH POST . . . . . 14 OUTREACH . . . . . 15 COMMUNITY HEALTH WORKER 16 OTHER PUBLIC HEALTH FACILITY _____ 17 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . . . 21 CLINIC . . . . . 22 DISPENSARY . . . . . 23 PHARMACY . . . . . 24 FAMILY PLANNING CLINIC . . . . . 25 OTHER PRIVATE HEALTH FACILITY _____ 26 (SPECIFY) OTHER SOURCES KIOSK . . . . . 31 CHURCH . . . . . 32 FRIEND/RELATIVE . . . . . 33 OTHER _____ 96 (SPECIFY)	
438	The last time you had sex did you or your partner use any method (other than a condom) to avoid or prevent a pregnancy?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 501
439	What method did you or your partner use? PROBE: Did you or your partner use any other method to prevent pregnancy? RECORD ALL MENTIONED.	FEMALE STERILIZATION . . . . . A MALE STERILIZATION . . . . . B IUD . . . . . C INJECTABLES . . . . . D IMPLANTS/JADELLE . . . . . E PILL . . . . . F FEMALE CONDOM . . . . . G DIAPHRAGM . . . . . H FOAM/JELLY . . . . . I LAM . . . . . J RHYTHM METHOD . . . . . K STANDARD DAYS METHOD . . . . . L WITHDRAWAL . . . . . M OTHER MODERN METHOD . . . . . X OTHER TRADITIONAL METHOD . . . . . Y	

SECTION 5. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	CHECK 401: CURRENTLY MARRIED OR LIVING WITH A PARTNER ☐ NOT CURRENTLY MARRIED AND NOT LIVING WITH A PARTNER ☐		→ 509
502	CHECK 439: MAN NOT STERILIZED ☐ MAN STERILIZED ☐		→ 509
503	(Is your (wife/partner)/Are any of your (wives/partners)) currently pregnant?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 505
504	Now I have some questions about the future. After the (child/children) you and your (wife(wives)/partner(s)) are expecting now, would you like to have another child, or would you prefer not have any more children?	HAVE ANOTHER CHILD . . . . . 1 NO MORE/NONE . . . . . 2 UNDECIDED/DON'T KNOW 8	→ 506 → 509
505	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?	HAVE (A/ANOTHER) CHILD . . . . . 1 NO MORE/NONE . . . . . 2 SAYS COUPLE CAN'T GET PREGNANT . . . . . 3 WIFE (WIVES)/PARTNER(S) STERILIZED . . . . . 4 UNDECIDED/DON'T KNOW 8	→ 509
506	CHECK 407: ONE WIFE/ PARTNER ☐ MORE THAN ONE WIFE/ PARTNER ☐		→ 508
507	CHECK 503: WIFE/PARTNER NOT PREGNANT OR DON'T KNOW ☐ WIFE/PARTNER PREGNANT ☐ How long would you like to wait from now before the birth of (a/another) child? 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 COUPLE INFECUND . . . . . 994 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	→ 509
508	How long would you like to wait from now before the birth of (a/another) child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 HE/ALL HIS WIVES/PARTNERS ARE INFECUND . . . . . 994 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
509	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)	→ 601 → 601
510	How many of these children would you like to be boys, how many would you like to be girls and for how many would it not matter if it's a boy or a girl?	BOYS GIRLS EITHER NUMBER ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	

SECTION 6. EMPLOYMENT AND GENDER ROLES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Have you done any work in the last seven days?	YES . . . . . 1 NO 2	→ 604
602	Although you did not work in the last seven days, do you have any job or business from which you were absent for leave, illness, vacation, or any other such reason?	YES . . . . . 1 NO 2	→ 604
603	Have you done any work in the last 12 months?	YES . . . . . 1 NO 2	→ 610
604	What is your occupation, that is, what kind of work do you mainly do?	_____ ☐☐ _____ _____	
605	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	
606	Are you paid 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	
607	CHECK 401: CURRENTLY MARRIED OR LIVING WITH A PARTNER ☐ ↓ NOT CURRENTLY MARRIED AND NOT LIVING WITH A PARTNER ☐ → 612		
608	CHECK 606: CODE 1 OR 2 CIRCLED ☐ ↓ OTHER ☐ → 610		
609	Who usually decides how the money you earn will be used: mainly you, mainly your (wife (wives)/partner(s)), or you and your (wife (wives)/partner(s)) jointly?	RESPONDENT . . . . . 1 WIFE(WIVES)/PARTNER(S) . . . . . 2 RESPONDENT AND WIFE (WIVES)/ PARTNER(S) JOINTLY . . . . . 3 OTHER _____ 6 SPECIFY	
610	Who usually makes decisions about health care for yourself: you, your (wife/partner), you and your (wife/partner) jointly, or someone else?	RESPONDENT . . . . . 1 WIFE(WIVES)/PARTNER(S) . . . . . 2 RESPONDENT AND WIFE (WIVES)/ PARTNER(S) JOINTLY . . . . . 3 SOMEONE ELSE . . . . . 4 OTHER 6	
611	Who usually makes decisions about making major household purchases?	RESPONDENT . . . . . 1 WIFE(WIVES)/PARTNER(S) . . . . . 2 RESPONDENT AND WIFE (WIVES)/ PARTNER(S) JOINTLY . . . . . 3 SOMEONE ELSE . . . . . 4 OTHER 6	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
612	Do you own this or any other house either alone or jointly with someone else?	ALONE ONLY . . . . . 1 JOINTLY ONLY . . . . . 2 BOTH ALONE AND JOINTLY . . . . . 3 DOES NOT OWN 4	
613	Do you own any land either alone or jointly with someone else?	ALONE ONLY . . . . . 1 JOINTLY ONLY . . . . . 2 BOTH ALONE AND JOINTLY . . . . . 3 DOES NOT OWN 4	
614	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 has sex with someone else?	SEX WITH SOMEONE 1 2 8	
	If she burns the food?	BURNS FOOD 1 2 8	
615	In your opinion, is a parent justified in hitting or beating his son for the following reasons:	YES NO DK	
	If he disobeys?	DISOBEY 1 2 8	
	If he impolite?	IMPOLITE 1 2 8	
	If he has embarrassed the family?	EMBARR. FAMILY . . . 1 2 8	

SECTION 7. HIV/AIDS

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	→ 723
702	Can people reduce their chances of getting the AIDS virus by having just one uninfected sex partner who has no other sex partners?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
703	Can people get the AIDS virus from mosquito bites?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
704	Can people reduce their chance 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 get the AIDS virus because of witchcraft or other supernatural means?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
707	Is it possible for a healthy-looking person to have the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
707A	Can men reduce their chance of getting the AIDS virus by getting circumcised?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
708	Can the virus that causes AIDS be transmitted from a mother to her baby: During pregnancy? During delivery? By breastfeeding?	YES NO DK DURING PREG. . . . . 1 2 8 DURING DELIVERY . . . 1 2 8 BREASTFEEDING . . . 1 2 8	
709	CHECK 708: AT LEAST ONE 'YES' ↓ OTHER →		711
710	Are there any special drugs that a doctor or a nurse can give to a woman infected with the AIDS virus to reduce the risk of transmission to the baby?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
711	CHECK FOR PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
711A	I don't want to know the results, but have you ever been tested to see if you have the AIDS virus for prenuptial purposes?	YES . . . . . 1 NO 2	
711B	CHECK 401 AND 402: CURRENTLY MARRIED OR LIVING WITH A WOMEN ↓ FORMERLY MARRIED OR LIVING WITH A WOMEN ↓ NEVER MARRIED OR NEVER LIVED WITH A WOMAN →		712
711C	I don't want to know the results, but have you ever been tested as a couple with your wife/partner to see if you and/or him have the AIDS virus?	YES . . . . . 1 NO 2	→ 712

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
711D	I don't want to know the results, but have you and your wife told each other the results of your tests?	YES . . . . . 1 NO 2	→ 713
712	I don't want to know the results, but have you ever been tested to see if you have the AIDS virus?	YES . . . . . 1 NO 2	→ 716
713	How many months ago was your most recent HIV test?	MONTHS AGO . . . . . ☐☐ TWO OR MORE YEARS 96	
714	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	
715	Where was the test done? PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC/AGREE SECTOR REFERAL HOSPITAL . . . . . 11 DISTRICT HOSPITAL . . . . . 12 HEALTH CENTER . . . . . 13 HEALTH POST . . . . . 14 OUTREACH . . . . . 15 COMMUNITY HEALTH WORKER 16 OTHER PUBLIC HEALTH FACILITY _____ 17 (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . . . 21 CLINIC . . . . . 22 DISPENSARY . . . . . 23 PHARMACY . . . . . 24 FAMILY PLANNING CLINIC . . . . . 25 OTHER PRIVATE HEALTH FACILITY _____ 26 (SPECIFY) OTHER SOURCES KIOSK . . . . . 31 TRADITIONAL BIRTH ATT. . . . . 32 FRIEND/RELATIVE . . . . . 33 CORRECTIONAL FACILITY . . . . . 34 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→ 718
716	Do you know of a place where people can go to get tested for the AIDS virus?	YES . . . . . 1 NO 2	→ 718

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
717	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC/AGREE SECTOR REFERAL HOSPITAL . . . . . A DISTRICT HOSPITAL . . . . . B HEALTH CENTER . . . . . C HEALTH POST . . . . . D OUTREACH . . . . . E COMMUNITY HEALTH WORKER F OTHER PUBLIC HEALTH FACILITY _____ G (SPECIFY) PRIVATE MEDICAL SECTOR POLYCLINIC . . . . . H CLINIC . . . . . I DISPENSARY . . . . . J PHARMACY . . . . . K FAMILY PLANING CLINIC . . . . . L OTHER PRIVATE HEALTH FACILITY _____ M (SPECIFY) OTHER SOURCES KIOSK . . . . . N TRADITIONAL BIRTH ATT. . . . . O FRIEND/RELATIVE . . . . . P CORRECTIONAL FACILITY . . . . . Q OTHER _____ X (SPECIFY)	
718	Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
719	If a member of your family got infected with the AIDS virus, would you want it to remain a secret or not?	YES, REMAIN A SECRET . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
720	If a member of your family became sick with AIDS, would you be willing to care for her or him in your own household?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
721	In your opinion, if a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in the school?	SHOULD BE ALLOWED . . . . . 1 SHOULD NOT BE ALLOWED . . . . . 2 DK/NOT SURE/DEPENDS 8	
722	Should children age 12-14 be taught about using a condom to avoid getting AIDS?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
723	CHECK 701: HEARD ABOUT AIDS ☐ → Apart from AIDS, have you heard about other infections that can be transmitted through sexual contact? NOT HEARD ABOUT AIDS ☐ → Have you heard about infections that can be transmitted through sexual contact?	YES . . . . . 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
724	CHECK 414: HAS HAD SEXUAL INTERCOURSE ☐↓ HAS NOT HAD SEXUAL INTERCOURSE ☐→		732
725	CHECK 723: HEARD ABOUT OTHER SEXUALLY TRANSMITTED INFECTIONS? YES ☐↓ NO ☐→		727
726	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 disease which you got through sexual contact?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
727	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	
728	Sometimes men have a sore or ulcer near their penis. During the last 12 months, have you had a sore or ulcer near your penis?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
729	CHECK 726, 727, AND 728: HAS HAD AN INFECTION (ANY 'YES') ☐↓ HAS NOT HAD AN INFECTION OR DOES NOT KNOW ☐→		732
730	The last time you had (PROBLEM FROM 726/727/728), did you seek any kind of advice or treatment?	YES . . . . . 1 NO 2	→ 732
731	Where did you go? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC/AGREE SECTOR REFERAL HOSPITAL . . . . . A DISTRICT HOSPITAL . . . . . B HEALTH CENTER . . . . . C HEALTH POST . . . . . D OUTREACH . . . . . E COMMUNITY HEALTH WORKER . . . F OTHER PUBLIC HEALTH FACILITY _____ (SPECIFY) G PRIVATE MEDICAL SECTOR POLYCLINIC . . . . . H CLINIC . . . . . I DISPENSARY . . . . . J PHARMACY . . . . . K FAMILY PLANNING CLINIC . . . . . L OTHER PRIVATE HEALTH FACILITY _____ (SPECIFY) M OTHER SOURCES KIOSK . . . . . N TRADITIONAL BIRTH ATT. . . . . O FRIEND/RELATIVE . . . . . P OTHER _____ (SPECIFY) X	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
732	If a wife knows her husband has a disease that she can get during sexual intercourse, is she justified in asking that they use a condom when they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
733	Is a wife justified in refusing to have sex with her husband when she knows her husband has sex with other women?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

734 **A** Have you ever heard about the following campaigns?

		B How did you hear about (NAME OF CAMPAIGN)?	**C** Who did you talk to about (NAME OF CAMPAIGN)?
a) Sinigurisha	YES 1 → / NO 2 ↓	a) ☐☐	a) ☐☐
b) Fata umwana wese nkuwawe	YES 1 → / NO 2 ↓	b) ☐☐	b) ☐☐
c) World AIDS Day (Ivuga,kwipimisha virus SIDA ku bushake n'ababana, kugirango tugabanya ubwiyongere bw'ikwizwa ry' ubwandu bw'agakoko gatera SIDA)	YES 1 → / NO 2 ↓	c) ☐☐	e) ☐☐
d) World AIDS Day (Iagakingirizo ni uburyo bwo kwirinda SIDA tukavuge, tukabone, tugakoreshe: ni uburenganzira bwa buri wese.)	YES 1 → / NO 2 ↓	d) ☐☐	d) ☐☐
e) Tega amatwi wemve on the radio	YES 1 → / NO 2 ↓		e) ☐☐
f) Zibukira on the radio	YES 1 → / NO 2 ↓		f) ☐☐
g) Inshuti y'ubuzima on the radio	YES 1 → / NO 2 ↓		g) ☐☐

CODE FOR 951B

01 = TELEVISION
02 = RADIO
03 = BILLBOARDS
04 = POSTERS
05 = PRINT MEDIA
06 = COMMUNITY/CHURCH/UMUGANDA MEETING OR THEATER
07 = SCHOOL/UNIVERSITY
08 = WORKPLACE
96 = OTHER

CODE FOR 951C:

01 = FAMILY MEMBER OR FRIEND
02 = COWORKER/SUPERVISOR AT WORK
03 = COMMUNITY HEALTH WORKER
04 = LOCAL GOVERNMENT LEADER
05 = LOCAL CHURCH LEADER
06 = TEACHER/PROFESSOR
07 = OUTREACH WORKER (NGO WORKER)
08 = NO ONE
96 = OTHER

SECTION 8. OTHER HEALTH ISSUES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	Some men are circumcised, that is, the foreskin is completely removed from the penis. Are you circumcised?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 805
802	How old were you when you got circumcised?	AGE IN COMPLETED YEARS . . . . . [ ][ ] DURING CHILDHOOD (<5 YEARS) 95 DON'T KNOW 98	
803	Who did the circumcision?	TRADITIONAL PRACTITIONER/ FAMILY/FRIEND . . . . . 1 HEALTH WORKER/PROFESSIONAL 2 OTHER . . . . . 3 DON'T KNOW 8	
804	Where was it done?	HEALTH FACILITY . . . . . 1 HOME OF A HEALTH WORKER/ PROFESSIONAL . . . . . 2 CIRCUMCISION DONE AT HOME . . . 3 RITUAL SITE . . . . . 4 OTHER HOME/PLACE . . . . . 5 DON'T KNOW 8	
805	Now I would like to ask you some other questions relating to health matters. Have you had an injection for any reason in the last 12 months? IF YES: How many injections have you had? IF NUMBER OF INJECTIONS IS 90 OR MORE, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . [ ][ ] NONE 00	→ 808
806	Among these injections, how many were administered by a doctor, a nurse, a pharmacist, a dentist, or any other health worker? IF NUMBER OF INJECTIONS IS 90 OR MORE, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . [ ][ ] NONE 00	→ 808
807	The last time you got an injection from a health worker, did he/she take the syringe and needle from a new, unopened package?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
808	Do you currently smoke cigarettes?	YES . . . . . 1 NO 2	→ 810
809	In the last 24 hours, how many cigarettes did you smoke?	NUMBER OF CIGARETTES . . . . . [ ][ ]	
810	Do you currently smoke or use any (other) type of tobacco?	YES . . . . . 1 NO 2	→ 812

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
811	What (other) type of tobacco do you currently smoke or use? RECORD ALL MENTIONED.	PIPE . . . . . A CHEWING TOBACCO . . . . . B SNUFF . . . . . C OTHER _____ X (SPECIFY)	
814	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 SUPERVISOR: _____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR: _____ DATE: _____