## Armenia



Demographic and Health Survey

# Armenia Demographic and Health Survey 2005 

National Statistical Service<br>Yerevan, Armenia<br>Ministry of Health<br>Yerevan, Armenia<br>O RC Macro<br>Calverton, Maryland USA

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This report summarizes the findings of the 2005 Armenia Demographic and Health Survey (ADHS), which was conducted by the National Statistical Service and the Ministry of Health of the Republic of Armenia. ORC Macro provided technical assistance and the U.S. Agency for International Development (USAID) provided funding under the terms of contract number GPO-C-00-03-00002-00. The opinions expressed herein are those of the authors and do not necessarily reflect the views of USAID.

The ADHS is part of the worldwide MEASURE DHS program, which is designed to collect data on fertility, family planning, and maternal and child health. Additional information about the ADHS may be obtained from the National Statistical Service, 3 Government House, Republic Avenue, 375010 Yerevan, Armenia (Telephone: 37410 524-326 and Fax: 37410 521-921). Additional information about the DHS project may be obtained from ORC Macro, 11785 Beltsville Drive, Calverton, MD 20705 (Telephone 301-572-0200 and Fax 301-572-0999).

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## PREFACE

The 2005 Armenia Demographic and Health Survey (ADHS) was a nationally representative sample survey designed to provide information on population and health issues in Armenia. The ADHS was conducted by the National Statistical Service and the Ministry of Health of the Republic of Armenia September-December 2005. ORC Macro provided technical support for the survey through the MEASURE DHS project. The MEASURE DHS project is sponsored by the United States Agency for International Development (USAID) to assist countries worldwide in obtaining information on key population and health indicators. USAID/Armenia provided funding for the survey. UNICEF/Armenia and UNFPA/Armenia supported the survey through in-kind contributions.

The purpose of the 2005 ADHS was to collect national- and regional-level data on fertility and contraceptive use, maternal and child health, adult health, and AIDS and other sexually transmitted diseases. Thus, much of the information collected in the survey represents updated estimates of basic health and demographic indicators covered in the 2000 ADHS (NSS, MOH, and ORC Macro, 2001). The survey obtained detailed information on these issues from women of reproductive ages and, on certain topics, from men as well. Data are presented by region (marz) when sample size permits.

The survey findings provide estimates for a variety of demographic indicators. The 2005 ADHS results are intended to provide the information needed to evaluate existing social programs and to design new strategies for improving the health of and health services for the people of Armenia. The 2005 ADHS also contributes to the growing international database on demographic and health indicators.

## SUMMARY OF RNDINGS

The Armenia Demographic and Health Survey (ADHS) is a nationally representative survey of 6,566 women and 1,447 men age $15-49$. Survey fieldwork was conducted during the period of September to December 2005.

The ADHS was conducted by the National Statistical Service and the Ministry of Health of the Republic of Armenia. The MEASURE DHS Project provided technical support for the survey. The U.S. Agency for International Development (USAID)/Armenia provided funding, and the United Nations Children干 Fund (UNICEF)/ Armenia and the UN Population Fund (UNFPA)/ Armenia supported the survey through in-kind contributions.

## Characteristics of Respondents

Armenia is an ethnically homogeneous country; virtually all respondents are Armenian and reported that they are Christians. The majority, approximately 60 percent, live in urban areas. Yerevan accounts for more than one-third of all respondents. All households in Armenia have electricity and a majority of households have water piped into the residence, a flush toilet, a finished floor, and a color television.

All but a handful of women and men in the sample have attended school. Approximately 40 percent have reached only secondary school, one-quarter have reached secondary-special school, and onequarter have attended university. Twenty-nine percent of women and 66 percent of men were employed in the 12 months prior to the survey.

## FRTIUTY

Fertility rates. A useful index of the level of fertility is the total fertility rate (TFR), which indicates the number of children a woman would have if she passed through the childbearing ages at the current age-specific fertility rates. For the three years preceding the survey, the survey estimate of the TFR was 1.7 children per woman. This is below replacement level.

The survey found that the TFR is only slightly lower in urban areas ( 1.6 children per woman) than in rural areas ( 1.8 children per woman).

Time trends. The total fertility rate of 1.7 is identical to the TFR measured in the 2000 ADHS for the three years preceding that survey, indicating no recent change in overall fertility levels.

Age at first birth. Research has shown that childbearing in the teenage years is associated with increased social and health problems for both the mother and her child. The survey found that only 2 percent of women age 15-19 had given birth. Moreover, almost all births to teenage women occurred at ages 18 and 19. Thus, the median age at initiation of childbearing in Armenia is about 22 years.

Birth intervals. Research has shown that children born soon after a previous birth, especially those born within two years of the previous birth, have an increased risk of morbidity and mortality. In Armenia, 32 percent of second and higher order births occur after a birth interval of less than two years. The proportion of closely spaced births declines as education of the mother increases.

Fertility preferences. Among currently married women, 71 percent reported that they either wanted no more children or were sterilized. Another 22 percent wanted another child, and 7 percent were infecund (unable to conceive) or undecided about having another child.

## Contraception

Knowledge and ever use. Knowledge of contraception is widespread in Armenia. Among married women, knowledge of at least one method is universal ( 99 percent). On average, married women reported knowing of six methods of contraception. Three-quarters (76 percent) of married women have used a method of contraception at some time.

Current use. Over half (53 percent) of married women reported that they were currently using a contraceptive method: 20 percent using modern methods and 34 percent using traditional methods. By far, the most commonly used method is withdrawal; more than half of all users (28 out of 53 percent) are using withdrawal. The second most common method-the IUD-is used by only 9 percent of married women.

Overall levels of contraceptive use are similar for women in urban and rural areas and across educational categories and wealth quintile (between 42 and 60 percent). Nevertheless, urban women and women with more education show distinctive behavior patterns by relying more on modern methods (the IUD and condom) and less on traditional methods (in particular, withdrawal).

Trends in current use. Use of contraception has declined from 61 percent of married women in the 2000 ADHS to 53 percent in 2005. Use of both modern and traditional methods has declined.

Method failure. A woman may discontinue use of contraception for many reasons, including the desire to have more children, health concerns, or lack of exposure to the risk of pregnancy. In Armenia, the single most prevalent reason for discontinuation is method failure, i.e, becoming pregnant while using a method. The method most commonly used in Armenia, withdrawal, has the second highest failure rate after periodic abstinence (rhythm). Twenty-one percent of women practicing withdrawal experience a contraceptive failure within 12 months of starting use.

Future use. Among married women who were not using contraception, 29 percent reported that they intended to use in the future. When asked which method they would prefer to use, approximately one-third of non-users said the IUD, while one-quarter said withdrawal and about one-fifth said condoms.

Source of supply. Most modern method users obtained their methods through the public sector (53 percent), primarily hospitals and polyclinics. Forty-two percent obtained their contraceptives from the private sector, primarily pharmacies.

## Induced Abortion

In Armenia, as in all of the former Soviet Union, induced abortion has been a primary means of fertility control for many years.


#### Abstract

Abortion rates. The use of abortion can be measured by the total abortion rate (TAR) which indicates the number of abortions a woman would have in her lifetime if she passed through her childbearing years at the current age-specific abortion rates. The survey estimate of the TAR indicates that a woman in Armenia will have an average of 1.8 abortions during her lifetime. This rate is considerably lower than the comparable rate in the 2000 ADHS of 2.6. Despite this decline, almost half ( 45 percent) of pregnancies end in an induced abortion.


Abortion differentials. The TAR is significantly higher in rural areas ( 2.2 abortions per woman) than in urban areas (1.5 abortions per woman).

Contraceptive failure and abortion. When formulating policies designed to improve the reproductive health of women, it is useful to know the contraceptive behavior of women who resort to abortion as a means of fertility control. Over half ( 52 percent) of all abortions were to women who were using contraception and experienced method failure, a large proportion of whom were using withdrawal. Greater access to and use of more reliable methods would reduce the incidence of abortion.

## Childhood Mortadty

Trends in childhood mortality. Data from the 2005 ADHS indicate that there has been a decline in childhood mortality over the recent five years. For example, infant mortality has declined from 36 deaths per 1,000 live births for the approximate period 1996-2000 to 26 for the period 2001-2005. There has been a similar decline in under-five mortality from 39 to 30 deaths per 1,000 births.

Differentials in infant mortality. The survey found levels of infant mortality to be slightly higher in rural areas than in urban areas. Infant mortality levels are also much higher among
children of poorer women than among children of women in the higher wealth quintiles.

## Maternal and Child Health and Nutrition

Antenatal care. Armenia has a well-developed health system with an extensive infrastructure of facilities that provide maternal care services. Overall, the levels of antenatal care and delivery assistance are high. Ninety-three percent of mothers receive antenatal care from professional health providers (doctors, nurses, and midwives). In urban areas, 94 percent of care is provided by doctors, as opposed to 83 percent in rural areas. Seven in ten pregnant women make four or more antenatal care visits, although there is a significant urban-rural differential.

In terms of content of care, almost all women said they were weighed, had their blood pressure tested and gave blood and urine specimens (98-99 percent); however less than half say that they were informed about pregnancy complications.

Delivery care. Overall, almost all births are delivered under the supervision of a trained medical professional (98 percent) and occur at health facilities (97 percent). Home deliveries are more common in Gegharkunik and Aragatsotn regions.

Childhood vaccinations. The health cards maintained at the health facilities are the primary source of vaccination data. Almost all children age 12-23 months have received vaccinations for BCG, DPT1 and polio 1. Coverage is also high for the second and third doses of both DPT and polio. Seventy-two percent of children age 12-23 months had received the MMR (measles, mumps, rubella) vaccination before the survey. Only 60 percent of children 12-23 months of age had received all the basic vaccinations (BCG, MMR, and three doses each of DPT and polio) at any time before the survey; however, since MMR is routinely given at 12 months of age, this may represent an underestimate of coverage. Nevertheless, there has been a sharp decline in coverage, from 76 percent of children in 2000 to 60 percent in 2005.

Treatment of diarrhea. The ADHS asked about the treatment of children who suffered from diarrhea during the two weeks preceding the survey. Overall, 65 percent of children under five with diarrhea in the two weeks before the survey were given either oral rehydration salts or increased fluids (oral rehydration therapy). For almost one-fifth of children with diarrhea, mothers reported that they engaged in the hazardous practice of curtailing fluid intake. On a more positive note, 70 percent of mothers who had a birth in the five years preceding the survey know about oral rehydration salts (ORS).

Breastfeeding. Ninety-seven percent of children born in the five years preceding the survey were breastfed at some time. Although the median duration of breastfeeding is 11 months, the durations of exclusive and predominant breastfeeding (breastfeeding plus plain water) are short (one month and three months, respectively).

Nutritional status. In the ADHS, the height and weight of children under five years of age were measured. These data are used to determine the nutritional status of children, i.e., the percentage of children who are stunted (measured in terms of height-for-age), wasted (weight-for-height), or underweight (weight-for-age). Stunting is a sign of chronic, long-term undernutrition; wasting is a sign of acute, short-term undernutrition; and underweight is a composite measure that takes into account both chronic and acute undernutrition.

In a well-nourished population of children, it is expected that slightly more than 2 percent of children will be stunted or wasted. In Armenia, 13 percent of children under age five are stunted and 5 percent are wasted. Overall, 4 percent of children are underweight.

There has been no change in the proportion of children stunted since 2000; however, there has been a slight increase in the proportions wasted (from 2 to 5 percent) and underweight (from 3 to 4 percent).

Anthropometric data were also collected from all women age 15-49. According to the findings of the ADHS, approximately four in ten Armenian
women weigh more than they should: 27 percent are overweight and 16 percent are obese. There is a positive relationship between age and obesity: the prevalence of obesity, for example, increases from 2 percent among women age 15-19 to onethird of women age 40-49. More than half of women age 30 and older are either overweight or obese, a serious public health challenge for Armenia.

Anemia. Determining anemia levels among women and their children under five was one component of the ADHS. Overall, 37 percent of children age 6-59 months have anemia: 17 percent have mild anemia, but 19 percent have moderate anemia and 1 percent have severe anemia. A comparison of data from the 2000 and 2005 ADHS surveys suggests that anemia rates among children have increased by 50 percent over the last five years, from 24 percent of children 6-59 months in 2000 to 37 percent in 2005. The increase is concentrated in Yerevan and Gegharkunik regions and it is possible that data collection problems may account for some of the implausible trend.

Similarly, the proportion of women with anemia appears to have doubled from 12 percent in 2000 to 25 percent in 2005. Again, the increase is concentrated in Yerevan and Gegharkunik. When these two regions are removed from the analysis, the increase in anemia among women is marginal.

## HIV/AIDSAND Other Sexualy TRANSMITIED Infections

The currently low level of HIV infection in Armenia provides a unique window of opportunity for early targeted interventions to prevent further spread of the disease. However, the increases in the cumulative incidence of HIV infection suggest that this window of opportunity is rapidly closing.

Knowledge and attitudes. Almost all respondents reported that they have heard of HIV/AIDS and roughly $70-80$ percent of women and men know about the three main ways to reduce its transmission, namely, abstinence, being faithful to one uninfected partner, and using condoms. Nevertheless, only about one-quarter of respondents have 'comprehensive' knowledge about HIV, i.e, they know that using condoms
consistently and having one faithful partner can reduce the chance of getting HIV, that a healthylooking person can have the AIDS virus, and that HIV cannot be transmitted by mosquito bites or by sharing food with someone who has AIDS.

Stigma surrounding AIDS is widespread in Armenia. Few women and men say they would be willing to care for a relative sick with AIDS in their own homes and even fewer say they would buy fresh vegetables from a shopkeeper who had the AIDS virus.

Sexual behavior. Only 12 percent of men and a negligible fraction of women reported having had more than one sexual partner in the 12 months before the survey and one-quarter of men reported having sex outside of a marital or cohabiting relationship (higher-risk sex).

Condom use. A large majority of men (76 percent) reported using a condom at the most recent higher risk sexual encounter. Only about two-thirds of youth age 15-24 said they knew a place where they could obtain a condom.

## Adult Health

The major causes of death in Armenia are similar to those in industrialized countries (cardiovascular diseases, cancer, and accidents), but there is also a rising incidence of certain infectious diseases, such as tuberculosis.

Women₹ health. Less than half of all women have been seen by a gynecologist in the five years preceding the survey and only 30 percent of Armenian women had visited a gynecologist during the 12 months preceding the survey. The most common reason for a visit is for a routine examination or for maternal care, however, almost one-fifth are for abortions.

Only 20 percent of Armenian women know about breast self-examinations. Only 10 percent of women have performed a breast exam in the three months prior to the survey and only 1 percent had a breast exam from a health professional in the year prior to the survey. These data underscore the need to improve women 千health services in Armenia.

Tuberculosis. Most men and women have heard of tuberculosis; however, only slightly over half of respondents correctly identify the mode of tuberculosis transmission (through the air when coughing). Almost 80 percent of women and men cite coughing as a symptom of tuberculosis.

Eye care. Eight in ten women and men have never visited an eye doctor. Most of those who do get care, go to get glasses.

Smoking. Survey data show a slight decline in the proportion of men age 15-49 who smoke, from 67 percent in 2000 to 64 percent in 2005. The proportion of women who report smoking remains negligible at 2 percent.

Hypertension. The 2005 ADHS included blood pressure measurement for consenting adults age 15-49. Results indicate that about one-quarter of adults in Armenia are classified as hypertensive. A very disturbing finding is that four out of five respondents with high blood pressure are unaware that they are hypertensive.

## ARMENIA



## INTRODUCTION

### 1.1 TERRITORY

The Republic of Armenia is a small, mountainous country, 90 percent of which is located more than 1,000 meters above sea level. The country is located in southwestern Asia, between the Caucasus and Near Asia (the area between the Kur and Araks rivers). The country is bordered by Georgia and Azerbaijan on the north and east, and by Turkey and Iran on the west and south. The area of the country is 29,743 square kilometers, 46.8 percent of which is agricultural land, 36.4 percent mountains and highlands, 11.2 percent forests, and 5.6 percent water surface. In Armenia, the largest lake is Lake Sevan, which has a surface area of 1,253 square kilometers. The longest river is the Araks.

The highest point in the country is the peak of Aragats (4,090 meters); the lowest point is the Debet River ( 390 meters). The longest distance between the northwest and the southeast is 360 kilometers, and the longest distance between west and east is 200 kilometers. The country is subdivided into 11 regions (marzes), which includes the region of Yerevan, the capital city of Armenia.

### 1.2 DEMOGRAPHIC CHARACTERISTICS

According to the most recent census, the population of Armenia is 3.2 million, of which 51.7 percent are female. The urban population consists of 64.1 percent of the total population.

Armenians are a mobile people, with approximately two-thirds of ethnic Armenians living in other countries. The exodus of Armenians began during the first World War, when the territory of Armenia was divided between the warring Ottoman and Russian Empires.

### 1.3 Health Care System in Armenia

## Historical Background

The radical changes that have been taking place after the declaration of independence in Armenia could not help but affect the health system. The implementation of fundamental reforms in this important social area, the departure from the monopolistic state financing, the use of various sources of financing, and the transition to the self-management methods in the health sector brought to light the shortcomings remaining from the Soviet years.

The present health system of Armenia has inherited the positive and negative features of the Soviet health system. On the positive side, it incorporates a rather developed structure and network, and sufficient staffing. However, the system is largely focused on hospital care, as well as deficiencies in the primary health system and a generally low quality of medical care.

In the former Soviet Union, health care was highly centralized. Medical services were basically accessible for the whole population. After independence, the unfavorable socioeconomic and political situation brought forward the need for developing a program of radical reforms.

The system reforms initiated since the mid-1990s were based on the condition that health services could no longer be freely provided to the whole population. Thereafter, a majority of the population had
to pay the full cost of medical services. Although the government tried to provide free medical care to vulnerable groups of the population under state-guaranteed programs, the under-financing of the health sector implied that even the persons included in these groups had to make partial payments. Thus, the changes violated the principle of equity and caused concerns about the deterioration of the population's health.

## Basic Principles of Health Policy

Armenia began reforming the health care sector at an early stage following independence. Recognizing health and health care as a fundamental human right, the strategy identified the major components of health care reform to involve a reorientation of health services towards a balanced partnership between primary and hospital care; the promotion of health and prevention of disease through tackling the determinants of health; and a shift from the narrow biomedical model towards a social, multiprofessional, and multisectoral approach to health and health care.

The current long-term directions and objectives include a combination of the following characteristics in service organization and delivery:

- Increase accessibility and utilization, especially at the primary health care level;
- Improve (refine) the system's organizational structure and governance;
- Introduce evidence-based clinical standards and implement continuous quality improvement programs;
- Enhance consumers' participation and responsibility in the clinical decisionmaking process;
- Integrate patient safety programs and medical error management into the system; and
- Assure rational linkages between the different levels of health care delivery.

A population's health status is a major determinant of human development, providing the ground for promoting economic and social growth of the society. Armenia has entered the new millennium with an orientation to the internationally recognized policies and strategies, including those in the health sector. Armenia recognizes basic health values, which include:

- Health as a basic human right;
- Equity in health issues and solidarity in the actions aimed at the health standards; and
- Involvement and responsibility of individuals and institutions in the continuous development of the health system.

In conformity with the said values, Armenia identifies the following internationally recognized health policy objectives:

- Promotion and protection of people's health over the whole life span; and
- Reduction of the incidence of the leading diseases and injuries and mitigation of the suffering caused by them.

The main directions of health sector development in Armenia arise from the basic provisions of the Government's Action Plan and the document "Health for All in the $21^{\text {st }}$ Century" adopted by the World Health Organization. The main tasks of the health system reforms are-given available resources and potential—ensuring citizens' constitutional right to health care, improving access to state-guaranteed free medical care, and initiating targeted balancing of the social and market values in the sector. In order to ensure the hygiene and epidemiological security of the population, it is planned to intensify activities aimed at prevention of infectious and mass non-infectious diseases, as well as the formation, strengthening, and further development of public health.

It is known that the number, capacity, and staffing potential of health facilities currently operating in the system essentially exceed the actual demand for medical care, including the demand under stateguaranteed programs. As a result, the resources allocated from the state budget to these programs are channeled not to ensuring quality health care, but to the maintenance of the whole system, including the payment of salaries of the staff with an inadequate workload. At that, these resources barely cover the current expenses of the medical care providers and are insufficient for providing the necessary pharmaceutical and technological supply or for increasing the salaries of the medical staff. Pursuant to government decrees, the health system optimization will continue in the regions and the city of Yerevan. The long-term continuous optimization programs provide for structural reforms and rationalization of the system, accurate assessment of health care needs, identification and rationing of the required capacities through the consolidation of premises and services, reorganization of ineffective health organizations, and redistribution of vacated capacities.

Further reforms of the health system financing mechanisms will be aimed at the reduction of the unofficial turnover, introduction of objective criteria for counterpart payments, clinical-economic standards, and reimbursement for provided services. The development of the hospital care system will proceed with short- and long-term planning aimed at introducing specific financing mechanisms, improving cost-efficiency, reducing excess capacities, and ensuring the quality of medical care. In order to ensure the provision of high-quality, accessible, and targeted health care to the population and to improve costefficiency, it is planned to practice selection-based placement of the state order.

The issue of medical insurance is one of the most important components of health system reforms; at that, it should be viewed not only as a means to involve additional sources of financing, but also to ensure better access to health care, to instill the principles of social equity, to enhance the targeted use of resources, and to improve the efficiency of medical services. In order to provide the legislative framework for the introduction and development of the mandatory medical insurance system, the Law on Mandatory Medical Insurance is to be adopted. The introduction of medical insurance is based on the "Concept Paper on Introduction of Medical Insurance" developed by Ministry of Health ( MOH ) and approved by the government.

In the arrangement of medical care, it is envisaged to essentially enhance the role of the primary unit. The main focus in the development of the ambulatory-polyclinic system, which appears to be the most important unit in primary care, is on forming the family medicine system and ensuring an adequate volume and quality of free ambulatory-polyclinic services through the use of borrowed and direct budgetary resources.

The main direction in the drug and technological policy will be the improvement of their accessibility, safety, and rational use. Actions will be taken for improving the state system of drug quality assurance, introducing prescription forms, and ensuring affordability of drug prices. Medical equipment acquired through budgetary allocations and international grants will first be provided to improve the technical instrumentation of the primary care unit, with preference given to medical institutions in the regions, as well as to the technical reinforcement-on a competitive basis-of the second- and third-level medical institutions providing really accessible medical care to the vulnerable groups of the population.

In relation to the further improvement of the medical education and scientific systems, it is planned to contract the volume of admissions to basic medical education and to improve the postgraduate education unit through partially transferring the educational process to the regional training centers.

Within the framework of international collaboration in the health sector, it is planned to channel the international collaboration programs to the improvement of the population's health, to further coordinate
the gradually decreasing humanitarian assistance, and to encourage foreign investments in the system including those for the instrumentation of modern technologies.

The next 10-12 years should be viewed as an important period from the perspective of adjusting the situation created in the health sector and assuring the prerequisites for the future development of the system.

## Health Care Financing

Historically, the state budget was the primary funding source for health care. Currently, the health system is financed both from local and international sources. The main local sources are the state budget and direct out-of-pocket payments by the population. International financing sources are general humanitarian donations and project-specific support.

The state budget remains the main formal source of financing. State funds are derived from general tax revenues. State health expenditures are not sufficient to support the core system and to meet the health needs of the population. In 2000, actual public health care expenditure amounted to only 4.4 percent of the state budget, about 1.0 percent of the gross domestic product (GDP). However, this share has since risen to 7.4 percent of the state budget in 2005 ( 1.4 percent of GDP). This increase has been attributed to the strengthening of sustainable budgetary policy introduced by the government, as well as a wider public acceptance of poverty reduction and related programs that are directed towards improving health as national priority. The 2005 health budget is projected to reach 8.2 percent of the total state budget and to rise to 10 percent by 2008 and 12 percent by 2015 (Ministry of Health, 2004). This trend indicates that health has become a higher priority in the allocation of funds across sectors of the state budget. However, state allocations are still too low to meet the costs of the benefits package.

Official external health financing sources include humanitarian aid (donations of medical supplies and equipment) as well as credit and grant programs with or in coordination with the MOH. Grants and credit projects financed by foreign governments and international and multilateral organizations are now the dominant form of external support in immunization, maternal and child health, reproductive health, adolescent health, iodine deficiency, and HIV/AIDS prevention that emphasizes prevention of mother-tochild transmission of HIV.

## Family Planning Policies

The main objectives of family planning programs in Armenia are to ensure safe motherhood among women of reproductive age, to decrease health risks during pregnancy, and to reduce reliance upon abortion as a method of family planning while promoting more modern and effective methods of contraception. In Armenia, abortion is a common method used to terminate unwanted pregnancies. Although originally outlawed in 1920, abortion was legalized by the Soviet Union in 1955 because of increases in mortality associated with illegal abortions. Today, abortion is legal during the first 12 weeks of pregnancy. In certain cases, an abortion may be performed until 22 weeks of gestation if there is medical or social justification. Abortions are performed in hospitals by trained medical staff. Despite decreases in recent years, the incidence of abortion remains an important issue for Armenian health care because of its negative effects on women's health.

Although contraceptives are distributed free of charge, health consultations are not free. For many years, oral contraceptives were not commonly available in Armenia because of the order "On the Side Effects and Complications of Oral Contraceptives" enacted by the MOH of the former Soviet Union in 1974. This document in effect banned the distribution and use of oral contraceptives. Currently, obtaining oral contraceptives or an abortion is not a problem in Armenia. In 2002 the Parliament of Armenia
adopted a new law on reproductive health and reproductive human rights. According to this law, use of contraception (including oral contraceptives) is legal in Armenia. Also, in 2005 the Government of Armenia proposed a law on abortion. According to this law, abortion is legal when carried out with drugs.

### 1.4 ObJEctives and Organization of the Survey

The 2005 Armenia Demographic and Health Survey ( 2005 ADHS) is the second in a series of nationally representative sample surveys designed to provide information on population and health issues in Armenia. As in the 2000 ADHS, the primary goal of the 2005 survey was to develop a single integrated set of demographic and health data pertaining to the population of the Republic of Armenia. In addition to integrating measures of reproductive, child, and adult health, another feature of the 2005 ADHS survey is that the majority of data are presented at the marz (region) level.

The 2005 ADHS was conducted by the National Statistical Service (NSS) and the MOH of the Republic of Armenia from September through December 2005. ORC Macro provided technical support for the survey through the MEASURE DHS project. MEASURE DHS is a worldwide project, sponsored by the United States Agency for International Development (USAID), with a mandate to assist countries in obtaining information on key population and health indicators. USAID/Armenia provided funding for the survey, while the United Nations Children's Fund (UNICEF)/Armenia and the United Nations Population Fund (UNFPA)/Armenia supported the survey through in-kind contributions.

The 2005 ADHS collected national- and regional-level data on fertility and contraceptive use, maternal and child health, adult health, and HIV/AIDS and other sexually transmitted diseases. The survey obtained detailed information on these issues from women of reproductive age and, on certain topics, from men as well. Data are presented by marz wherever sample size permits.

The 2005 ADHS results are intended to provide the information needed to evaluate existing social programs and to design new strategies for improving the health of and health services for the people of Armenia. The 2005 ADHS also contributes to the growing international database on demographic and health-related variables.

## Sample Design and Implementation

The sample was designed to permit detailed analysis-including the estimation of rates of fertility, infant/child mortality, and abortion-for the national level, for Yerevan, and for total urban and total rural areas separately. Many indicators can also be estimated at the regional (marz) level.

A representative probability sample of 7,565 households was selected for the 2005 ADHS sample. The sample was selected in two stages. In the first stage, 308 clusters were selected from a list of enumeration areas in a subsample from a master sample that was designed from the 2001 Population Census. In the second stage, a complete listing of households was carried out in each selected cluster. Households were then systematically selected for participation in the survey.

All women age 15-49 who were either permanent residents of the households in the 2005 ADHS sample or visitors present in the household on the night before the survey were eligible to be interviewed. Interviews were completed with 6,566 women. In addition, in a subsample of one-third of all the households selected for the survey, all men age 15-49 were eligible to be interviewed if they were either permanent residents or visitors present in the household on the night before the survey. Interviews were completed with 1,447 men.

## Questionnaires

Three questionnaires were used in the 2005 ADHS: a Household Questionnaire, a Women's Questionnaire, and a Men's questionnaire. The Household and Individual Questionnaires were based on model survey instruments developed in the MEASURE DHS program and on questionnaires used in the 2000 ADHS. The model questionnaires were adapted for use by experts from the NSS and MOH. Input was also sought from a number of non-governmental organizations. The questionnaires were developed in English and translated into Armenian. The Household and Individual Questionnaires were pretested in June 2005.

The Household Questionnaire was used to list all usual members of and visitors to the selected households and to collect information on the socioeconomic status of the household. The first part of the Household Questionnaire collected information on the age, sex, educational attainment, and relationship to the household head of each household member or visitor. This information provides basic demographic data for Armenian households. It also was used to identify the women and men who were eligible for the individual interview (i.e., women and men age 15-49). In the second part of the Household Questionnaire, there were questions on housing characteristics (e.g., flooring material, source of water, type of toilet facilities), on ownership of a variety of consumer goods, and other questions relating to the socioeconomic status of the household. In addition, the Household Questionnaire was used to record height and weight measurements of women, men, and children under age five; hemoglobin measurement of women and children under age five; and blood pressure measurement of women and men.

The Women's Questionnaire obtained data from women age 15-49 on the following topics:

- Background characteristics
- Pregnancy history
- Antenatal, delivery, and postnatal care
- Knowledge, attitudes, and use of contraception
- Reproductive and adult health
- Health care utilization
- Vaccinations, birth registration, and health of children under age five
- Episodes of diarrhea and respiratory illness of children under age five
- Breastfeeding and weaning practices
- Marriage and recent sexual activity
- Fertility preferences
- Knowledge of and attitude toward HIV/AIDS and other sexually transmitted infections

The Men's Questionnaire, administered to men age 15-49, focused on the following topics:

- Background characteristics
- Health and health care utilization
- Marriage and recent sexual activity
- Attitudes toward and use of condoms
- Knowledge of and attitude toward HIV/AIDS and other sexually transmitted infections
- Attitudes toward women's status


## Training of Field Staff

The main survey training, which was conducted by the NSS, was held during a three-week period in August and was attended by all supervisors, field editors, interviewers, and quality control personnel. The training included lectures, demonstrations, practice interviewing in small groups, and examinations. The health technicians, who were recruited by the MOH , were trained separately during the same period. They received training in anthropometric measurement, anemia testing, and blood pressure measurement. All field staff participated in four days of field practice.

## Fieldwork and Data Processing

Thirteen teams collected the survey data; each team consisted of four female interviewers, a male interviewer, a field editor, and a team supervisor. A health technician was also assigned to each team. Fieldwork began in early September 2005 and was completed by early December 2005. Senior DHS technical staff visited teams regularly to review the work and monitor data quality.

The processing of the 2005 ADHS results began shortly after the fieldwork commenced. Completed questionnaires were returned regularly from the field to NSS headquarters in Yerevan, where they were entered and edited by data processing personnel who were specially trained for this task. The data processing personnel included a supervisor, a questionnaire administrator who ensured that the expected number of questionnaires from all clusters were received, several office editors, 10 data entry operators, and a secondary editor. The concurrent processing of the data was an advantage because the senior ADHS technical staff were able to advise field teams of problems detected during the data entry. In particular, tables were generated to check various data quality parameters. As a result, specific feedback was given to the teams to improve performance. The data entry and editing phase of the survey was completed in January 2006.

### 1.5 RESPONSE RATES

Table 1.1 presents household and individual response rates for the survey. A total of 7,565 households were selected for the sample, of which 7,003 were occupied at the time of fieldwork. The main reason for the difference is that some of the dwelling units that were occupied during the household listing operation were either vacant or the household was away for an extended period at the time of interviewing. Of the occupied households, 96 percent were successfully interviewed.

In these households, 6,773 women were identified as eligible for the individual interview, and interviews were completed with 97 percent of them. Of the 1,630 eligible men identified, 89 percent were

| Number of households and respondents selected, number of interviews, and response rates, according to residence, Armenia 2005 |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Residence |  |  |
| Result | Urban | Rural | Total |
| Household interviews |  |  |  |
| Households selected | 5,446 | 2,119 | 7,565 |
| Households occupied | 5,032 | 1,971 | 7,003 |
| Households interviewed | 4,806 | 1,901 | 6,707 |
| Household response rate ${ }^{1}$ | 95.5 | 96.4 | 95.8 |
| Individual interviews: women |  |  |  |
| Number of eligible women | 4,732 | 2,041 | 6,773 |
| Number of eligible women interviewed | 4,592 | 1,974 | 6,566 |
| Eligible women response rate ${ }^{2}$ | 97.0 | 96.7 | 96.9 |
| Individual interviews: men |  |  |  |
| Number of eligible men | 1,126 | 504 | 1,630 |
| Number of eligible men interviewed | 999 | 448 | 1,447 |
| Eligible men response rate ${ }^{2}$ | 88.7 | 88.9 | 88.8 |
| ${ }^{1} \mathrm{H}$ ouseholds interviewed/households occupied <br> ${ }^{2}$ Respondents interviewed/eligible respondents |  |  |  | successfully interviewed. Response rates are almost identical in urban and rural areas.

## HOUSEHOLD POPULATION AND HOUSING CHARACTERISTICS

This chapter provides a summary of the demographic and socioeconomic characteristics of the household population in the 2005 ADHS, including age, sex, place of residence, educational status, and household characteristics. Information collected on the characteristics of the households and respondents is important in understanding and interpreting the findings of the survey and also provides some indication of the representativeness of the survey.

A household is defined as a person or group of related and unrelated persons who live together in the same dwelling unit(s) or in connected premises, who acknowledge one adult member as head of the household, and who have common arrangements for cooking and eating their food. The questionnaire for the 2005 ADHS distinguishes between the de jure population (persons who usually live in a selected household) and the de facto population (persons who stayed the night before the interview in the household). According to the 2005 ADHS data, the differences between these populations are small. Tabulations for the household data presented in this chapter are primarily based on the de facto population.

Due to the way the sample was designed, the number of cases in some regions may appear small because they are weighted to make the regional distribution nationally representative. Throughout this report, numbers in the tables reflect weighted numbers. To ensure statistical reliability, percentages based on 25 to 49 unweighted cases are shown within parentheses, and percentages based on fewer than 25 unweighted cases are suppressed.

### 2.1 Characteristics of the Population

## Age-Sex Structure

Age and sex are important demographic variables and form the primary basis of demographic classification in vital statistics, censuses, and surveys. They are also important variables in the study of mortality, fertility, and nuptiality. Table 2.1 presents the percent distribution of the de facto population by five-year age groups, according to urban-rural residence and sex. The information is used to construct the population pyramid shown in Figure 2.1.

The total de facto population was 24,443 . The data show that in Armenia there are more women than men; 54 percent of the population is female. The gender disparity is more pronounced in urban areas than in rural areas ( 81 and 88 men per 100 women, respectively). Among the youngest age groups, however, there are more males than females. It is not until the 15-19 age cohort that women outnumber men (Figure 2.1). Overall, this imbalance in the sex ratio among the working age population strongly suggests that the outmigration from Armenia has been disproportionately selective of men.

About two-thirds of the population is in the 15-64 age group, also referred to as the economically active population. The proportion of the population falling within this age group is significantly higher in urban areas ( 67 percent) than in rural areas ( 61 percent). This difference may be largely attributed to high levels of rural-urban migration, especially among the young in search of jobs and higher education. The disproportionately low percentage of the population in the 60-64 age group is probably due to low levels of fertility during World War II (Figure 2.1).

| Table 2.1 Household population by age, sex, and residence |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of the de facto household population by five-year age group, according to sex and residence, Armenia 2005 |  |  |  |  |  |  |  |  |  |
|  |  | Urban |  |  | Rural |  |  | Total |  |
| Age | M ale | Female | Total | M ale | Female | Total | M ale | Female | Total |
| < 5 | 6.8 | 5.4 | 6.1 | 8.5 | 4.6 | 6.4 | 7.5 | 5.1 | 6.2 |
| 5-9 | 7.1 | 4.7 | 5.8 | 9.0 | 7.4 | 8.1 | 7.9 | 5.7 | 6.7 |
| 10-14 | 8.9 | 7.3 | 8.0 | 12.0 | 9.3 | 10.5 | 10.1 | 8.1 | 9.0 |
| 15-19 | 9.1 | 8.6 | 8.8 | 9.5 | 9.5 | 9.5 | 9.3 | 9.0 | 9.1 |
| 20-24 | 9.0 | 9.1 | 9.1 | 8.3 | 8.2 | 8.2 | 8.7 | 8.8 | 8.8 |
| 25-29 | 7.8 | 7.4 | 7.6 | 5.9 | 6.8 | 6.4 | 7.1 | 7.2 | 7.2 |
| 30-34 | 5.9 | 6.1 | 6.0 | 4.6 | 5.3 | 5.0 | 5.4 | 5.8 | 5.6 |
| 35-39 | 5.4 | 5.7 | 5.6 | 5.5 | 6.1 | 5.8 | 5.5 | 5.8 | 5.7 |
| 40-44 | 6.5 | 7.2 | 6.9 | 7.4 | 8.2 | 7.8 | 6.9 | 7.6 | 7.2 |
| 45-49 | 7.1 | 7.9 | 7.5 | 6.7 | 6.8 | 6.7 | 6.9 | 7.5 | 7.2 |
| 50-54 | 6.8 | 8.0 | 7.4 | 5.0 | 6.4 | 5.8 | 6.1 | 7.4 | 6.8 |
| 55-59 | 5.2 | 5.5 | 5.4 | 3.2 | 3.7 | 3.5 | 4.4 | 4.8 | 4.7 |
| 60-64 | 3.3 | 3.0 | 3.1 | 2.0 | 2.1 | 2.1 | 2.8 | 2.7 | 2.7 |
| 65-69 | 5.0 | 4.7 | 4.8 | 3.7 | 5.4 | 4.6 | 4.5 | 5.0 | 4.8 |
| 70-74 | 2.7 | 3.6 | 3.2 | 4.2 | 3.7 | 3.9 | 3.3 | 3.7 | 3.5 |
| 75-79 | 2.4 | 3.2 | 2.8 | 3.2 | 4.0 | 3.6 | 2.7 | 3.5 | 3.1 |
| $80+$ | 1.0 | 2.3 | 1.7 | 1.2 | 2.5 | 1.9 | 1.1 | 2.4 | 1.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number ${ }^{1}$ | 6,824 | 8,392 | 15,222 | 4,310 | 4,912 | 9,221 | 11,134 | 13,304 | 24,443 |
| ${ }^{1}$ Total includes five persons whose sex was not stated. |  |  |  |  |  |  |  |  |  |

Figure 2.1 Population Pyramid


The data further indicate that 22 percent of the population is under 15 years of age. The proportion under 15 is larger in the rural areas than in the urban areas ( 25 and 20 percent, respectively). This is evidence of higher fertility in the rural areas (see Chapter 4). The percentages of the 10-14 and 15-19 year-old cohorts are larger than younger age cohorts, which may largely be due to the fertility peaks of both 1986 and 1990-1991-the second of which was the so-called "compensation period" following the earthquake of 1988.

## Household Composition

Table 2.2 presents the percent distribution of households in the 2005 ADHS sample by sex of the head of the household and by household size for urban and rural areas and mean size of household. These characteristics are important because they are often associated with differences in household socioeconomic levels. For example, female-headed households are frequently poorer than households headed by males. In addition, the size and composition of the household affects the allocation of financial and other resources among household members, which in turn influences the overall well-being of these individuals. Household size is also associated with crowding in the dwelling, which can lead to unfavorable health conditions.

In general, heads of household in Armenia are male (64 percent). This is lower than that recorded in the 2000 ADHS ( 71 percent). Households in the urban areas are more likely than in rural areas to be headed by a woman ( 37 percent compared with 33 percent). The average household size in Armenia is 3.8 persons, compared with 4.3 persons in 2000 . The average household size in rural areas is much larger than in urban areas ( 4.2 compared with 3.5 members). The increase over time in the proportion of femaleheaded households and the smaller average household size would be consistent with continued outmigration, particularly of men.

| Table 2.2 Household composition |  |  |  |
| :---: | :---: | :---: | :---: |
| Percent distribution of households by sex of head of household and by household size, according to residence, Armenia 2005 |  |  |  |
|  | Residence |  | Total |
| Characteristic | Urban | Rural |  |
| Sex of head of household |  |  |  |
| Male | 62.6 | 66.9 | 64.1 |
| Female | 37.4 | 33.1 | 35.9 |
| Total | 100.0 | 100.0 | 100.0 |
| Number of usual members |  |  |  |
| 1 | 14.5 | 10.3 | 13.1 |
| 2 | 17.9 | 14.4 | 16.7 |
| 3 | 17.4 | 11.3 | 15.3 |
| 4 | 22.1 | 19.6 | 21.3 |
| 5 | 13.4 | 18.0 | 14.9 |
| 6 | 9.8 | 14.8 | 11.5 |
| 7 | 3.0 | 7.5 | 4.5 |
| 8 | 1.2 | 2.7 | 1.7 |
| 9+ | 0.8 | 1.4 | 1.0 |
| Total | 100.0 | 100.0 | 100.0 |
| Number of households | 4,429 | 2,278 | 6,707 |
| Mean size | 3.5 | 4.2 | 3.8 |
| Note: Table is based on de jure members, i.e., usual residents. |  |  |  |

## Children's Living Arrangements and Orphanhood

Detailed information on living arrangements and orphanhood for children under 18 years of age is presented in Table 2.3. Of the 6,903 children under age 18 recorded in the 2005 ADHS, four in five live with both parents, 16 percent live with their mother only, 1 percent live with their father only, and 2 percent live with neither of their natural parents.

The table also provides data on the extent of orphanhood, that is, the proportion of children who have lost one or both parents. Three percent of children under 18 years have lost their fathers. Very few children have lost their mothers or both parents.

| Percent distribution of de jure children under age 18 by living arrangements and survival status of parents according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | ng mother father |  | ving father mother |  | Not livis eith | ing with parent |  | Missing |  |  |
| Background characteristic |  | Father alive | Father dead | M other alive | M other dead | Both alive | Only father alive | Only mother alive | Both dead | tion on father/ mother | Total | Number of children |
| Age |  |  |  |  |  |  |  |  |  |  |  |  |
| <2 | 87.8 | 11.5 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 100.0 | 659 |
| 2-4 | 87.1 | 11.2 | 0.9 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.3 | 100.0 | 867 |
| 5-9 | 82.8 | 13.6 | 1.6 | 0.4 | 0.3 | 0.8 | 0.1 | 0.1 | 0.0 | 0.4 | 100.0 | 1,619 |
| 10-14 | 78.2 | 15.0 | 2.9 | 0.9 | 0.6 | 1.5 | 0.1 | 0.0 | 0.0 | 0.7 | 100.0 | 2,212 |
| 15-17 | 72.2 | 14.5 | 4.7 | 0.5 | 1.5 | 3.5 | 0.1 | 0.0 | 0.3 | 2.6 | 100.0 | 1,547 |
| Sex |  |  |  |  |  |  |  |  |  |  |  |  |
| Male | 80.1 | 14.2 | 2.5 | 0.5 | 0.6 | 1.1 | 0.0 | 0.0 | 0.1 | 0.9 | 100.0 | 3,641 |
| Female | 79.8 | 13.3 | 2.5 | 0.6 | 0.6 | 2.0 | 0.1 | 0.1 | 0.1 | 1.1 | 100.0 | 3,260 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 78.8 | 14.2 | 2.4 | 0.6 | 0.4 | 2.1 | 0.0 | 0.1 | 0.1 | 1.3 | 100.0 | 3,941 |
| Rural | 81.5 | 13.2 | 2.7 | 0.4 | 0.8 | 0.8 | 0.1 | 0.0 | 0.1 | 0.5 | 100.0 | 2,962 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 78.7 | 13.9 | 2.1 | 0.7 | 0.2 | 2.2 | 0.0 | 0.1 | 0.1 | 2.0 | 100.0 | 2,230 |
| Aragatsotn | 87.6 | 6.7 | 3.5 | 1.0 | 0.0 | 0.6 | 0.3 | 0.0 | 0.0 | 0.1 | 100.0 | 350 |
| Ararat | 82.4 | 8.0 | 5.5 | 0.9 | 2.4 | 0.5 | 0.1 | 0.0 | 0.1 | 0.2 | 100.0 | 615 |
| Armavir | 86.2 | 10.1 | 0.8 | 0.5 | 0.3 | 1.5 | 0.3 | 0.0 | 0.0 | 0.3 | 100.0 | 687 |
| Gegharkunik | 65.7 | 31.1 | 1.3 | 0.1 | 0.7 | 0.8 | 0.0 | 0.0 | 0.0 | 0.3 | 100.0 | 522 |
| Lori | 84.4 | 9.5 | 2.0 | 1.0 | 1.0 | 1.4 | 0.0 | 0.0 | 0.0 | 0.7 | 100.0 | 554 |
| Kotayk | 82.6 | 10.7 | 2.5 | 0.2 | 0.6 | 2.2 | 0.0 | 0.0 | 0.3 | 0.9 | 100.0 | 569 |
| Shirak | 73.4 | 21.4 | 2.9 | 0.0 | 0.4 | 1.1 | 0.0 | 0.0 | 0.4 | 0.3 | 100.0 | 634 |
| Syunik | 86.4 | 7.6 | 3.5 | 0.0 | 0.2 | 1.3 | 0.4 | 0.0 | 0.0 | 0.7 | 100.0 | 304 |
| Vayots Dzor | 88.5 | 3.1 | 5.0 | 0.0 | 0.8 | 0.7 | 0.0 | 0.0 | 0.0 | 1.8 | 100.0 | 119 |
| Tavush | 77.2 | 18.6 | 2.3 | 0.3 | 0.2 | 1.2 | 0.1 | 0.0 | 0.0 | 0.2 | 100.0 | 320 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 79.9 | 13.2 | 3.8 | 0.3 | 1.1 | 1.1 | 0.2 | 0.0 | 0.0 | 0.4 | 100.0 | 1,613 |
| Second | 78.0 | 16.8 | 2.0 | 0.6 | 0.7 | 1.0 | 0.0 | 0.0 | 0.2 | 0.7 | 100.0 | 1,425 |
| Middle | 77.0 | 15.9 | 2.2 | 0.5 | 0.2 | 2.4 | 0.1 | 0.0 | 0.3 | 1.5 | 100.0 | 1,291 |
| Fourth | 80.0 | 13.0 | 2.8 | 0.3 | 0.3 | 2.3 | 0.0 | 0.1 | 0.0 | 1.1 | 100.0 | 1,324 |
| Highest | 85.5 | 9.6 | 1.4 | 0.9 | 0.3 | 1.1 | 0.0 | 0.0 | 0.0 | 1.2 | 100.0 | 1,250 |
| Total < 15 | 82.2 | 13.5 | 1.9 | 0.5 | 0.3 | 1.0 | 0.1 | 0.0 | 0.0 | 0.5 | 100.0 | 5,356 |
| Total < 18 | 80.0 | 13.8 | 2.5 | 0.5 | 0.6 | 1.5 | 0.1 | 0.0 | 0.1 | 0.9 | 100.0 | 6,903 |

Note: Total includes two children (weighted) with missing information on sex. Table is based on de jure members, i.e., usual residents.

Differentials in fosterhood and orphanhood by background characteristics are not large. As expected, older children are more likely than younger children to be fostered and orphaned; older children are less likely than younger children to live with both parents and more likely than younger children to have lost one or both parents. Small differences in living arrangements are found between rural and urban children. However, Vayots Dzor and Aragatsotn have the highest proportion of children living with both parents (89 percent and 88 percent, respectively), while Gegharkunik has the lowest (66 percent). Table 2.3 shows that children’s living arrangements have no specific pattern according to the household wealth index.

Table 2.3 also presents the extent of orphanhood among children under age 15 to allow comparison with data from the 2000 ADHS. There has been a shift in the proportions of children under 15 by their living arrangements since 2000. Overall, the proportion of children under 15 living with both parents has declined from 90 percent in 2000 to 82 percent in 2005. This is due to a substantial increase in the proportion of children who live only with their mothers, but whose fathers are alive (from 5 percent to 14 percent). This trend is particularly pronounced in Gegharkunik, Shirak, and Yerevan regions. These areas are also subject to high male migration away from home.

## Education

The educational attainment of household members is an important determinant of their opportunities and behaviors. Many phenomena such as use of health facilities, reproductive behavior, health of children, and proper hygienic habits are associated with the educational level of household members, especially women.

The school system in Armenia has three levels. The first level, primary school, consists of grades one through three for students age 7-9. ${ }^{1}$ The second level, or middle school, consists of grades 4-8 for students age $10-14$. The first two levels together are called general basic education and are compulsory. The third level, or high school, comprises grades 9 and 10. The three levels together (primary school plus middle school plus high school) are referred to as a full general secondary education.

Students who have completed a minimum of eight grades may enroll in specialized secondary education. There are two tracks within specialized secondary education. The first track consists of profes-sional-technical institutions that train students in a variety of specializations. Students who have completed at least primary and middle school are eligible for this secondary-special track. The second track prepares specialists with mid-level qualifications, such as teachers, midwives, and mechanics. This track can be completed in two years by students who have completed the tenth grade, or it can be completed in four years by students who completed the eighth grade.

University and postgraduate education prepares higher level specialists. Students who complete a full general secondary education may enroll in university.

Tables 2.4.1 and 2.4.2 present information on the educational attainment of the Armenian population age six and over. Virtually all Armenians have gone to school. The median number of years of schooling is 9.5 years for men and 9.8 years for women. The proportion of the population with no education is low (less than 2 percent), with the highest levels being among those age six to nine (reflecting some who have not yet started school) and those 65 years and older. Individuals residing in urban areas have significantly higher levels of university education than those in rural areas. One in three individuals

[^0]living in the capital city of Yerevan has attended university. Wealth status has a strong positive relationship with education; 45 percent of men in the highest wealth quintile have at least some university education, compared with 4 percent of men in the lowest quintile. The corresponding proportions for women are 42 percent and 4 percent, respectively.

| Percent distribution of the de facto male household population age six and over by highest level of schooling attended or completed, median num ber of years completed, and percentage with general basic and general secondary completed, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Highest level of schooling attended |  |  |  |  |  |  | Median number of years of schooling | $\begin{aligned} & \text { General } \\ & \text { basic } \\ & \text { completed }{ }^{1} \end{aligned}$ | General secondary completed ${ }^{2}$ | Number of men |
| Background characteristic | No education | $\underset{(1-3)}{\text { Primary }}$ | Middle (4-8) | High school (9-10) | Specialized secondary | Higher | Total |  |  |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |
| 6-9 | 7.6 | 92.0 | 0.5 | 0.0 | 0.0 | 0.0 | 100.0 | 0.7 | 0.0 | 0.0 | 725 |
| 10-14 | 0.5 | 12.3 | 86.7 | 0.2 | 0.2 | 0.0 | 100.0 | 4.9 | 6.7 | 0.2 | 1,120 |
| 15-19 | 0.9 | 0.3 | 30.5 | 44.4 | 5.0 | 19.0 | 100.0 | 8.9 | 95.9 | 46.6 | 1,032 |
| 20-24 | 0.5 | 0.7 | 17.2 | 40.0 | 12.1 | 29.5 | 100.0 | 9.8 | 97.4 | 81.2 | 971 |
| 25-29 | 0.0 | 0.3 | 16.5 | 40.0 | 14.8 | 28.4 | 100.0 | 9.8 | 99.1 | 82.7 | 790 |
| 30-34 | 0.5 | 0.0 | 9.0 | 31.3 | 26.7 | 32.5 | 100.0 | 11.6 | 99.0 | 90.5 | 600 |
| 35-39 | 0.2 | 0.0 | 9.1 | 35.5 | 34.1 | 21.1 | 100.0 | 11.2 | 99.6 | 90.6 | 610 |
| 40-44 | 0.4 | 0.0 | 9.4 | 32.1 | 34.7 | 23.4 | 100.0 | 11.4 | 98.5 | 90.0 | 764 |
| 45-49 | 0.2 | 0.2 | 9.9 | 33.2 | 32.2 | 24.5 | 100.0 | 11.4 | 98.6 | 89.7 | 774 |
| 50-54 | 0.0 | 0.3 | 8.9 | 37.0 | 31.5 | 22.4 | 100.0 | 11.2 | 98.5 | 90.8 | 677 |
| 55-59 | 0.5 | 0.4 | 10.2 | 32.1 | 26.5 | 30.3 | 100.0 | 11.6 | 98.9 | 89.0 | 492 |
| 60-64 | 1.0 | 1.2 | 19.5 | 33.6 | 21.4 | 23.3 | 100.0 | 9.9 | 89.6 | 77.8 | 310 |
| 65+ | 3.3 | 3.4 | 35.9 | 23.9 | 13.9 | 19.6 | 100.0 | 9.4 | 71.8 | 56.9 | 1,287 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 0.8 | 7.5 | 19.9 | 26.4 | 18.6 | 26.8 | 100.0 | 9.8 | 81.4 | 69.5 | 6,270 |
| Rural | 2.1 | 10.2 | 31.7 | 31.9 | 15.2 | 8.8 | 100.0 | 9.1 | 71.2 | 53.3 | 3,882 |
| Region |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 0.6 | 7.3 | 17.7 | 24.0 | 17.3 | 33.0 | 100.0 | 10.0 | 83.2 | 72.4 | 3,657 |
| Aragatsotn | 2.4 | 10.6 | 22.7 | 28.0 | 26.2 | 10.2 | 100.0 | 9.5 | 74.5 | 61.8 | 462 |
| Ararat | 1.2 | 8.0 | 29.0 | 41.1 | 12.6 | 8.1 | 100.0 | 9.3 | 77.7 | 59.4 | 865 |
| Armavir | 1.9 | 8.6 | 34.5 | 28.4 | 14.8 | 11.9 | 100.0 | 9.1 | 71.6 | 52.5 | 903 |
| Gegharkunik | 2.1 | 11.9 | 27.7 | 30.1 | 16.2 | 11.9 | 100.0 | 9.2 | 71.4 | 55.2 | 608 |
| Lori | 2.2 | 10.1 | 24.9 | 28.5 | 21.1 | 13.2 | 100.0 | 9.4 | 73.1 | 60.3 | 795 |
| Kotayk | 1.5 | 8.7 | 25.4 | 32.2 | 17.3 | 14.9 | 100.0 | 9.4 | 77.7 | 61.8 | 852 |
| Shirak | 2.2 | 7.8 | 31.6 | 28.0 | 15.0 | 15.4 | 100.0 | 9.2 | 70.5 | 55.3 | 883 |
| Syunik | 0.2 | 7.7 | 22.2 | 27.8 | 26.8 | 15.2 | 100.0 | 9.7 | 81.1 | 66.9 | 496 |
| Vayots Dzor | 1.8 | 7.7 | 26.5 | 41.8 | 13.4 | 8.8 | 100.0 | 9.3 | 75.8 | 59.6 | 186 |
| Tavush | 0.5 | 12.8 | 31.9 | 28.0 | 13.4 | 13.5 | 100.0 | 9.1 | 70.9 | 52.9 | 444 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 2.9 | 11.8 | 39.7 | 29.1 | 12.3 | 4.2 | 100.0 | 7.9 | 65.4 | 43.6 | 2,027 |
| Second | 1.4 | 9.5 | 27.6 | 35.3 | 17.0 | 9.2 | 100.0 | 9.3 | 75.4 | 58.5 | 1,997 |
| Middle | 1.2 | 6.1 | 22.9 | 32.5 | 22.5 | 14.8 | 100.0 | 9.6 | 80.5 | 67.2 | 1,987 |
| Fourth | 0.6 | 8.3 | 19.0 | 27.0 | 19.3 | 25.7 | 100.0 | 9.8 | 81.4 | 69.3 | 2,072 |
| Highest | 0.3 | 7.1 | 13.2 | 18.9 | 15.6 | 45.0 | 100.0 | 11.7 | 84.5 | 77.7 | 2,068 |
| Total | 1.3 | 8.6 | 24.4 | 28.5 | 17.3 | 19.9 | 100.0 | 9.5 | 77.5 | 63.3 | 10,152 |
| ${ }^{1}$ Completed grade 8 or higher <br> ${ }^{2}$ Defined as having completed high school (grade 10) or having attended either specialized secondary or higher. The proportions may be slightly overestimated because some students enroll in specialized secondary after completing only grade 8. |  |  |  |  |  |  |  |  |  |  |  |

Table 2.4.2 Educational attainment of the household population: Female
Percent distribution of the de facto female household population age six and over by highest level of schooling attended or completed, median
number of years completed, and percentage with general basic and general secondary completed, according to background characteristics, Armenia 2005

| Background characteristic | Highest level of schooling |  |  |  |  |  |  | Median number of years of schooling | General basic completed ${ }^{1}$ | General secondary completed ${ }^{2}$ | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { No } \\ \text { education } \end{gathered}$ | Primary (1-3) | Middle (4-8) | High school (9-10) | Specialized secondary | Higher | Total |  |  |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |
| 6-9 | 11.1 | 88.9 | 0.1 | 0.0 | 0.0 | 0.0 | 100.0 | 0.8 | 0.0 | 0.0 | 655 |
| 10-14 | 0.5 | 11.1 | 88.0 | 0.2 | 0.1 | 0.1 | 100.0 | 5.0 | 9.3 | 0.2 | 1,072 |
| 15-19 | 0.3 | 0.2 | 19.5 | 42.3 | 17.2 | 20.6 | 100.0 | 9.3 | 98.1 | 61.1 | 1,192 |
| 20-24 | 0.3 | 0.1 | 7.3 | 29.0 | 30.4 | 32.9 | 100.0 | 11.8 | 99.3 | 92.0 | 1,171 |
| 25-29 | 0.2 | 0.3 | 7.4 | 36.2 | 28.1 | 27.8 | 100.0 | 11.4 | 99.1 | 90.7 | 958 |
| 30-34 | 0.1 | 0.0 | 4.4 | 35.8 | 32.6 | 27.1 | 100.0 | 11.5 | 99.4 | 94.9 | 772 |
| 35-39 | 0.8 | 0.0 | 4.3 | 35.3 | 35.7 | 23.3 | 100.0 | 11.5 | 98.5 | 94.1 | 777 |
| 40-44 | 0.2 | 0.7 | 3.6 | 40.4 | 36.1 | 19.0 | 100.0 | 11.2 | 99.1 | 95.4 | 1,005 |
| 45-49 | 0.0 | 0.5 | 4.8 | 36.4 | 39.2 | 19.0 | 100.0 | 11.3 | 99.0 | 94.5 | 994 |
| 50-54 | 0.4 | 0.4 | 6.3 | 32.9 | 37.5 | 22.2 | 100.0 | 11.5 | 98.2 | 92.5 | 985 |
| 55-59 | 0.0 | 0.5 | 11.0 | 32.4 | 29.5 | 26.7 | 100.0 | 11.6 | 97.8 | 88.0 | 645 |
| 60-64 | 0.5 | 0.4 | 19.4 | 36.2 | 23.9 | 19.6 | 100.0 | 9.8 | 91.2 | 79.6 | 357 |
| 65+ | 5.1 | 4.8 | 35.6 | 28.2 | 13.1 | 13.2 | 100.0 | 9.2 | 67.8 | 52.7 | 1,933 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 1.1 | 5.3 | 15.6 | 26.1 | 26.0 | 25.9 | 100.0 | 10.5 | 84.4 | 75.9 | 7,889 |
| Rural | 2.5 | 8.8 | 24.7 | 35.9 | 20.8 | 7.4 | 100.0 | 9.4 | 75.0 | 61.1 | 4,630 |
| Region |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 1.0 | 4.6 | 13.8 | 22.8 | 24.7 | 33.0 | 100.0 | 11.4 | 86.4 | 78.6 | 4,583 |
| Aragatsotn | 1.9 | 5.8 | 20.3 | 37.7 | 26.1 | 8.2 | 100.0 | 9.5 | 79.5 | 67.0 | 515 |
| Ararat | 1.0 | 8.5 | 23.9 | 36.4 | 22.4 | 7.9 | 100.0 | 9.4 | 78.3 | 65.1 | 974 |
| Armavir | 2.5 | 9.5 | 24.2 | 32.7 | 22.7 | 8.3 | 100.0 | 9.4 | 74.8 | 61.6 | 1,097 |
| Gegharkunik | 3.4 | 9.9 | 23.2 | 35.9 | 19.5 | 8.2 | 100.0 | 9.3 | 73.4 | 59.8 | 819 |
| Lori | 1.9 | 6.4 | 18.2 | 35.0 | 25.1 | 13.5 | 100.0 | 9.7 | 81.0 | 70.9 | 1,060 |
| Kotayk | 2.1 | 8.0 | 18.8 | 32.8 | 24.3 | 14.0 | 100.0 | 9.6 | 78.5 | 69.0 | 983 |
| Shirak | 1.9 | 5.9 | 24.2 | 33.4 | 21.6 | 12.9 | 100.0 | 9.5 | 77.9 | 64.8 | 1,152 |
| Syunik | 0.5 | 6.6 | 19.9 | 25.6 | 32.9 | 14.4 | 100.0 | 9.9 | 80.5 | 71.1 | 554 |
| Vayots Dzor | 1.6 | 6.0 | 20.1 | 41.9 | 21.5 | 8.9 | 100.0 | 9.5 | 80.1 | 70.2 | 205 |
| Tavush | 2.6 | 8.9 | 24.0 | 28.7 | 24.1 | 11.6 | 100.0 | 9.5 | 75.8 | 61.6 | 577 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 3.5 | 9.9 | 31.2 | 36.0 | 15.5 | 4.0 | 100.0 | 9.1 | 69.7 | 52.3 | 2,503 |
| Second | 1.7 | 6.4 | 21.8 | 37.9 | 24.1 | 7.9 | 100.0 | 9.5 | 79.8 | 67.5 | 2,505 |
| Middle | 1.4 | 5.8 | 17.2 | 30.0 | 27.9 | 17.7 | 100.0 | 9.8 | 82.5 | 73.3 | 2,564 |
| Fourth | 0.9 | 6.2 | 13.8 | 26.7 | 28.9 | 23.6 | 100.0 | 10.7 | 84.9 | 77.4 | 2,469 |
| Highest | 0.5 | 4.6 | 10.7 | 17.8 | 23.9 | 42.3 | 100.0 | 12.1 | 87.8 | 81.9 | 2,477 |
| Total | 1.6 | 6.6 | 19.0 | 29.7 | 24.1 | 19.0 | 100.0 | 9.8 | 80.9 | 70.4 | 12,518 |

Note: Totals include 0.1 percent of cases with missing data that are not shown separately.
${ }^{1}$ Completed grade 8 or higher
${ }^{2}$ Defined as having completed high school (grade 10) or having attended either specialized secondary or higher. The proportions may be slightly overestimated because some students enroll in specialized secondary after completing only grade 8.

Data on net attendance ratios (NARs) and gross attendance ratios (GARs) by school level, sex, residence, region, and wealth quintile are shown in Table 2.5. The NAR indicates participation in general basic education (primary and middle school) for the population age 7-14 and high school for the population age 15-16. The GAR measures participation at each level of schooling among those of any age from 6 to 24 . The GAR is nearly always higher than the NAR for the same level because the GAR includes participation by those who may be older or younger than the official age range for that level. ${ }^{2}$ A NAR of 100 percent would indicate that all children in the official age range for the level are attending education at that level. The GAR can exceed 100 percent if there is significant over age or under age participation at a given level of schooling.

In Armenia, school attendance among school-age household members is high. The overall NAR for general basic education is 94 and the GAR is 101. A comparison of the NAR and GAR indicates that approximately 7 percent of students are either under age or over age. Attendance ratios are virtually the same by sex, region, and urban-rural residence.

The NAR for the high school level is much lower than that recorded in the 2000 ADHS ( 72 versus 87 ). The GAR, however, is approximately the same ( 90 versus 92 ). This suggests that there has been an increase in over age or under age participation in high school. Indeed, a comparison of the NAR and GAR indicates that approximately 17 percent of students are either under age or over age.

The gender parity index (GPI), or the ratio of the female to the male GAR at the general basic and high school levels, indicates the magnitude of the gender gap in attendance ratios. If there is no gender difference, the GPI will be equal to one. GPI will be closer to zero if the disparity is in favor of males. If the gender gap favors females, the GPI will exceed one. Table 2.5 shows the GPI is 0.96 in the general basic level and 1.15 in the high school level, which indicates that there is a substantial gender gap in favor of females at the secondary level.

Figure 2.2 presents the age-specific attendance rates (ASAR) for the population age 6-24, by sex. The ASAR indicates participation in schooling at any level, from primary through higher education. The closer the ASAR is to 100 percent, the higher the proportion of a given age attending school.

In Armenia, almost all youths of general basic age (7-14) attend school, and there are no significant differences by gender. Among the high-school-age population (15-16), attendance ratios begin to decline, particularly among males. It should be noted that among young people age 17 to 19 , a significantly higher proportion of females than males are attending school. This is also the age when many young men are required to serve in the military.

In Armenia, virtually all students in grades 2 through 8 are promoted every year, and nearly all stay in school until grade 8. Findings from the 2005 ADHS show that the dropout rate after eighth grade is 9 percent. This means that these children stop studying after the compulsory years of school (estimates not shown).

[^1]Table 2.5 School attendance ratios
Net attendance ratios (NAR), gross attendance ratios (GAR), and gender parity index (GPI) for the de jure household population by sex and level of schooling, according to background characteristics, Armenia 2005

| Background characteristic | Net attendance ratio ${ }^{1}$ |  |  | Gross attendance ratio ${ }^{2}$ |  |  | Gender parity index |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | Total | Male | Female | Total |  |
| GENERAL BASIC |  |  |  |  |  |  |  |
| Residence |  |  |  |  |  |  |  |
| Urban | 94.1 | 92.6 | 93.4 | 102.9 | 98.0 | 100.4 | 0.95 |
| Rural | 95.1 | 92.2 | 93.7 | 102.2 | 99.1 | 100.7 | 0.97 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 94.1 | 91.6 | 92.9 | 104.0 | 97.3 | 100.8 | 0.94 |
| Aragatsotn | 93.5 | 92.9 | 93.2 | 100.4 | 98.3 | 99.5 | 0.98 |
| Ararat | 93.8 | 94.5 | 94.2 | 99.6 | 103.7 | 101.7 | 1.04 |
| Armavir | 97.0 | 89.7 | 93.3 | 101.5 | 93.9 | 97.7 | 0.93 |
| Gegharkunik | 96.5 | 95.2 | 95.8 | 107.2 | 100.5 | 103.8 | 0.94 |
| Lori | 92.4 | 92.2 | 92.3 | 97.4 | 98.0 | 97.7 | 1.01 |
| Kotayk | 92.5 | 96.9 | 94.7 | 99.7 | 103.3 | 101.5 | 1.04 |
| Shirak | 94.7 | 87.5 | 91.3 | 101.9 | 92.4 | 97.5 | 0.91 |
| Syunik | 96.7 | 94.3 | 95.4 | 106.9 | 98.0 | 102.2 | 0.92 |
| Vayots Dzor | 95.0 | 95.8 | 95.4 | 101.2 | 100.7 | 101.0 | 1.00 |
| Tavush | 96.9 | 95.1 | 96.1 | 108.9 | 108.8 | 108.8 | 1.00 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 94.9 | 91.1 | 93.1 | 102.0 | 99.0 | 100.6 | 0.97 |
| Second | 95.4 | 92.3 | 93.9 | 103.4 | 95.8 | 99.9 | 0.93 |
| Middle | 93.6 | 91.8 | 92.7 | 99.2 | 99.6 | 99.4 | 1.00 |
| Fourth | 95.2 | 94.8 | 95.0 | 106.0 | 99.3 | 102.7 | 0.94 |
| Highest | 93.5 | 92.4 | 93.0 | 102.3 | 98.1 | 100.3 | 0.96 |
| Total | 94.6 | 92.4 | 93.5 | 102.6 | 98.4 | 100.6 | 0.96 |
| HIGH SCHOOL |  |  |  |  |  |  |  |
| Residence |  |  |  |  |  |  |  |
| Urban | 68.0 | 74.8 | 71.4 | 85.4 | 96.5 | 91.0 | 1.13 |
| Rural | 70.1 | 76.9 | 73.2 | 81.0 | 95.2 | 87.5 | 1.18 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 63.4 | 68.5 | 66.1 | 83.9 | 93.8 | 89.1 | 1.12 |
| Aragatsotn | 77.1 | 92.3 | 86.5 | 92.6 | 101.7 | 98.3 | 1.10 |
| Ararat | 62.9 | 52.9 | 59.0 | 77.0 | 74.7 | 76.1 | 0.97 |
| Armavir | 71.2 | 67.0 | 69.3 | 74.5 | 89.0 | 80.9 | 1.19 |
| Gegharkunik | 67.4 | 85.6 | 75.7 | 78.6 | 97.2 | 87.1 | 1.24 |
| Lori | 90.0 | 71.3 | 78.3 | 115.9 | 87.2 | 98.0 | 0.75 |
| Kotayk Shirak | 56.7 75.0 | 87.3 88.9 | 69.0 81.9 | 67.3 91.0 | 96.7 121.7 | 79.1 106.3 | 1.44 1.34 |
| Syunik | 83.3 | 95.4 | 88.6 | 90.9 | 110.4 | 99.5 | 1.22 |
| Vayots Dzor | 78.4 | 82.0 | 79.6 | 87.0 | 92.6 | 88.9 | 1.06 |
| Tavush | 76.2 | 85.3 | 80.5 | 87.6 | 97.0 | 92.1 | 1.11 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 54.3 | 73.6 | 63.9 | 61.8 | 90.7 | 76.2 | 1.47 |
| Second | 74.0 | 79.1 | 76.2 | 90.8 | 97.7 | 93.8 | 1.08 |
| Middle | 75.5 | 79.6 | 77.5 | 91.5 | 112.2 | 101.4 | 1.23 |
| Fourth | 67.8 | 68.1 | 67.9 | 80.2 | 86.1 | 82.8 | 1.07 |
| Highest | 76.2 | 77.7 | 77.1 | 98.6 | 95.5 | 96.7 | 0.97 |
| Total | 68.9 | 75.6 | 72.2 | 83.4 | 96.0 | 89.5 | 1.15 |

${ }^{1}$ The NAR for general basic school is the percentage of the primary and middle-school-age ( $7-14$ years) population that is attending primary or middle school. The NAR for high school is the percentage of the high-school-age ( $15-16$ years) population that is attending grades 9 or 10. By definition, the NAR cannot exceed 100 percent.
${ }^{2}$ GAR for general basic school is the total number of primary and middle school students, expressed as a percentage of the official general basic-school-age population. The GAR for high school is the total number of high school students, expressed as a percentage of the official high-school-age population. If there are significant numbers of over age and under age students at a given level of schooling, the GAR can exceed 100 percent.
${ }^{3}$ The (GPI) for general basic school is the ratio of the general basic school GAR for females to the GAR for males. The Gender Parity Index for high school is the ratio of the high school GAR for females to the GAR for males.

Figure 2.2 Age-Specific School Attendance Rates, by Sex


### 2.2 Housing Characteristics

To assess the socioeconomic conditions under which the population lives, respondents were asked to give specific information about their household environment. Type of water source, sanitation facilities, and floor material are characteristics that affect the health status of household members, particularly children. They also indicate the socioeconomic status of households. Tables 2.6 to 2.8 present major housing characteristics by urban-rural residence.

All households in Armenia have electricity (Table 2.6). A majority of households and population in the country have a finished floor, use liquid petroleum gas (LPG) or natural gas for cooking, and have a specific place for cooking inside the house. Overall, most of the respondents in urban areas live in environments with adequate sanitary conditions. In rural areas, living conditions are more mixed.

Parquet or polished wood floors are most common in urban areas (63 percent). In rural areas, the majority of households have wooden plank floors ( 67 percent) while 2 percent of households have an earth or sand floor. Almost half of households ( 45 percent) have two rooms used for sleeping. There is little difference between urban and rural households.

Cooking fuel appears to have changed dramatically since 2000. The proportion of households using electricity for cooking has declined from 37 percent in 2000 to 14 percent in 2005. Conversely, the proportion using LPG or natural gas has increased from 14 percent to 80 percent in the same time period. Differences in coding categories between the two surveys could account for some of the apparent shifts. Figure 2.3 shows the percentage of households using electricity or LPG/natural gas for cooking.

The last panel in Table 2.6 shows the distribution of the very small proportion of households that use biomass fuel ( 5 percent) by type of stove they use. The majority of these households in Armenia (three in four) use an open fire without chimney or hood. One in six households uses an open fire or stove with a chimney or hood. Rural households are much more likely to use this type of stove than urban households.

| Table 2.6 Housing characteristics |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Percentage of households with electricity and percent distribution of households by housing characteristics, according to residence, Armenia 2005 |  |  |  |  |
|  | Residence |  | Total | De jure population |
| Characteristic | Urban | Rural |  |  |
| Electricity | 99.9 | 99.7 | 99.8 | 99.8 |
| Flooring material |  |  |  |  |
| Earth, sand | 0.5 | 2.0 | 1.0 | 1.0 |
| W ood planks | 20.8 | 66.9 | 36.5 | 39.0 |
| Parquet, polished wood | 63.4 | 12.6 | 46.2 | 44.5 |
| Vinyl, asphalt strips | 9.1 | 5.8 | 8.0 | 6.8 |
| Ceramic tiles | 2.7 | 1.3 | 2.2 | 2.2 |
| Cement | 1.9 | 8.2 | 4.0 | 4.4 |
| O ther/missing | 1.7 | 3.2 | 2.2 | 2.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Rooms for sleeping |  |  |  |  |
| One | 34.7 | 23.8 | 31.0 | 19.4 |
| Two | 45.9 | 41.6 | 44.5 | 47.4 |
| Three or more | 18.5 | 33.5 | 23.6 | 32.2 |
| Missing | 0.9 | 1.1 | 1.0 | 1.0 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Cooking fuel |  |  |  |  |
| Electricity | 15.9 | 15.6 | 15.8 | 14.2 |
| Liquid petroleum gas (LPG) | 39.9 | 31.3 | 36.9 | 36.2 |
| Natural gas | 43.4 | 41.0 | 42.6 | 44.9 |
| Other/missing | 0.8 | 12.2 | 4.6 | 4.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Place for cooking |  |  |  |  |
| In the house | 98.9 | 92.9 | 96.9 | 96.7 |
| In a separate building | 0.6 | 4.5 | 1.9 | 2.1 |
| O utdoors | 0.2 | 2.6 | 1.0 | 1.0 |
| O ther/missing | 0.3 | 0.1 | 0.2 | 0.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of households | 4,429 | 2,278 | 6,707 | 25,235 |
| Type of fire/stove among households using solid fuel ${ }^{2}$ |  |  |  |  |
| Closed stove with chimney/hood | 1.8 | 6.8 | 6.2 | 6.9 |
| O pen fire/stove with chimney/hood | 3.0 | 16.9 | 15.4 | 16.1 |
| O pen fire/stove without chimney/hood | 75.5 | 75.7 | 75.7 | 74.6 |
| Other/missing | 19.6 | 0.6 | 2.7 | 2.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of households/de jure population using solid fuel | 34 | 269 | 303 | 1,149 |
| ${ }^{1}$ Household members, i.e., usual residents <br> ${ }^{2}$ Solid fuel includes coal/lignite, charcoal, wood/straw/shrubs, and animal dung. |  |  |  |  |

# Figure 2.3 Households with Electricity and LPG/ Natural Gas for Cooking 



## Drinking Water

The source of drinking water is an indicator of whether it is suitable for drinking. Table 2.7 provides information on the source of drinking water, time to obtain the water, the age and sex of the person who usually collects the drinking water, and the treatment of water used for drinking. The table presents the percentage of households as well as the percentage of the de jure population living in those households.

Three in four households in Armenia have their drinking water piped directly into the house (Figure 2.4). Urban households are much more likely than rural households to have piped water in their house ( 94 percent compared with 39 percent). In rural areas, 36 percent of households have their drinking water piped to the yard or plot. Because most households use water that is available in the dwelling, less than 10 percent of Armenians have to go out to get drinking water. In households with no water in the house, water is collected most frequently by an adult woman (age 15 or older). This is particularly true in rural areas (16 percent).

Because households may use more than one method to treat water to make it safer to drink, water treatment is given as the percentages of households using the treatment method and the percentage of the de jure population (usual residents) of those households, rather than a percent distribution. Data in Table 2.7 show that no treatment is done in 89 percent of households. The most frequently used treatment for water is boiling (8 percent).

| Table 2.7 Household drinking water |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Percent distribution of households by source of drinking water, time to obtain drinking water, and person who usually collects drinking water, according to residence; percent distribution of the de jure household population by the same characteristics; and percentage of households and of the de jure household population using various water treatment prior to drinking, Armenia 2005 |  |  |  |  |
| Residence |  |  |  |  |
| Characteristic | Urban | Rural | Total | De jure population ${ }^{1}$ |
| Source of drinking water |  |  |  |  |
| Improved |  |  |  |  |
| Piped water into dwelling | 93.6 | 38.8 | 75.0 | 73.0 |
| Piped into yard/plot | 3.8 | 36.2 | 14.8 | 16.1 |
| O ther protected | 2.0 | 17.9 | 7.4 | 7.7 |
| Non-improved |  |  |  |  |
| Tanker truck | 0.0 | 6.1 | 2.1 | 2.4 |
| O ther unprotected | 0.1 | 0.4 | 0.2 | 0.3 |
| Other/missing | 0.5 | 0.7 | 0.6 | 0.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Time to obtain drinking water (round trip) |  |  |  |  |
| W ater on premises | 97.7 | 77.8 | 91.0 | 90.4 |
| Less than 30 minutes | 1.5 | 14.9 | 6.1 | 6.5 |
| 30 minutes or longer | 0.7 | 6.8 | 2.8 | 2.8 |
| Don't know/missing | 0.1 | 0.4 | 0.2 | 0.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Person who usually collects drinking water |  |  |  |  |
| Adult male 15+ | 0.5 | 3.7 | 1.6 | 1.6 |
| Adult female 15+ | 1.6 | 16.4 | 6.6 | 7.1 |
| M ale child under age 15 | 0.0 | 0.6 | 0.2 | 0.3 |
| Female child under age 15 | 0.1 | 0.6 | 0.3 | 0.4 |
| W ater on premises | 97.7 | 77.8 | 91.0 | 90.4 |
| Other/M issing | 0.1 | 0.8 | 0.3 | 0.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Water treatment prior to drinking |  |  |  |  |
| Boiled | 8.7 | 5.4 | 7.6 | 8.3 |
| O ther | 2.6 | 2.5 | 2.6 | 2.5 |
| No treatment | 88.8 | 90.8 | 89.4 | 88.7 |
| Don't know/missing | 0.7 | 1.9 | 1.1 | 1.2 |
| Number of households/de jure population | 4,429 | 2,278 | 6,707 | 25,235 |
| ${ }^{1}$ Household members, i.e., usual residents |  |  |  |  |

## Sanitation Facility

Table 2.8 shows the proportion of households and of the de jure population with access to hygienic sanitation facilities. Hygienic status is determined by type of facility used and whether or not it is a shared facility.

A household's toilet/latrine facility is classified as hygienic if it is used only by household members (i.e., not shared) and the type of facility effectively separates human waste from human contact. The types of facilities that are most likely to accomplish this are flush or pour flush into a piped sewer system/septic tank/pit latrine, ventilated improved pit latrine, pit latrine with a slab, and a composting toilet. A household's sanitation facility is classified as unhygienic if it is shared with other households or if it does not effectively separate human waste from human contact.

Most households in Armenia use improved sanitation facilities that are not shared with another household (Table 2.8). Two in three households in Armenia use a flush toilet connected to piped sewer system (Figure 2.4) and 18 percent use a ventilated improved pit latrine. Flush toilets are widespread in urban areas ( 92 percent), while VIP latrines are the most common type of facility in rural areas ( 47 percent). It should be noted that the 2005 ADHS questionnaire categorized sanitation facilities differently than the 2000 ADHS questionnaire and thus it is difficult to compare data from the two surveys.

| Table 2.8 Household sanitation facility |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Percent distribution of households by type of sanitation facility; and percent distribution of the de jure population by type of sanitation facility, Armenia 2005 |  |  |  |  |
|  | Residence |  |  | De jure population ${ }^{1}$ |
| Characteristic | Urban | Rural | Total |  |
| Improved, not shared |  |  |  |  |
| Flush/pour flush to piped sewer system | 92.1 | 17.3 | 66.7 | 64.1 |
| Flush/pour flush to septic tank | 0.3 | 0.3 | 0.3 | 0.3 |
| Flush/pour flush to a pit latrine | 1.0 | 7.1 | 3.1 | 3.6 |
| Ventilated improved pit (VIP) latrine | 2.9 | 47.2 | 18.0 | 19.3 |
| Pit latrine with a slab | 0.6 | 7.5 | 3.0 | 3.1 |
| Not improved |  |  |  |  |
| Any facility shared with other households | 1.6 | 3.1 | 2.1 | 1.9 |
| Flush/pour flush not to sewer/septic tank/pit latrine | 0.5 | 0.2 | 0.4 | 0.3 |
| Pit latrine without slab/open pit | 0.5 | 17.0 | 6.1 | 7.1 |
| Bucket | 0.2 | 0.1 | 0.1 | 0.1 |
| No facility/bush/field | 0.1 | 0.0 | 0.1 | 0.1 |
| O ther/missing | 0.2 | 0.1 | 0.1 | 0.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of households/de jure population | 4,429 | 2,278 | 6,707 | 25,235 |
| ${ }^{1}$ Household members, i.e., usual residents |  |  |  |  |

Figure 2.4 Households with Drinking Water Piped into the House and Flush Toilet to Piped Sewer System, by Residence


## Household Possessions

The availability of durable goods is a proximate measure of household socioeconomic status. Moreover, particular goods have specific benefits: having access to a radio or a television exposes household members to innovative ideas; a refrigerator prolongs the wholesomeness of foods; and a means of transportation allows greater access to many services away from the local area. Table 2.9 provides information on household ownership of durable goods (e.g., radios, televisions, telephones, refrigerators) and means of transportation (e.g., bicycles, motorcycles, automobiles).

Table 2.9 shows that urban households are more likely than rural households to own durable goods, while rural households are more likely to own a means of transportation. Overall, 85 percent of Armenian households have color televisions, 82 percent have refrigerators, 72 percent have land line (non-mobile) telephones, and 67 percent have a washing machine. Both mobile and non-mobile telephones are much more common in urban areas than in rural areas. While 84 percent of urban households have a non-mobile telephone, the corresponding proportion in the rural areas is only 49 percent.

One in four households in Armenia has a car or truck, while only 5 percent have a bicycle. Rural households are more likely than urban households to own a car or truck. Bicycles are also more common in rural areas than in urban areas ( 12 percent and 2 percent, respectively).

Forty-one percent of Armenian households own agricultural land; the proportion is understandably higher in rural than urban areas ( 85 percent vs. 17 percent). One-quarter of Armenian households own farm animals.

| Table 2.9 Household possessions |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Percentage of households with various household effects, means of transportation, agricultural land, and farm animals by residence; and percentage of de jure household population with various household effects, means of transportation, agricultural land, and farm animals, Armenia 2005 |  |  |  |  |
|  | Residence |  |  | De jure |
| Possession | Urban | Rural | Total | population ${ }^{1}$ |
| Household effects |  |  |  |  |
| Radio | 34.7 | 17.8 | 28.9 | 29.6 |
| Black and white television | 11.1 | 18.6 | 13.6 | 12.1 |
| Color television | 88.5 | 77.3 | 84.7 | 88.0 |
| W ashing machine | 69.2 | 62.7 | 67.0 | 71.3 |
| Vacuum cleaner | 54.1 | 24.7 | 44.1 | 46.5 |
| Computer | 12.1 | 2.0 | 8.7 | 9.1 |
| M obile telephone | 39.2 | 19.4 | 32.5 | 37.1 |
| Non-mobile telephone | 83.5 | 49.4 | 71.9 | 72.5 |
| Refrigerator | 86.3 | 74.8 | 82.4 | 84.0 |
| Camera | 46.1 | 27.7 | 39.9 | 45.6 |
| Means of transportation |  |  |  |  |
| Bicycle | 1.9 | 11.6 | 5.2 | 6.7 |
| Animal-drawn cart | 0.1 | 1.6 | 0.6 | 0.7 |
| M otorcycle/scooter | 0.2 | 1.2 | 0.6 | 0.8 |
| Car/truck | 22.6 | 27.6 | 24.3 | 29.7 |
| O wnership of agricultural land | 17.3 | 85.4 | 40.5 | 45.2 |
| O wnership of farm animals | 5.1 | 63.7 | 25.0 | 30.4 |
| Number of households/ de jure population | 4,429 | 2,278 | 6,707 | 25,235 |
| ${ }^{1}$ Household members, i.e., usual residents |  |  |  |  |

### 2.3 Wealth Quintiles

The wealth index is a recently developed measure that has been tested in a number of countries in relation to inequities in household income, use of health services, and health outcomes (Rutstein 2004, Rutstein et al., 2000). The wealth index is constructed by assigning a weight or factor score to each household asset through principal components analysis. These scores were summed by household, and individuals were ranked according to the total score of the household in which they resided. The sample was then divided into population quintiles-five groups with the same number of individuals in each. At the national level, approximately 20 percent of the population is in each wealth quintile.

Table 2.10 shows the distribution of the population across the five wealth quintiles, by urban and rural areas and region. These distributions indicate the degree to which wealth is evenly (or unevenly) distributed by geographic areas. For example, over three-fourths of the rural population is in the lowest and second-lowest wealth quintiles. This compares to approximately six in ten urban residents who are in the two highest wealth quintiles.

| Table 2.10 Population distribution by wealth quintile |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of the de jure population by wealth quintile, according to residence and region, Armenia 2005 |  |  |  |  |  |  |  |
|  | W ealth quintile |  |  |  |  |  | Number of de jure population ${ }^{1}$ |
| Residence/region | Lowest | Second | Middle | Fourth | Highest | Total |  |
| Residence |  |  |  |  |  |  |  |
| Urban | 3.6 | 12.9 | 24.2 | 28.7 | 30.7 | 100.0 | 15,703 |
| Rural | 47.1 | 31.8 | 12.9 | 5.9 | 2.3 | 100.0 | 9,531 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 0.7 | 6.8 | 20.8 | 30.7 | 41.0 | 100.0 | 9,115 |
| Aragatsotn | 54.2 | 26.4 | 8.4 | 8.0 | 3.1 | 100.0 | 1,091 |
| Ararat | 27.3 | 38.3 | 21.1 | 10.0 | 3.3 | 100.0 | 2,101 |
| Armavir | 39.9 | 27.1 | 14.2 | 12.9 | 5.9 | 100.0 | 2,201 |
| Gegharkunik | 33.8 | 28.7 | 19.3 | 11.6 | 6.6 | 100.0 | 1,578 |
| Lori | 25.0 | 24.3 | 21.3 | 17.4 | 12.0 | 100.0 | 2,190 |
| Kotayk | 13.2 | 21.4 | 26.8 | 20.6 | 17.9 | 100.0 | 2,044 |
| Shirak | 32.6 | 35.5 | 19.7 | 9.2 | 3.0 | 100.0 | 2,184 |
| Syunik | 16.0 | 14.0 | 21.9 | 31.5 | 16.6 | 100.0 | 1,137 |
| Vayots Dzor | 38.8 | 30.9 | 15.3 | 9.8 | 5.2 | 100.0 | 462 |
| Tavush | 46.0 | 21.5 | 19.4 | 7.9 | 5.3 | 100.0 | 1,130 |
| Total | 20.0 | 20.0 | 19.9 | 20.1 | 20.0 | 100.0 | 25,235 |
| ${ }^{1}$ H ousehold members, i.e., usual residents |  |  |  |  |  |  |  |

### 2.4 BIRTH REGISTRATION

In Armenia, birth registration is recognized as one of children's rights. The registration of births is the inscription of the facts of the birth into an official log kept at the registrar's office. A birth certificate is issued at the time of registration or later as proof of the registration of the birth. In the 2005 ADHS, for all children born since January 2000, mothers were asked if their child had been registered. Table 2.11 gives the percentage of children under five years of age whose births were officially registered and the percentage who had a birth certificate at the time of the survey. Not all children who are registered may have a birth certificate because some certificates may have been lost or were never issued. However, all children with a certificate have been registered.

Birth registration is almost universal in Armenia, with 96 percent of births in the five years preceding the survey registered, and practically all of these births have a certificate. Small variations are found across subgroups of children. The proportion of births that are registered ranges from 90 percent in Shirak to 100 percent in Tavush.

| Table 2.11 Birth registration of children under five |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Percentage of de jure children under five years of age whose births are registered with the civil authorities, according to background characteristics, Armenia 2005 |  |  |  |  |
| Percentage of children whose births are registered: |  |  |  |  |
| Background characteristic | $\begin{aligned} & \text { Had } \\ & \text { a birth } \\ & \text { certificate } \end{aligned}$ | Didn't have a birth certificate | Total registered | $\begin{aligned} & \text { Number } \\ & \text { of } \\ & \text { children } \end{aligned}$ |
| Age |  |  |  |  |
| <2 | 95.6 | 0.5 | 96.1 | 659 |
| 2-4 | 96.0 | 0.6 | 96.6 | 867 |
| Sex |  |  |  |  |
| M ale | 96.2 | 0.4 | 96.6 | 839 |
| Female | 95.3 | 0.8 | 96.1 | 687 |
| Residence |  |  |  |  |
| Urban | 97.0 | 0.2 | 97.1 | 928 |
| Rural | 94.0 | 1.2 | 95.2 | 598 |
| Region |  |  |  |  |
| Yerevan | 96.6 | 0.0 | 96.6 | 573 |
| Aragatsotn | 96.0 | 2.7 | 98.7 | 82 |
| Ararat | 96.4 | 1.5 | 97.9 | 141 |
| Armavir | 93.6 | 0.0 | 93.6 | 133 |
| Gegharkunik | 96.0 | 0.2 | 96.3 | 122 |
| Lori | 94.8 | 2.8 | 97.6 | 99 |
| Kotayk | 97.0 | 0.0 | 97.0 | 123 |
| Shirak | 90.0 | 0.0 | 90.0 | 91 |
| Syunik | 95.1 | 1.9 | 97.0 | 66 |
| Vayots Dzor | 95.9 | 0.0 | 95.9 | 21 |
| Tavush | 99.5 | 0.0 | 99.5 | 75 |
| Wealth quintile |  |  |  |  |
| Lowest | 90.8 | 2.6 | 93.4 | 293 |
| Second | 93.4 | 0.0 | 93.4 | 301 |
| Middle | 96.3 | 0.0 | 96.3 | 297 |
| Fourth | 99.5 | 0.3 | 99.8 | 328 |
| Highest | 98.6 | 0.0 | 98.6 | 307 |
| Total | 95.8 | 0.6 | 96.4 | 1,526 |
| Note: Table is based on de jure household members, i.e., usual residents. |  |  |  |  |

# BACKGROUND CHARACTERISTICS OF RESPO NDENTS 

The purpose of this chapter is to provide a demographic and socioeconomic profile of the 2005 ADHS sample. Information on the basic characteristics of women and men interviewed in the survey is essential for the interpretation of findings presented later in the report and can provide an approximate indication of the representativeness of the survey.

### 3.1 BACKGROUND CHARACTERISTICS OF RESPONDENTS

Table 3.1 presents the percent distribution of interviewed women and men age $15-49$ by background characteristics including age, marital status, educational level, place of residence, and region. As noted in Chapter 1, all women age 15-49 who were usual residents or present in the household on the night before the interviewer's visit were eligible to be interviewed in the 2005 ADHS. Men age 15-49 were interviewed in every third household. ${ }^{1}$ In order not to double count respondents, the tables in this report are based on the de facto population, that is, those who stayed in the household the previous night.

For the most part, the male and female populations represented in the sample are evenly distributed by age, but there are some noticeable exceptions. For example, there are lower proportions of women and men in their thirties compared with in older and younger age groups. This is notable because people in this age group tend to be economically active.

A majority of both women and men are married (or living together). Compared with the results of the 2000 ADHS, there is a much lower proportion of men who are married or living with a woman (56 percent versus 68 percent). This can be explained in part by a larger cohort of the youngest men (age 1519 ) and the exclusion in 2005 of men aged 50-54. Seven percent of women are divorced, separated, or widowed as opposed to 1 percent of men. Thirty-one percent of women and 43 percent of men have never been married.

Almost two-thirds of the population live in urban areas, the majority of those in Yerevan. There is considerable variation by region. All but a tiny handful of the respondents interviewed had attended school at some time. Approximately 10 percent of respondents attended only basic general education, while about 40 percent reached high school or general secondary. Thirty percent of women have attended a specialized secondary institution, as have 22 percent of men. Approximately one-quarter of respondents have at least some higher education.

[^2]| Table 3.1 Background characteristics of respondents |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of women and men age 15-49 by background characteristics, Armenia 2005 |  |  |  |  |  |  |
|  | Women |  |  | Men |  |  |
| Background characteristic | W eighted percent | W eighted number | Unweighted number | W eighted percent | W eighted number | Unweighted number |
| Age |  |  |  |  |  |  |
| 15-19 | 17.1 | 1,123 | 1,136 | 20.2 | 292 | 295 |
| 20-24 | 17.2 | 1,131 | 1,067 | 16.3 | 237 | 239 |
| 25-29 | 14.2 | 929 | 910 | 14.0 | 202 | 183 |
| 30-34 | 11.4 | 749 | 709 | 10.8 | 156 | 157 |
| 35-39 | 10.8 | 711 | 720 | 10.4 | 150 | 138 |
| 40-44 | 14.7 | 965 | 1,024 | 13.8 | 199 | 210 |
| 45-49 | 14.6 | 958 | 1,000 | 14.6 | 211 | 225 |
| Marital status |  |  |  |  |  |  |
| Never married | 31.1 | 2,043 | 2,006 | 42.5 | 615 | 614 |
| M arried | 60.8 | 3,995 | 4,064 | 49.6 | 717 | 754 |
| Living together | 0.7 | 49 | 48 | 6.7 | 98 | 61 |
| Divorced/separated | 4.9 | 325 | 281 | 0.9 | 13 | 15 |
| W idowed | 2.4 | 155 | 167 | 0.3 | 4 | 3 |
| Residence |  |  |  |  |  |  |
| Urban | 63.9 | 4,194 | 4,592 | 63.1 | 913 | 999 |
| Rural | 36.1 | 2,372 | 1,974 | 36.9 | 534 | 448 |
| Region |  |  |  |  |  |  |
| Yerevan | 37.6 | 2,468 | 1,141 | 37.8 | 547 | 262 |
| Aragatsotn | 4.5 | 292 | 553 | 4.9 | 71 | 142 |
| Ararat | 7.0 | 462 | 545 | 7.6 | 110 | 108 |
| Armavir | 8.6 | 567 | 613 | 9.6 | 139 | 146 |
| Gegharkunik | 6.7 | 443 | 593 | 5.6 | 81 | 123 |
| Lori | 8.2 | 537 | 464 | 6.0 | 87 | 56 |
| Kotayk | 8.6 | 563 | 562 | 10.4 | 151 | 128 |
| Shirak | 8.6 | 563 | 583 | 6.8 | 98 | 112 |
| Syunik | 4.3 | 281 | 537 | 4.6 | 67 | 139 |
| Vayots Dzor | 1.6 | 107 | 407 | 2.1 | 31 | 106 |
| Tavush | 4.3 | 285 | 568 | 4.4 | 64 | 125 |
| Education |  |  |  |  |  |  |
| Basic general ${ }^{1}$ | 8.1 | 529 | 506 | 14.1 | 205 | 193 |
| Secondary general | 37.2 | 2,440 | 2,522 | 40.5 | 586 | 601 |
| Specialized secondary | 30.4 | 1,997 | 2,141 | 21.5 | 310 | 328 |
| Higher | 24.4 | 1,600 | 1,397 | 23.9 | 346 | 325 |
| Total | 100.0 | 6,566 | 6,566 | 100.0 | 1,447 | 1,447 |
| Note: Unweighted numbers refer to the number of interviews actually completed. Education refers to the highest level of educa tion attended, whether or not that level was completed. <br> ${ }^{1}$ Includes a tiny proportion with no education. |  |  |  |  |  |  |

### 3.2 EdUCATIONAL LEVEL OF RESPONDENTS

Tables 3.2.1 and 3.2.2 show the educational level of female and male respondents by selected background characteristics. Education has been almost universal in Armenia for some time; the median years of schooling for women is 10.8 years and for men is 9.9 years.

## Table 3.2.1 Educational attainment by background characteristics: Women

Percent distribution of women by highest level of schooling attended, median number of years completed, and percentage with general basic and general secondary completed, according to background characteristics, Armenia 2005


There are small differentials across subgroups of the population. Younger women, women in the poorest households, and those in rural areas have less education than other women. Nevertheless, based on the median, half of the women have at least ten years of education. Education is closely related to wealth status; women in the lowest wealth quintile have the least education while women in the highest wealth quintile have the most education. Women in Yerevan and Syunik are better educated than women in other regions; the median years of schooling for women in these regions is 11.5 years or higher, while in other regions it is 10 years or less.

As Table 3.2.2 shows, the pattern of educational attainment among men is similar to that of women. Younger men and men in rural areas generally have a lower level of education. Thirty percent of urban men have some university-level education or higher, compared with 14 percent of rural men. Wealth status is positively associated with education; while 7 percent of men in the lowest wealth quintile have higher education, the corresponding proportion for men in the highest wealth quintile is 53 percent. There is considerable variation by region, with men in Yerevan and Syunik having more years of education than men from other regions.

Table 3.2.2 Educational attainment by background characteristics: Men
Percent distribution of men by highest level of schooling attended, median number of years completed, and percentage with general basic and general secondary completed, according to background characteristics, Armenia 2005

| Background characteristic | Highest level of schooling attended |  |  |  |  |  |  | Median number of years of schooling | General basic completed ${ }^{1}$ | General secondary completed ${ }^{2}$ | Number of men |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { No } \\ \text { education } \end{gathered}$ | Primary (1-3) | Middle (4-8) | High school (9-10) | Specialized secondary | Higher | Total |  |  |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 0.8 | 0.4 | 23.7 | 53.3 | 4.8 | 17.0 | 100.0 | 8.9 | 98.4 | 47.7 | 292 |
| 20-24 | 0.0 | 0.0 | 18.0 | 46.0 | 11.4 | 24.5 | 100.0 | 9.7 | 99.3 | 81.4 | 237 |
| 25-29 | 0.0 | 0.0 | 16.3 | 42.5 | 13.9 | 27.3 | 100.0 | 9.8 | 97.9 | 82.2 | 202 |
| 30-34 | 0.0 | 0.0 | 7.5 | 30.1 | 28.3 | 34.1 | 100.0 | 11.8 | 99.7 | 92.2 | 156 |
| 35-39 | 1.1 | 0.0 | 7.4 | 40.6 | 33.5 | 17.3 | 100.0 | 10.8 | 99.1 | 91.7 | 150 |
| 40-44 | 0.0 | 0.0 | 7.3 | 30.9 | 40.7 | 21.1 | 100.0 | 11.8 | 99.6 | 92.7 | 199 |
| 45-49 | 0.8 | 0.2 | 7.2 | 31.0 | 31.2 | 29.6 | 100.0 | 12.1 | 98.8 | 91.7 | 211 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 0.4 | 0.2 | 10.8 | 36.4 | 22.3 | 29.9 | 100.0 | 10.3 | 98.8 | 83.8 | 913 |
| Rural | 0.3 | 0.0 | 18.6 | 47.4 | 20.0 | 13.7 | 100.0 | 9.6 | 99.2 | 73.5 | 534 |
| Region |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 0.4 | 0.0 | 10.8 | 32.6 | 22.8 | 33.4 | 100.0 | 11.4 | 99.0 | 84.6 | 547 |
| Aragatsotn | 0.0 | 0.0 | 16.9 | 34.3 | 32.7 | 16.1 | 100.0 | 9.9 | 97.7 | 78.0 | 71 |
| Ararat | 1.5 | 0.0 | 7.3 | 61.0 | 18.7 | 11.5 | 100.0 | 9.6 | 98.7 | 79.5 | 110 |
| Armavir | 0.0 | 0.0 | 25.7 | 44.0 | 18.3 | 12.1 | 100.0 | 9.5 | 99.1 | 69.7 | 139 |
| Gegharkunik | 0.0 | 0.0 | 15.1 | 40.4 | 30.3 | 14.1 | 100.0 | 9.8 | 98.7 | 81.7 | 81 |
| Lori | 2.0 | 0.0 | 13.6 | 42.1 | 13.9 | 28.4 | 100.0 | 9.8 | 98.4 | 78.1 | 87 |
| Kotayk | 0.0 | 0.7 | 16.7 | 52.3 | 10.6 | 19.7 | 100.0 | 9.6 | 98.9 | 75.8 | 151 |
| Shirak | 0.0 | 0.0 | 13.0 | 38.3 | 23.7 | 25.0 | 100.0 | 9.8 | 99.9 | 78.3 | 98 |
| Syunik | 0.0 | 0.6 | 11.2 | 32.8 | 29.3 | 26.1 | 100.0 | 10.5 | 99.7 | 80.2 | 67 |
| Vayots Dzor | 0.0 | 0.0 | 5.8 | 72.9 | 9.8 | 11.5 | 100.0 | 9.5 | 99.6 | 82.1 | 31 |
| Tavush | 0.0 | 0.0 | 17.5 | 37.5 | 27.6 | 17.4 | 100.0 | 9.8 | 99.8 | 78.5 | 64 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 0.0 | 0.0 | 26.6 | 46.7 | 19.3 | 7.3 | 100.0 | 9.4 | 99.4 | 68.8 | 261 |
| Second | 0.0 | 0.0 | 11.2 | 51.2 | 26.8 | 10.8 | 100.0 | 9.7 | 99.2 | 81.0 | 264 |
| Middle | 1.2 | 0.3 | 11.1 | 43.0 | 26.6 | 17.8 | 100.0 | 9.8 | 98.4 | 80.4 | 326 |
| Fourth | 0.6 | 0.1 | 12.5 | 38.9 | 18.4 | 29.6 | 100.0 | 10.0 | 98.2 | 81.7 | 316 |
| Highest | 0.0 | 0.0 | 8.1 | 23.3 | 15.9 | 52.7 | 100.0 | 12.5 | 99.7 | 87.1 | 280 |
| Total | 0.4 | 0.1 | 13.6 | 40.5 | 21.5 | 23.9 | 100.0 | 9.9 | 98.9 | 80.0 | 1,447 |

### 3.3 Exposure to Mass Media

The 2005 ADHS collected information on the exposure of women and men to both the broadcast and print media. This information is important because it can help program managers plan the dissemination of information on health, family planning, nutrition, and other programs. The results are presented in Tables 3.3.1 and 3.3.2.

At least once a week, 97 percent of Armenian women watch television, 53 percent read a newspaper, and 33 percent listen to the radio (Table 3.3.1). Only 2 percent do not regularly have access to mass media, and 23 percent have access to all three media.

Younger women are more likely than older women to read newspapers or magazines and have access to the three types of media. Exposure to media has a strong positive association with education and wealth status. For example, while 44 percent of women in the highest wealth quintile have access to all three media, the corresponding proportion for women in the lowest wealth quintile is only 5 percent. Urban women are about twice as likely to be exposed to mass media as their rural counterparts. Overall, women from Syunik, Vayots Dzor, and Yerevan are the most likely to have access to all media.

Interestingly, men have different patterns of media exposure by age from that of women (Table 3.3.2). Younger men are in general less likely than older men to be exposed to three media, partly because they are less likely to read a newspaper on a weekly basis. Across regions, exposure to the three media ranges from 37 percent in Yerevan to 5 percent or less for men in Ararat, Gegharkunik, Shirak, and Vayots Dzor.

There has apparently been a large increase in the proportion of women who read a newspaper once a week, from 29 percent in 2000 to 53 percent in 2005. Television watching has also increased, from 88 percent of women who said they watched at least once a week in 2000 to 97 percent in 2005. Slight changes in the wording of the questions between the two surveys may account for some of the trends.

### 3.4 EMPLOYMENT

In the 2005 ADHS, respondents were asked a number of questions to determine their employment status at the time of the survey and continuity of employment in the 12 months prior to the survey. The measurement of women's employment is difficult because some of the activities that women do, especially work on family farms, family businesses, or in the informal sector, are often not perceived by women themselves as employment and hence are not reported as such. To avoid underestimating women's employment, the 2005 ADHS survey asked women several questions to ascertain their employment status. First, women were asked, "Aside from your own housework, are you currently working?" Women who answered "no" to this question were then asked, "As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business, or work on the family farm or in the family business. Are your currently doing any of these things or any other work?" Women who answered "no" to this question were asked, "Have you done any work in the last 12 months?" Women are considered currently employed if they answered "yes" to either of the first two questions. Women who answered "yes" to the third question are not currently employed but have worked in the past 12 months. All employed women were asked their occupation; whether they were paid in cash, in kind, or not at all; and for whom they worked.


| Table 3.3.2 Exposure to mass media: M en |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of men age 15-49 who are exposed to specific media on a weekly basis, by background characteristics, Armenia 2005 |  |  |  |  |  |  |
| Type of mass media exposure |  |  |  |  |  |  |
|  | Reads a |  |  | All | No |  |
|  | newspaper/ | W atches | Listens to | three | mass |  |
|  | magazine | television | the radio | media | media |  |
|  | at least | at least | at least | at least | at least | Number |
| Background | once | once | once | once | once | of |
| characteristic | a week | a week | a week | a week | a week | men |
| Age |  |  |  |  |  |  |
| 15-19 | 26.0 | 99.0 | 35.1 | 17.3 | 1.0 | 292 |
| 20-24 | 30.6 | 100.0 | 51.9 | 21.1 | 0.0 | 237 |
| 25-29 | 31.1 | 99.3 | 57.6 | 22.1 | 0.0 | 202 |
| 30-34 | 43.1 | 99.3 | 52.9 | 26.5 | 0.0 | 156 |
| 35-39 | 36.0 | 98.3 | 53.7 | 24.2 | 1.7 | 150 |
| 40-44 | 40.9 | 97.8 | 44.3 | 24.6 | 1.8 | 199 |
| 45-49 | 39.8 | 98.7 | 39.1 | 21.2 | 0.5 | 211 |
| Residence |  |  |  |  |  |  |
| Urban | 39.9 | 98.9 | 55.8 | 28.0 | 0.7 | 913 |
| Rural | 25.0 | 99.1 | 31.2 | 11.4 | 0.7 | 534 |
| Region |  |  |  |  |  |  |
| Yerevan | 45.6 | 99.0 | 72.7 | 37.3 | 0.6 | 547 |
| Aragatsotn | 40.0 | 100.0 | 48.7 | 26.2 | 0.0 | 71 |
| Ararat | 15.0 | 100.0 | 23.7 | 3.4 | 0.0 | 110 |
| Armavir | 33.0 | 100.0 | 62.0 | 24.4 | 0.0 | 139 |
| Gegharkunik | 36.9 | 99.5 | 8.9 | 4.0 | 0.0 | 81 |
| Lori | 31.4 | 95.3 | 30.1 | 8.1 | 1.9 | 87 |
| Kotayk | 28.8 | 98.5 | 43.7 | 18.1 | 1.5 | 151 |
| Shirak | 4.0 | 98.0 | 3.4 | 1.8 | 2.0 | 98 |
| Syunik | 25.8 | 99.3 | 16.7 | 7.3 | 0.0 | 67 |
| Vayots Dzor | 8.4 | 98.2 | 9.3 | 5.4 | 1.8 | 31 |
| Tavush | 52.1 | 100.0 | 21.8 | 15.8 | 0.0 | 64 |
| Education |  |  |  |  |  |  |
| Basic general | 11.2 | 98.9 | 33.5 | 6.4 | 0.5 | 205 |
| Secondary general | 24.8 | 99.2 | 41.6 | 14.7 | 0.7 | 586 |
| Specialized secondary | 29.0 | 98.8 | 46.8 | 14.8 | 0.9 | 310 |
| Higher | 69.2 | 98.8 | 63.0 | 49.5 | 0.7 | 346 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 21.9 | 98.1 | 27.1 | 9.0 | 1.4 | 261 |
| Second | 21.1 | 98.3 | 29.9 | 7.6 | 1.7 | 264 |
| M iddle | 33.9 | 100.0 | 39.4 | 17.7 | 0.0 | 326 |
| Fourth | 39.4 | 99.5 | 59.8 | 26.7 | 0.0 | 316 |
| Highest | 53.7 | 98.7 | 74.6 | 46.6 | 0.6 | 280 |
| Total | 34.4 | 99.0 | 46.7 | 21.9 | 0.7 | 1,447 |

Table 3.4 shows the percent distribution of female and male respondents by employment status according to background characteristics. Twenty-seven percent of women reported being currently employed, 2 percent were employed in the 12 months preceding the survey but not working at the time of the survey, and 71 percent were not employed in the 12 months preceding the survey (Figure 3.1). Almost twice as many men as women reported being currently employed ( 50 percent versus 27 percent). Nonetheless, one-third of men reported that they were not employed during the 12 months preceding the survey. Women who are formerly married are more likely than other women to be employed at the time of the survey (Table 3.4). For men, those who are currently married are most likely to be employed.

Figure 3.1 Percent Distribution of Women and Men Age 15-49 by Employment Status


ADHS 2005

Employment among women and men increases with age, education, and wealth quintile. Figure 3.2 depicts the differentials by residence and education. Differences in employment between rural and urban women are not significant; however, urban men are more likely to be employed than rural men. Employment among women is highest in Syunik and Tavush (47 and 41 percent, respectively) while in Shirak the proportion is only 13 percent. For men, employment rates range from 64 percent in Armavir to 26 percent in Vayots Dzor.

| Table 3.4 Employment status |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Women |  |  |  |  | Men |  |  |  |  |
|  | Emplo last 12 | ed in months | Not employed |  |  | $\begin{gathered} \text { Emplo } \\ \text { last } 12 \mathrm{r} \end{gathered}$ | yed in months | Not employed |  |  |
| Background characteristic | Currently employed ${ }^{1}$ | Not currently employed | 12 months preceding the survey | Total | Number of women | Currently employed ${ }^{1}$ | Not currently employed | 12 months preceding the survey | Total | Number of men |
| Age |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 3.3 | 0.3 | 96.4 | 100.0 | 1,123 | 4.9 | 13.4 | 81.6 | 100.0 | 292 |
| 20-24 | 17.7 | 2.4 | 79.8 | 100.0 | 1,131 | 36.6 | 15.9 | 47.5 | 100.0 | 237 |
| 25-29 | 25.4 | 3.3 | 71.3 | 100.0 | 929 | 68.1 | 12.8 | 19.1 | 100.0 | 202 |
| 30-34 | 32.1 | 2.7 | 65.2 | 100.0 | 749 | 70.0 | 20.0 | 10.0 | 100.0 | 156 |
| 35-39 | 39.0 | 1.8 | 59.2 | 100.0 | 711 | 71.8 | 15.2 | 12.0 | 100.0 | 150 |
| 40-44 | 39.0 | 2.5 | 58.6 | 100.0 | 965 | 64.6 | 21.1 | 14.1 | 100.0 | 199 |
| 45-49 | 42.4 | 3.0 | 54.6 | 100.0 | 958 | 68.9 | 14.0 | 17.1 | 100.0 | 211 |
| Marital status |  |  |  |  |  |  |  |  |  |  |
| Never married | 19.3 | 1.5 | 79.2 | 100.0 | 2,043 | 26.1 | 14.6 | 59.3 | 100.0 | 615 |
| M arried/living together | 28.1 | 2.3 | 69.6 | 100.0 | 4,044 | 68.8 | 16.2 | 14.7 | 100.0 | 815 |
| Divorced/separated/ widowed | 50.5 | 5.3 | 44.2 | 100.0 | 479 | * | * | * | * | 17 |
| Number of living children |  |  |  |  |  |  |  |  |  |  |
| 0 | 20.2 | 1.8 | 78.0 | 100.0 | 2,352 | 30.0 | 14.8 | 55.3 | 100.0 | 688 |
| 1-2 | 29.4 | 2.3 | 68.3 | 100.0 | 2,812 | 73.2 | 15.0 | 11.8 | 100.0 | 519 |
| $3+$ | 33.7 | 2.8 | 63.6 | 100.0 | 1,402 | 59.6 | 20.4 | 19.0 | 100.0 | 240 |
| Residence |  |  |  |  |  |  |  |  |  |  |
| Urban | 27.9 | 2.1 | 70.0 | 100.0 | 4,194 | 53.2 | 12.4 | 34.1 | 100.0 | 913 |
| Rural | 25.4 | 2.5 | 72.0 | 100.0 | 2,372 | 45.5 | 21.5 | 32.9 | 100.0 | 534 |
| Region |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 29.4 | 2.4 | 68.2 | 100.0 | 2,468 | 57.2 | 9.7 | 32.8 | 100.0 | 547 |
| Aragatsotn | 15.8 | 4.4 | 79.8 | 100.0 | 292 | 42.2 | 21.0 | 36.8 | 100.0 | 71 |
| Ararat | 37.8 | 0.1 | 62.1 | 100.0 | 462 | 41.8 | 9.5 | 48.7 | 100.0 | 110 |
| Armavir | 30.5 | 4.7 | 64.7 | 100.0 | 567 | 64.0 | 9.5 | 26.5 | 100.0 | 139 |
| Gegharkunik | 19.9 | 0.8 | 79.4 | 100.0 | 443 | 53.0 | 22.1 | 24.9 | 100.0 | 81 |
| Lori | 17.9 | 1.5 | 80.5 | 100.0 | 537 | 28.0 | 54.2 | 17.9 | 100.0 | 87 |
| Kotayk | 22.4 | 2.8 | 74.8 | 100.0 | 563 | 51.1 | 21.4 | 27.4 | 100.0 | 151 |
| Shirak | 13.0 | 1.0 | 86.0 | 100.0 | 563 | 42.0 | 3.4 | 54.6 | 100.0 | 98 |
| Syunik | 47.3 | 2.1 | 50.6 | 100.0 | 281 | 46.9 | 28.1 | 25.0 | 100.0 | 67 |
| Vayots Dzor | 20.7 | 0.3 | 78.5 | 100.0 | 107 | 26.0 | 4.2 | 67.9 | 100.0 | 31 |
| Tavush | 41.4 | 2.8 | 55.8 | 100.0 | 285 | 40.4 | 24.2 | 35.5 | 100.0 | 64 |
| Education |  |  |  |  |  |  |  |  |  |  |
| Basic general | 16.8 | 1.6 | 81.6 | 100.0 | 529 | 36.8 | 21.8 | 41.3 | 100.0 | 205 |
| Secondary general | 19.5 | 1.5 | 78.9 | 100.0 | 2,440 | 43.1 | 15.5 | 41.4 | 100.0 | 586 |
| Specialized secondary | 30.8 | 3.0 | 66.1 | 100.0 | 1,997 | 60.6 | 21.1 | 18.3 | 100.0 | 310 |
| Higher | 37.0 | 2.5 | 60.5 | 100.0 | 1,600 | 61.7 | 7.9 | 30.0 | 100.0 | 346 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |
| Lowest | 23.7 | 2.8 | 73.5 | 100.0 | 1,164 | 42.2 | 24.3 | 33.3 | 100.0 | 261 |
| Second | 23.5 | 1.7 | 74.7 | 100.0 | 1,284 | 44.2 | 18.1 | 37.7 | 100.0 | 264 |
| Middle | 27.3 | 3.2 | 69.5 | 100.0 | 1,303 | 49.1 | 16.1 | 34.8 | 100.0 | 326 |
| Fourth | 28.6 | 1.4 | 70.1 | 100.0 | 1,375 | 47.2 | 14.0 | 38.3 | 100.0 | 316 |
| Highest | 31.1 | 2.2 | 66.7 | 100.0 | 1,440 | 69.0 | 7.3 | 23.8 | 100.0 | 280 |
| Total | 27.0 | 2.2 | 70.7 | 100.0 | 6,566 | 50.4 | 15.8 | 33.7 | 100.0 | 1,447 | are regularly employed and were absent from work for leave, illness, vacation, or any other such reason.

Figure 3.2 Respondents Currently Employed, by Residence and Education


### 3.5 OCCUPATION

In the survey, respondents who indicated that they were currently working were asked about the kind of work that they did. Their responses were recorded verbatim and served as the basis for the coding of occupation that occurred in the central office. Table 3.5.1 shows the percent distribution of employed women in the 12 months preceding the survey by occupation, according to background characteristics. Information on a woman's occupation not only allows an evaluation of the woman's source of income but also has implications for her empowerment.

Almost half ( 45 percent) of employed women are in professional, technical, or managerial positions, and 20 percent are employed in sales and services. Two in ten women work in agriculture. Women with specialized secondary or higher education, women living in households in the highest wealth quintile, and urban women are more likely to hold professional, technical, or managerial jobs. There is a relationship between the number of children that a woman has and her occupation. Women with more children are more likely to be employed in the agriculture sector. In regions where agricultural work is scarce, such as Yerevan, Gegharkunik, Lori, and Shirak, more than half of women work in professional positions. On the other hand, two in three women in Ararat were engaged in agricultural jobs.

| Percent distribution of women employed in the 12 months preceding the survey by occupation, according to background characteristics, Armenia 2001 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Background characteristic | Professional/ technical/ managerial | Clerical | Sales and services | Skilled manual | Unskilled manual | Agriculture | Don't know/ missing | Total | Number of women |
| Age |  |  |  |  |  |  |  |  |  |
| 15-19 | (38.3) | (3.8) | (34.1) | (0.4) | (7.1) | (16.3) | (0.0) | (100.0) | 40 |
| 20-24 | 53.1 | 8.8 | 23.7 | 2.8 | 0.2 | 9.7 | 1.8 | 100.0 | 228 |
| 25-29 | 53.2 | 9.3 | 17.4 | 2.1 | 0.8 | 16.2 | 0.9 | 100.0 | 267 |
| 30-34 | 48.5 | 2.8 | 20.4 | 4.6 | 2.8 | 20.9 | 0.0 | 100.0 | 261 |
| 35-39 | 47.3 | 3.1 | 16.8 | 3.3 | 3.0 | 25.8 | 0.6 | 100.0 | 290 |
| 40-44 | 38.9 | 3.8 | 18.9 | 7.1 | 8.3 | 22.8 | 0.1 | 100.0 | 400 |
| 45-49 | 39.5 | 3.5 | 22.0 | 5.2 | 7.6 | 21.8 | 0.4 | 100.0 | 434 |
| Marital status |  |  |  |  |  |  |  |  |  |
| Never married | 51.4 | 14.5 | 22.4 | 3.7 | 1.2 | 6.3 | 0.5 | 100.0 | 425 |
| M arried or living together | 46.1 | 2.0 | 15.6 | 4.6 | 4.3 | 27.0 | 0.4 | 100.0 | 1,229 |
| Divorced/separated/widowed | d 31.8 | 2.8 | 37.3 | 4.9 | 11.1 | 10.9 | 1.1 | 100.0 | 268 |
| Number of living children |  |  |  |  |  |  |  |  |  |
| 0 | 52.6 | 13.2 | 21.4 | 3.5 | 1.7 | 7.0 | 0.5 | 100.0 | 518 |
| 1-2 | 48.5 | 2.3 | 21.2 | 4.8 | 5.5 | 16.8 | 0.9 | 100.0 | 892 |
| $3+$ | 32.2 | 0.8 | 17.1 | 4.6 | 5.8 | 39.4 | 0.0 | 100.0 | 511 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 54.1 | 6.5 | 26.0 | 5.6 | 4.4 | 2.9 | 0.5 | 100.0 | 1,258 |
| Rural | 28.5 | 1.8 | 9.0 | 2.1 | 5.0 | 52.9 | 0.7 | 100.0 | 663 |
| Region |  |  |  |  |  |  |  |  |  |
| Yerevan | 54.1 | 7.4 | 26.6 | 5.9 | 3.9 | 1.7 | 0.5 | 100.0 | 784 |
| Aragatsotn | 42.8 | 1.1 | 10.2 | 3.1 | 3.0 | 39.8 | 0.0 | 100.0 | 59 |
| Ararat | 21.5 | 0.7 | 5.6 | 1.6 | 4.1 | 66.6 | 0.0 | 100.0 | 175 |
| Armavir | 28.0 | 0.6 | 16.5 | 3.7 | 4.6 | 45.5 | 1.1 | 100.0 | 200 |
| Gegharkunik | 55.6 | 3.2 | 19.0 | 5.9 | 3.0 | 13.3 | 0.0 | 100.0 | 91 |
| Lori | 59.2 | 5.2 | 17.4 | 3.1 | 1.9 | 10.9 | 2.2 | 100.0 | 104 |
| Kotayk | 48.1 | 3.6 | 22.4 | 4.4 | 16.5 | 4.4 | 0.6 | 100.0 | 142 |
| Shirak | 55.0 | 8.4 | 31.4 | 0.0 | 2.3 | 2.9 | 0.0 | 100.0 | 79 |
| Syunik | 44.3 | 5.1 | 13.1 | 3.7 | 2.1 | 31.3 | 0.4 | 100.0 | 139 |
| Vayots Dzor | 39.7 | 6.9 | 19.4 | 13.1 | 14.6 | 4.1 | 2.2 | 100.0 | 22 |
| Tavush | 26.2 | 2.6 | 12.5 | 3.0 | 1.9 | 53.5 | 0.2 | 100.0 | 126 |
| Education |  |  |  |  |  |  |  |  |  |
| Basic general | 3.8 | 0.5 | 29.6 | 2.9 | 16.3 | 47.0 | 0.0 | 100.0 | 97 |
| Secondary general | 8.9 | 1.8 | 29.8 | 11.4 | 7.8 | 39.5 | 0.8 | 100.0 | 514 |
| Specialized secondary | 50.1 | 5.5 | 19.9 | 2.4 | 4.3 | 17.2 | 0.6 | 100.0 | 677 |
| Higher | 76.2 | 7.3 | 11.2 | 1.1 | 0.4 | 3.5 | 0.3 | 100.0 | 633 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |
| Lowest | 16.5 | 1.5 | 11.7 | 2.3 | 6.3 | 61.4 | 0.4 | 100.0 | 308 |
| Second | 32.5 | 2.9 | 18.4 | 2.8 | 7.6 | 34.6 | 1.1 | 100.0 | 324 |
| Middle | 37.7 | 7.7 | 25.0 | 8.2 | 6.2 | 14.4 | 0.9 | 100.0 | 398 |
| Fourth | 56.4 | 4.8 | 25.8 | 5.2 | 3.9 | 3.9 | 0.0 | 100.0 | 411 |
| Highest | 69.3 | 6.0 | 18.0 | 3.1 | 0.6 | 2.6 | 0.4 | 100.0 | 479 |
| Total | 45.3 | 4.9 | 20.2 | 4.4 | 4.6 | 20.2 | 0.5 | 100.0 | 1,921 |

Table 3.5.2 shows that among employed men, 25 percent hold professional, technical, or managerial jobs, 27 percent are in sales and services, 19 percent work as skilled manual laborers, and 18 percent work in agriculture. Men show similar variations across subgroups as women. However, the relationship between the number of children a man has and his occupation is less clear than that for women.

| Table 3.5.2 Occupation: Men |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of men employed in the 12 months preceding the survey by occupation, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |  |
| Background characteristic | Professional/ technical/ managerial | Clerical | Sales and services | Skilled manual | Un- <br> skilled manual | Agriculture | Don't know/ missing | Total | Number of men |
| Age |  |  |  |  |  |  |  |  |  |
| 15-19 | (0.3) | (3.1) | (21.8) | (23.4) | (12.5) | (39.0) | (0.0) | (100.0) | 54 |
| 20-24 | 19.3 | 2.0 | 22.8 | 24.7 | 8.0 | 22.3 | 0.9 | 100.0 | 124 |
| 25-29 | 27.0 | 2.3 | 31.4 | 17.7 | 11.9 | 9.8 | 0.0 | 100.0 | 164 |
| 30-34 | 31.6 | 0.0 | 27.0 | 18.2 | 10.5 | 12.6 | 0.0 | 100.0 | 140 |
| 35-39 | 23.1 | 1.0 | 25.4 | 22.7 | 7.5 | 20.2 | 0.0 | 100.0 | 131 |
| 40-44 | 20.6 | 1.1 | 35.3 | 15.0 | 7.1 | 21.0 | 0.0 | 100.0 | 171 |
| 45-49 | 35.3 | 1.1 | 23.0 | 18.5 | 7.9 | 14.3 | 0.0 | 100.0 | 175 |
| Marital status |  |  |  |  |  |  |  |  |  |
| Never married | 19.5 | 1.6 | 23.9 | 23.5 | 10.8 | 20.3 | 0.4 | 100.0 | 251 |
| M arried or living together | 27.2 | 1.3 | 28.4 | 18.0 | 8.2 | 17.0 | 0.0 | 100.0 | 693 |
| Divorced/separated/widowed | d * | , | * | * | * | * | * | * | 15 |
| Number of living children |  |  |  |  |  |  |  |  |  |
| 0 | 21.2 | 1.9 | 23.3 | 23.2 | 10.1 | 19.9 | 0.3 | 100.0 | 308 |
| 1-2 | 28.7 | 1.1 | 34.1 | 15.4 | 9.1 | 11.6 | 0.0 | 100.0 | 457 |
| $3+$ | 22.4 | 1.1 | 18.2 | 22.5 | 6.9 | 28.8 | 0.0 | 100.0 | 192 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 32.2 | 1.7 | 34.5 | 20.2 | 9.4 | 1.9 | 0.2 | 100.0 | 600 |
| Rural | 13.1 | 0.8 | 15.6 | 18.0 | 8.4 | 44.1 | 0.0 | 100.0 | 358 |
| Region |  |  |  |  |  |  |  |  |  |
| Yerevan | 37.0 | 1.2 | 34.6 | 17.0 | 9.0 | 1.2 | 0.0 | 100.0 | 366 |
| Aragatsotn | 8.7 | 2.8 | 15.3 | 23.0 | 7.3 | 42.9 | 0.0 | 100.0 | 45 |
| Ararat | 14.3 | 0.0 | 23.3 | 30.3 | 6.6 | 25.5 | 0.0 | 100.0 | 57 |
| Armavir | 13.2 | 2.5 | 14.1 | 12.1 | 10.9 | 47.1 | 0.0 | 100.0 | 103 |
| Gegharkunik | 15.9 | 1.8 | 20.5 | 20.6 | 1.4 | 39.7 | 0.0 | 100.0 | 61 |
| Lori | (15.4) | (0.0) | (33.8) | (20.6) | (8.4) | (21.9) | (0.0) | (100.0) | 72 |
| Kotayk | 24.6 | 2.8 | 13.1 | 35.9 | 11.5 | 11.1 | 1.0 | 100.0 | 110 |
| Shirak | 17.1 | 1.3 | 50.3 | 8.1 | 18.7 | 4.4 | 0.0 | 100.0 | 44 |
| Syunik | 27.0 | 0.0 | 19.8 | 12.4 | 2.7 | 38.1 | 0.0 | 100.0 | 50 |
| Vayots Dzor | (24.2) | (0.0) | (48.9) | (3.0) | (18.7) | (5.2) | (0.0) | (100.0) | 9 |
| Tavush | 18.4 | 0.0 | 33.3 | 15.1 | 10.2 | 23.0 | 0.0 | 100.0 | 41 |
| Education |  |  |  |  |  |  |  |  |  |
| Basic general | 3.8 | 2.0 | 23.7 | 24.9 | 17.4 | 28.2 | 0.0 | 100.0 | 120 |
| Secondary general | 13.2 | 0.3 | 29.2 | 25.4 | 11.0 | 20.5 | 0.3 | 100.0 | 343 |
| Specialized secondary | 15.8 | 1.1 | 32.7 | 23.5 | 8.2 | 18.6 | 0.0 | 100.0 | 254 |
| Higher | 62.1 | 2.7 | 21.2 | 3.7 | 2.8 | 7.5 | 0.0 | 100.0 | 241 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |
| Lowest | 7.6 | 0.0 | 15.4 | 18.2 | 11.7 | 47.1 | 0.0 | 100.0 | 174 |
| Second | 9.7 | 2.0 | 25.3 | 23.9 | 9.1 | 29.8 | 0.0 | 100.0 | 165 |
| Middle | 19.5 | 0.0 | 31.0 | 25.3 | 10.4 | 13.4 | 0.5 | 100.0 | 213 |
| Fourth | 35.2 | 2.2 | 29.3 | 16.1 | 12.6 | 4.5 | 0.0 | 100.0 | 193 |
| Highest | 47.3 | 2.5 | 33.7 | 13.8 | 2.1 | 0.7 | 0.0 | 100.0 | 213 |
| Total | 25.0 | 1.4 | 27.4 | 19.3 | 9.0 | 17.7 | 0.1 | 100.0 | 958 |

### 3.6 EMPLOYMENT CHRACTERISTICS

Table 3.6 shows the percent distribution of women who were employed in the 12 months preceding the survey by type of earnings, type of employer, and continuity of employment. Type of earnings refers to whether they were paid in cash, in kind, or not at all. Women who reported being currently employed were asked about their employer-whether they were employed by a relative, a nonrelative, or were self-employed. Additionally, women were also asked whether they worked continuously throughout the year or seasonally.

Overall, 80 percent of employed women earn cash only, 4 percent were paid in cash and in kind, and 15 percent received no payment. Men are more likely to receive compensation than women- 84 percent receive cash and only 6 percent work for no payment (not shown in table). Seven in ten women who work in agriculture did not receive payment, while 96 percent who work in nonagricultural jobs were paid in cash.

Table 3.6 shows that 71 percent of women who work are employed by a nonrelative, 21 percent are employed by a family member, and 8 percent are self-employed. As expected, most women who work in agriculture are employed by a family member ( 69 percent), while most of those who hold a position in nonagricultural jobs were employed by nonfamily members ( 86 percent).

With regard to continuity of employment, the data show that three-fourths of employed women work all year. Most women who work in agriculture work seasonally ( 80 percent), while most of those who work in nonagricultural jobs work all year ( 90 percent).

| Table 3.6 Employment characteristics |  |  |  |
| :---: | :---: | :---: | :---: |
| Percent distribution of women employed in the 12 months preceding the survey by type of earnings, type of employer, and continuity of employment, according to type of employment (agricultural or nonagricultural), Armenia 2005 |  |  |  |
| Employment characteristics | Agricultural work | Nonagricultural work | Total |
| Type of earnings |  |  |  |
| Cash only | 19.7 | 95.6 | 80.2 |
| Cash and in-kind | 10.4 | 2.3 | 3.9 |
| In-kind only | 1.4 | 0.3 | 0.5 |
| Not paid | 68.5 | 1.7 | 15.2 |
| M issing | 0.0 | 0.1 | 0.2 |
| Total | 100.0 | 100.0 | 100.0 |
| Type of employer |  |  |  |
| Employed by family member | 69.3 | 8.3 | 20.6 |
| Employed by nonfamily member | 12.1 | 86.2 | 71.0 |
| Self-employed | 18.5 | 5.5 | 8.2 |
| M issing | 0.0 | 0.0 | 0.2 |
| Total | 100.0 | 100.0 | 100.0 |
| Continuity of employment |  |  |  |
| All year | 19.9 | 90.0 | 75.7 |
| Seasonal | 80.0 | 7.7 | 22.2 |
| Occasional | 0.1 | 2.1 | 1.7 |
| M issing | 0.0 | 0.2 | 0.3 |
| Total | 100.0 | 100.0 | 100.0 |
| Number | 387 | 1,523 | 1,921 |
| Note: Total includes 10 women with missing information on type of employment who are not shown separately. |  |  |  |

All women who were interviewed in the 2005 ADHS were asked to give a complete reproductive history. In collecting these histories, each woman was first asked about the total numbers of pregnancies that had ended in live births, induced abortions, miscarriages, and stillbirths. After obtaining these aggregate data, an event-by-event pregnancy history was collected. For each pregnancy, the duration, the month and year of termination, and the result of the pregnancy were recorded. Information was collected about the most recent completed pregnancy, then the next-to-last, etc. For each live birth, information was collected on the sex of the child, survival status, and age (for surviving children) or age at death (for deceased children).

### 4.1 Current Fertility

The data collected in the reproductive history were used to calculate two of the most widely used measures of current fertility: the total fertility rate (TFR) and its component age-specific fertility rates. The TFR is interpreted as the average number of children a woman would bear in her lifetime if she experienced the currently observed age-specific rates throughout her reproductive years. The fertility rates refer to the three-year period before the survey (i.e., approximately from October 2002 to October 2005).

According to the results of the 2005 ADHS, the TFR is 1.7 children per woman (Table 4.1). This is below replacement level fertility (which is slightly more than 2.0). The 2005 ADHS rate of 1.7 is the same as the rate estimated by the 2000 ADHS. Thus, there is no evidence of change in overall levels of fertility in Armenia over the last five years.

The data suggest, however, some change in urban-rural differentials. While urban fertility is statistically the same ( 1.5 in 2000 versus 1.6 in 2005) there is some evidence of decline in rural areas (from 2.1 in 2000 to 1.8 in 2005). Overall, the pattern of age-specific fertility rates is the same, although there has been a shift away from childbearing at the youngest ages (15-19) to higher levels of fertility among women in their late 20s.

Most childbearing takes place when women are in their 20s. The age-specific fertility rates peak at age 20-24 regardless of residence (Figure 4.1). In fact, in both urban and rural areas, fertility rates in these age groups (20-24 and 25-29) account for three-fourths of the total fertility rate.

| Table 4.1 Current fertility |  |  |  |
| :---: | :---: | :---: | :---: |
| Age-specific and cumulative fertility rates, the general fertility rate, and the crude birth rate for the three years preceding the survey, by residence, Armenia 2005 |  |  |  |
|  |  |  |  |
| Age | Urban | Rural | Total |
| 15-19 | 22 | 43 | 30 |
| 20-24 | 140 | 165 | 148 |
| 25-29 | 104 | 115 | 107 |
| 30-34 | 43 | 26 | 37 |
| 35-39 | 15 | 16 | 16 |
| 40-44 | 6 | 1 | 4 |
| 45-49 | 0 | 0 | 0 |
| TFR | 1.6 | 1.8 | 1.7 |
| GFR | 57 | 60 | 58 |
| CBR | 14.5 | 14.9 | 14.6 |
| Note: Rates are for the period 1-36 months preceding the survey. Rates for age group 45-49 may be slightly biased due to truncation. <br> TFR: Total fertility rate for ages 15-49, expressed per woman. GFR: General fertility rate expressed per 1,000 women CBR: Crude birth rate expressed per 1,000 population |  |  |  |

Figure 4.1 Age-specific Fertility Rates for the Threeyear Period Preceding the Survey, by Residence


### 4.2 FERTILITY DIFFERENTIALS BY BACKGROUND ChARACTERISTICS

Table 4.2 shows the total fertility rate by background characteristics. Albeit not strong, there is a negative association between education and fertility (Figure 4.2). Women who have higher education have fewer children than women with less education (1.5 versus 1.8 or 1.9).

The TFR in Yerevan is 1.7 births per woman. There appears to be marked variation between regions, ranging from approximately one birth per woman in Vayots Dzor to 2.5 in Aragatsotn. Undoubtedly, some of these differences are due to sampling variability, which is quite large due to the small number of respondents in each region (see Appendix B).

Three percent of women reported being pregnant at the time of the survey. Small differences are found in this percentage across subgroups of women.

The last column in Table 4.2 shows the mean number of children ever born to women age 40-49. This is an indicator of cumulative fertility; it reflects the fertility performance of older women who are nearing the end of their reproductive period and thus represents completed fertility. If fertility had remained stable over time, the two fertility measures, TFR and children ever born, would be equal or similar. The findings show that the mean number of children ever born to women age 40-49 ( 2.5 children per woman) is higher than the TFR for the three years preceding the survey ( 1.7 children per woman), indicating a decline in fertility over the past 30 years.

| Table 4.2 Fertility by background characteristics |  |  |  |
| :---: | :---: | :---: | :---: |
| Total fertility rate for the three years preceding the survey, percentage currently pregnant, and mean number of children ever born to women age 40-49, by background characteristics, Armenia 2005 |  |  |  |
| Background characteristic | Total fertility rate ${ }^{1}$ | Percentage currently pregnant ${ }^{1}$ | M ean number of children ever born to women age 40-49 |
| Residence |  |  |  |
| Urban | 1.6 | 3.1 | 2.3 |
| Rural | 1.8 | 2.8 | 2.8 |
| Region |  |  |  |
| Yerevan | 1.7 | 2.9 | 2.2 |
| Aragatsotn | 2.5 | 2.6 | 3.0 |
| Ararat | 2.0 | 2.5 | 2.8 |
| Armavir | 1.7 | 2.9 | 2.7 |
| Gegharkunik | 2.1 | 2.1 | 2.8 |
| Lori | (1.4) | 4.2 | 2.6 |
| Kotayk | 1.8 | 3.6 | 2.8 |
| Shirak | 1.2 | 3.9 | 2.7 |
| Syunik | 1.8 | 2.7 | 2.7 |
| Vayots Dzor Tavush | (0.9) 1.6 | 2.9 1.6 | 2.8 |
| Education |  |  |  |
| Basic general | 1.9 | 2.7 | 2.6 |
| Secondary general | 1.8 | 3.3 | 2.7 |
| Specialized secondary | 1.9 | 2.7 | 2.5 |
| Higher | 1.5 | 2.8 | 2.1 |
| Wealth quintile |  |  |  |
| Lowest | 1.8 | 3.2 | 2.9 |
| Second Middle | 2.0 1.9 | 3.0 2.7 | 2.7 2.4 |
| Fourth | 1.6 | 3.4 | 2.4 |
| Highest | 1.5 | 2.6 | 2.3 |
| Total | 1.7 | 3.0 | 2.5 |
| Note: Figures in parentheses are based on 250-499 unweighted women. <br> ${ }^{1}$ Women age 15-49 |  |  |  |

Figure 4.2 Total Fertility Rates for the Three Years Preceding the Survey, by Residence and Education


### 4.3 Fertility Trends

One of the most important and complex issues for Armenia is the decline in fertility. One method of understanding fertility trends is to examine the agespecific fertility rates over time. Because women age 50 and older were not interviewed in the survey, the rates are successively truncated as the number of years before the survey increases (see Table 4.3). Data in this table indicate that fertility has declined in the past 20 years. This decline is particularly evident among women in the youngest age groups (15-19 and 20-24) in the 10 years preceding the survey. For example, agespecific fertility among women age 20-24 declined from 178 births per 1,000 women in the period five to nine years before the survey to 146 births per 1,000 women in the period zero to four years before the survey, a decrease of 18 percent.

| Table 4.3 Trends in age-specific fertility rates |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Age-specific fertility rates for five-year periods preceding the survey, by mother's age at the time of the birth, Armenia 2005 |  |  |  |  |
| M other's age | Number of years preceding the survey |  |  |  |
| of the birth | 0-4 | 5-9 | 10-14 | 15-19 |
| 15-19 | 33 | 56 | 101 | 71 |
| 20-24 | 146 | 178 | 215 | 255 |
| 25-29 | 95 | 93 | 120 | 142 |
| 30-34 | 36 | 42 | 57 | [77] |
| 35-39 | 15 | 18 | [32] |  |
| 40-44 | 4 | [7] |  |  |
| 45-49 | [0] |  |  |  |

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

### 4.4 Fertility Rates From NSS and the Adhs

At the national level, the 2005 ADHS TFR of 1.7 is higher than the official government rates published for the same period. For example, 1.4 was the official TFR for both 2003 and 2004 based on administrative records (National Statistical Service, 2006). An important difference in the computing of these rates should be noted: whereas the ADHS rate is based on the de facto population, the official government rates are based on the de jure population.

Other factors that could contribute to the difference between fertility rates include sampling variability of the ADHS estimates and underreporting of births to the government registration system.

### 4.5 Children Ever Born and Living

Table 4.4 shows the distribution of all women and currently married women by number of children ever born. Data on the number of children ever born reflect the accumulation of births to women over their entire reproductive years and therefore have limited reference to current fertility levels, particularly when the country has experienced a decline in fertility.

On average, women in Armenia have given birth to 1.5 children by their late twenties. Even in the oldest age groups, the mean number of children ever born is only 2.5 . As expected, currently married women have had more births than all women in all age groups. Nevertheless, the mean number of children ever born does not exceed 3.0. The largest difference between the data on children ever born for currently married women and all women is in the young age groups, because a large number of unmarried young women are not exposed to the risk of pregnancy. Differences at older ages reflect the impact of marital dissolution (divorce or widowhood).

Among currently married women, 14 percent have had only one live-born child, 42 percent have had two children, and 27 percent have three children. Ten percent of women have had four or more children. In total, only 1 percent of currently married women age 45-49 have never had a live birth. This is an indirect indicator of primary infertility. Voluntary childlessness is rare in Armenia, and most women desire to have at least one child, preferably soon after marriage.

| Percent distribution of all women and currently married women by number of children ever born, and mean number of children ever born and mean number of living children, according to age group, Armenia 2005 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number of children ever born |  |  |  |  |  |  |  | Number of women | M ean number of children ever born | Mean number of living children |
| Age | 0 | 1 | 2 | 3 | 4 | 5 | $6+$ | Total |  |  |  |
| ALL WOMEN |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 97.6 | 2.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 1,123 | 0.03 | 0.03 |
| 20-24 | 64.4 | 20.1 | 14.1 | 1.3 | 0.1 | 0.0 | 0.0 | 100.0 | 1,131 | 0.53 | 0.52 |
| 25-29 | 27.2 | 17.6 | 41.6 | 10.8 | 2.0 | 0.4 | 0.2 | 100.0 | 929 | 1.45 | 1.41 |
| 30-34 | 11.4 | 10.5 | 49.7 | 22.4 | 5.1 | 0.5 | 0.3 | 100.0 | 749 | 2.03 | 1.93 |
| 35-39 | 6.9 | 10.8 | 42.9 | 29.6 | 8.0 | 0.8 | 1.0 | 100.0 | 711 | 2.28 | 2.19 |
| 40-44 | 6.7 | 6.1 | 37.9 | 33.4 | 11.3 | 3.4 | 1.2 | 100.0 | 965 | 2.52 | 2.36 |
| 45-49 | 6.3 | 9.7 | 32.2 | 35.6 | 11.0 | 3.4 | 1.8 | 100.0 | 958 | 2.53 | 2.35 |
| Total | 35.6 | 11.0 | 28.9 | 17.6 | 5.0 | 1.2 | 0.6 | 100.0 | 6,566 | 1.52 | 1.44 |
| CURRENTLY MARRIED WOMEN |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 65.6 | 32.5 | 1.9 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 78 | 0.36 | 0.36 |
| 20-24 | 21.6 | 43.6 | 31.6 | 3.0 | 0.3 | 0.0 | 0.0 | 100.0 | 504 | 1.17 | 1.14 |
| 25-29 | 7.2 | 21.0 | 53.7 | 14.5 | 2.7 | 0.6 | 0.3 | 100.0 | 695 | 1.88 | 1.82 |
| 30-34 | 2.3 | 7.9 | 56.9 | 25.9 | 6.2 | 0.4 | 0.4 | 100.0 | 601 | 2.29 | 2.18 |
| 35-39 | 1.6 | 8.5 | 45.4 | 33.0 | 9.4 | 0.9 | 1.2 | 100.0 | 602 | 2.48 | 2.39 |
| 40-44 | 1.5 | 4.5 | 38.6 | 37.2 | 12.8 | 3.8 | 1.4 | 100.0 | 824 | 2.74 | 2.56 |
| 45-49 | 1.4 | 5.1 | 33.1 | 42.6 | 12.0 | 3.9 | 1.9 | 100.0 | 741 | 2.79 | 2.59 |
| Total | 6.3 | 14.0 | 42.3 | 27.0 | 7.6 | 1.8 | 0.9 | 100.0 | 4,044 | 2.25 | 2.14 |

Note: Currently married includes respondents in consensual union (living together).

### 4.6 BIRTH INTERVALS

A birth interval is defined as the length of time between two live births. Research has shown that short birth intervals may adversely affect maternal health and children's chances of survival. Children born too close to a previous birth, especially if the interval between the births is less than two years, are at increased risk of health problems and dying at an early age. Longer birth intervals, on the other hand, contribute to the improved health status of both mother and child.

Table 4.5 shows the percent distribution of second and higher-order births in the five years prior to the survey by the number of months since the previous birth. The overall median birth interval is 37 months. Nonetheless, approximately one-third of births ( 32 percent) occur within 24 months of the previous birth. Indeed, 17 percent of births occur within 18 months of a previous birth. This finding has not changed since 2000.

In general younger women have shorter birth intervals than older women. While 41 percent of women age 20-29 space their births less than 24 months apart, the corresponding statistic for women 3039 is 16 percent. There is a strong relationship between birth interval and education. Births to mothers with basic general education have shorter intervals than births to mothers who have attended secondary education. For example, whereas 42 percent of births to mothers with basic general education are born less than 24 months after their older sibling, the corresponding statistic for women in each of the three more highly educated categories is approximately 30 percent (Figure 4.3).

Measured in terms of the median number of months between births, birth intervals also vary by the selected background characteristics. Births to young mothers in their 20s and to mothers with basic education have the shortest median birth interval ( 28 months each). While there is no clear relationship between birth interval and wealth status, births to mothers in the lowest wealth quintile have the shortest
interval compared with births to mothers in the higher wealth quintiles. Birth interval is also related to birth order and residence. For example, the median birth interval for fourth to sixth order births is 64 months compared with 34 months for second and third order births. Birth interval varies widely across regions, with the longest in Ararat (43 months) and the shortest in Gegharkunik and Tavush (less than 30 months).

| Table 4.5 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, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |
| Background characteristic | Number of months since preceding birth |  |  |  |  | Total |  | Median number of months since preceding birth ${ }^{1}$ |
|  | 7-17 | 18-23 | 24-35 | 36-47 | 48+ |  |  |  |
| Age |  |  |  |  |  |  |  |  |
| 15-19 | * | * | * | * | * | * | 2 | * |
| 20-29 | 20.3 | 20.7 | 20.0 | 18.6 | 20.5 | 100.0 | 528 | 28.1 |
| 30-39 | 9.9 | 6.3 | 10.4 | 11.4 | 62.0 | 100.0 | 214 | 64.9 |
| 40-49 | (3.0) | (0.0) | (8.5) | (9.8) | (78.7) | (100.0) | 41 | ( $>70$ ) |
| Sex of preceding birth |  |  |  |  |  |  |  |  |
| Male | 16.0 | 18.3 | 17.8 | 16.9 | 31.0 | 100.0 | 386 | 34.3 |
| Female | 16.9 | 13.3 | 16.0 | 15.4 | 38.4 | 100.0 | 399 | 38.5 |
| Survival of preceding birth |  |  |  |  |  |  |  |  |
| Living Dead | $\begin{aligned} & 16.3 \\ & (21.1) \end{aligned}$ | $\begin{aligned} & 15.6 \\ & (18.6) \end{aligned}$ | $\begin{aligned} & 17.1 \\ & (11.3) \end{aligned}$ | $\begin{gathered} 16.4 \\ (9.5) \end{gathered}$ | $\begin{gathered} 34.6 \\ (39.6) \end{gathered}$ | $\begin{gathered} 100.0 \\ (100.0) \end{gathered}$ | $\begin{array}{r} 751 \\ 34 \end{array}$ | $\begin{gathered} 37.0 \\ (34.9) \end{gathered}$ |
| Birth order |  |  |  |  |  |  |  |  |
| 2-3 | 17.8 | 16.6 | 17.8 | 17.1 | 30.8 | 100.0 | 691 | 34.2 |
| 4-6 | 6.1 | 10.1 | 7.1 | 7.0 | 69.7 | 100.0 | 87 | 63.9 |
| 7+ | * | * | * | * | * | * | 7 | * |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 20.1 | 12.4 | 15.3 | 16.9 | 35.4 | 100.0 | 437 | 37.6 |
| Rural | 12.0 | 20.0 | 18.9 | 15.1 | 34.0 | 100.0 | 348 | 35.3 |
| Region |  |  |  |  |  |  |  |  |
| Yerevan | 22.7 | 11.5 | 12.3 | 17.6 | 35.9 | 100.0 | 266 | 38.0 |
| Aragatsotn | 11.4 | 16.6 | 19.1 | 16.3 | 36.6 | 100.0 | 51 | 37.5 |
| Ararat | 11.0 | 11.3 | 15.9 | 16.4 | 45.4 | 100.0 | 72 | 42.8 |
| Armavir | 11.1 | 22.2 | 12.8 | 14.1 | 39.7 | 100.0 | 74 | 37.9 |
| Gegharkunik | 15.2 | 25.7 | 17.9 | 9.1 | 32.1 | 100.0 | 73 | 27.7 |
| Lori | (16.1) | (22.3) | (12.4) | (17.2) | (32.0) | (100.0) | 50 | (33.7) |
| Kotayk | 11.0 | 4.4 | 28.8 | 20.8 | 35.0 | 100.0 | 65 | 41.5 |
| Shirak | (19.3) | (13.9) | (30.9) | (13.7) | (22.2) | (100.0) | 45 | (30.4) |
| Syunik | 16.2 | 22.7 | 14.8 | 13.2 | 33.2 | 100.0 | 33 | 32.0 |
| Vayots Dzor | (8.1) | (22.9) | (33.7) | (18.2) | (17.0) | (100.0) | 9 | (30.3) |
| Tavush | 13.1 | 23.6 | 19.9 | 17.1 | 26.3 | 100.0 | 47 | 28.5 |
| Education |  |  |  |  |  |  |  |  |
| Basic general | 24.7 | 17.2 | 13.2 | 21.4 | 23.4 | 100.0 | 83 | 28.3 |
| Secondary general | 13.7 | 17.6 | 20.2 | 16.9 | 31.6 | 100.0 | 320 | 34.5 |
| Specialized secondary | 16.2 | 14.2 | 14.0 | 15.2 | 40.4 | 100.0 | 220 | 40.4 |
| Higher | 18.2 | 13.3 | 16.0 | 13.2 | 39.3 | 100.0 | 163 | 37.3 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 13.5 | 20.2 | 19.1 | 17.1 | 30.0 | 100.0 | 183 | 32.7 |
| Second | 12.6 | 17.4 | 16.8 | 14.3 | 39.0 | 100.0 | 163 | 40.2 |
| Middle | 17.2 | 13.4 | 18.5 | 13.4 | 37.5 | 100.0 | 151 | 36.5 |
| Fourth | 21.1 | 16.6 | 13.7 | 17.3 | 31.4 | 100.0 | 135 | 34.7 |
| Highest | 19.5 | 10.3 | 15.5 | 18.4 | 36.3 | 100.0 | 154 | 37.9 |
| Total | 16.5 | 15.7 | 16.9 | 16.1 | 34.8 | 100.0 | 785 | 36.9 |
| 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. 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. <br> ${ }^{1}$ The median is the midpoint of the distribution of births by number of months since preceding birth. |  |  |  |  |  |  |  |  |

Figure 4.3 Percentage of Births Occurring Less than 24 Months after a Prior Birth, by Residence and Education


ADHS 2005

### 4.7 Age at First Birth

Age at first birth is an important determinant of fertility. It has significant demographic consequences for society as a whole, as well as for the health and welfare of mothers and children. Table 4.6 shows the percentage of women age 15-49 who have given birth by specific exact ages, according to current age. For women age 25 and older, the median age at first birth is presented in the last column of the table.

| Table 4.6 Age at first birth |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of women age 15-49 who have given birth by specific exact ages, percentage who have never given birth, and median age at first birth, according to current age, Armenia 2005 |  |  |  |  |  |  |  |  |
|  |  |  | $\begin{aligned} & \text { of won } \\ & \text { th by } \end{aligned}$ | ho ha age: |  | Percentage who have | Number | Median age at |
| Current age | 15 | 18 | 20 | 22 | 25 | given birth | women | birth ${ }^{1}$ |
| 15-19 | 0.0 | na | na | na | na | 97.6 | 1,123 | a |
| 20-24 | 0.0 | 3.4 | 15.4 | na | na | 64.4 | 1,131 | a |
| 25-29 | 0.2 | 9.0 | 27.7 | 46.5 | 64.2 | 27.2 | 929 | 22.5 |
| 30-34 | 0.0 | 6.2 | 36.0 | 56.4 | 74.4 | 11.4 | 749 | 21.3 |
| 35-39 | 0.0 | 5.7 | 28.9 | 58.8 | 78.3 | 6.9 | 711 | 21.3 |
| 40-44 | 0.0 | 1.1 | 19.7 | 47.8 | 73.8 | 6.7 | 965 | 22.2 |
| 45-49 | 0.1 | 2.8 | 17.3 | 40.9 | 68.7 | 6.3 | 958 | 22.8 |
| 25-49 | 0.1 | 4.8 | 25.2 | 49.3 | 71.4 | 11.9 | 4,312 | 22.1 |
| na $=$ Not applicable due to censoring <br> $a=0$ mitted because less than 50 percent of women had a birth before reaching the beginning of the age group ${ }^{1}$ The median is the midpoint of the distribution of women by exact age at first birth. |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

The 2005 ADHS findings indicate that childbearing among Armenian women begins relatively late. The majority of women age 20-24 (64 percent) have never given birth. The median age at first birth among women age 25 and older is between 21 and 23 years. The median age at first birth has decreased by more than one year from 22.8 years among women age 45-49 to 21.3 years among women age 30-39. However, median age at first birth seems to be increasing among younger women; the median age for women age $25-29$ is 22.5 years.

Changes in the median age at first birth are associated with changes in age at first marriage (see Table 7.2). Other researchers have noted that among Armenians, there is an expectation that a child will be born within the first two years of marriage (National Program on Reproductive Health, 1998). The 2005 ADHS data indicate that Armenian women of all cohorts have adhered to the practice of giving birth to a first child within two years of getting married. Among women age 25-29, for example, the median age at first marriage is almost one and a half years less than the median age at first birth ( 21.2 and 22.5 years, respectively). The same interval between age at first marriage and age at first birth is observed for women age 45-49 (21.5 and 22.8 years, respectively).

Table 4.7 shows that, overall, there is little significant difference in the median age at first birth by background characteristics. The median age at first birth shows a positive relationship with wealth status. The median age at first birth varies only slightly by region, ranging from 21 years in Gegharkunik to 23 years in Yerevan.

| Table 4.7 Median age at first birth by background characteristics |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Median age at first birth among women 25-49, by current age, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |
|  | Current age |  |  |  |  | Women |
| characteristic | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 25-49 |
| Residence |  |  |  |  |  |  |
| Urban | 23.6 | 22.4 | 21.6 | 22.7 | 23.1 | 22.7 |
| Rural | 20.7 | 20.0 | 20.8 | 21.4 | 22.5 | 21.1 |
| Region |  |  |  |  |  |  |
| Yerevan | 23.9 | 23.0 | 21.8 | 23.5 | 23.3 | 23.2 |
| Aragatsotn | 20.9 | 20.1 | 20.8 | 21.6 | 22.2 | 21.3 |
| Ararat | 21.4 | 20.8 | 21.2 | 22.0 | 22.5 | 21.7 |
| Armavir | 21.1 | 20.0 | 21.0 | 21.5 | 23.1 | 21.4 |
| Gegharkunik | 19.8 | 20.4 | 20.5 | 21.0 | 22.7 | 20.9 |
| Lori | 21.3 | 20.2 | (20.9) | 21.1 | 22.9 | 21.3 |
| Kotayk | 21.7 | 21.4 | 20.6 | 21.4 | 21.3 | 21.3 |
| Shirak | 24.4 | 20.1 | 21.9 | 22.7 | 22.9 | 22.3 |
| Syunik | 23.3 | 21.6 | 21.1 | 22.2 | 22.5 | 22.2 |
| Vayots Dzor | (22.8) | (20.2) | (20.5) | 21.9 | 22.8 | 21.5 |
| Tavush | 21.2 | 21.0 | 21.2 | 21.4 | 22.6 | 21.6 |
| Education |  |  |  |  |  |  |
| Basic general | 18.9 | (19.5) | (19.7) | (20.6) | (21.4) | 20.4 |
| Secondary general | 20.1 | 19.7 | 20.0 | 21.1 | 21.7 | 20.6 |
| Specialized secondary | 24.3 | 20.9 | 21.4 | 22.2 | 22.7 | 22.2 |
| Higher | a | 24.5 | 24.3 | 24.9 | 25.4 | a |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 20.0 | 19.9 | 20.9 | 21.7 | 23.0 | 21.2 |
| Second | 21.6 | 20.5 | 20.9 | 21.6 | 22.8 | 21.5 |
| Middle | 22.0 | 21.8 | 21.1 | 22.2 | 22.5 | 22.1 |
| Fourth | 23.5 | 21.3 | 21.4 | 22.5 | 22.5 | 22.4 |
| Highest | 24.6 | 23.2 | 21.9 | 22.8 | 23.5 | 23.2 |
| Total | 22.5 | 21.3 | 21.3 | 22.2 | 22.8 | 22.1 |
| Note: The median is the midpoint of the distribution of women by exact age at first birth. Figures in paren theses are based on 25-49 unweighted cases. <br> $\mathrm{a}=0$ mitted because less than 50 percent of the women had a birth before the beginning of the age group |  |  |  |  |  |  |

### 4.8 Teenage Pregnancy and Motherhood

It is well known that adolescent pregnancy, early childbearing, and motherhood have negative socioeconomic and health consequences. Adolescent mothers are more likely to have complications during labor, which result in higher morbidity and mortality for themselves and their children. Moreover, childbearing during the teenage years frequently has adverse social consequences, particularly on female educational attainment, because women who become mothers in their teens are more likely to curtail education. ${ }^{1}$

Table 4.8 shows the percentage of women age 15-19 (teenagers) who are mothers or pregnant with their first child, by background characteristics. Overall, 5 percent of teenagers in Armenia have begun childbearing, 2 percent are already mothers, and 2 percent are pregnant with their first child. As expected, the proportion of young women who have begun childbearing increases rapidly with age, from less than 1 percent among women age 15 and 16 to 12 percent of women age 19.

The variation in early childbearing by educational attainment and wealth quintile is unclear. The proportion of teenagers who have begun childbearing is highest among women with secondary general education and among women in the middle wealth quintile.

Teenage fertility varies slightly by urban-rural residence. The proportion of

| Table 4.8 Teenage pregnancy and motherhood |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Percentage of women age 15-19 who are mothers or pregnant with their first child and percentage who have begun childbearing, by background characteristics, Armenia 2005 |  |  |  |  |
| Percentage who are |  |  | Percentage who have begun childbearing | Number of women |
| Background characteristic | M others | Pregnant with first child |  |  |
| Age |  |  |  |  |
| 15 | 0.0 | 0.0 | 0.0 | 234 |
| 16 | 0.0 | 0.8 | 0.8 | 242 |
| 17 | 1.3 | 2.6 | 3.9 | 207 |
| 18 | 3.5 | 3.0 | 6.5 | 192 |
| 19 | 7.3 | 5.1 | 12.4 | 248 |
| Residence |  |  |  |  |
| Urban | 2.3 | 1.7 | 4.0 | 684 |
| Rural | 2.6 | 3.2 | 5.9 | 439 |
| Region |  |  |  |  |
| Yerevan | 3.1 | 1.2 | 4.3 | 386 |
| Aragatsotn | 0.4 | 0.6 | 1.0 | 56 |
| Ararat | 6.7 | 0.8 | 7.5 | 66 |
| Armavir | 0.0 | 3.1 | 3.1 | 113 |
| Gegharkunik | 2.0 | 3.5 | 5.5 | 84 |
| Lori | 0.0 | 4.7 | 4.7 | 95 |
| Kotayk | 5.9 | 3.5 | 9.4 | 105 |
| Shirak | 1.3 | 3.8 | 5.1 | 117 |
| Syunik | 1.2 | 0.0 | 1.2 | 46 |
| Vayots Dzor | 0.0 | 0.6 | 0.6 | 18 |
| Tavush | 2.6 | 2.7 | 5.3 | 36 |
| Education |  |  |  |  |
| Basic general | 2.7 | 1.6 | 4.3 | 212 |
| Secondary general | 3.2 | 3.4 | 6.7 | 491 |
| Specialized secondary | y 2.2 | 2.8 | 5.0 | 183 |
| Higher | 0.8 | 0.0 | 0.9 | 237 |
| Wealth quintile |  |  |  |  |
| Lowest | 0.9 | 4.4 | 5.3 | 215 |
| Second | 2.5 | 1.9 | 4.5 | 237 |
| Middle | 4.8 | 4.0 | 8.8 | 226 |
| Fourth | 4.4 | 1.0 | 5.4 | 196 |
| Highest | 0.0 | 0.2 | 0.2 | 248 |
| Total | 2.4 | 2.3 | 4.7 | 1,123 | teenagers who have begun childbearing is 4 percent in urban areas compared with 6 percent in urban areas. Teenage childbearing varies significantly across regions, ranging from 1 percent in Vayots Dzor, Aragatsotn, and Syunik to 9 percent in Kotayk.

In terms of trends, at the national level there is little difference overall in adolescent fertility between the 2000 and 2005 ADHS surveys. Six percent of teenagers in 2000 and 5 percent of teenagers in 2005 reported either being pregnant or mothers at the time of data collection. Although the results by background characteristics vary greatly between the two surveys, this can be explained in part by sampling variability due to the small numbers of respondents in the samples who are teenagers.

[^3]
## CONTRACEPTION

The primary function of family planning programs is to advocate conscious entry into parenthood for both women and men. Contraception provides women and men with the means to achieve their desired number of children and to time the birth of those children. The efficacy of family planning depends on people's knowledge of contraceptive methods and on the availability of methods to meet the varying needs of a wide spectrum of potential users. Availability of methods, in turn, depends on the quality and quantity of service providers and on available financial and technical resources. In 2002 the Parliament of Armenia adopted a new law on reproductive health and reproductive human rights. According to this law, use of contraception, including voluntary sterilization, is legal in Armenia.

Family planning topics addressed in this chapter include knowledge of contraceptive methods, use of methods in the past and present, source of supply, reasons for nonuse, desire to use in the future, exposure to family planning messages, and attitudes toward family planning. Although the focus of this chapter is on women, some results from the men's survey will also be presented because men play an important role in the realization of reproductive goals.

### 5.1 Knowledge of Contraceptive Methods

Acquiring knowledge about fertility control is an important step towards gaining access to and then using a suitable contraceptive method in a timely and effective manner. The 2005 ADHS collected information on knowledge and use of contraception. To obtain these data, respondents were first asked to name all of the methods that they had heard about. For methods not mentioned spontaneously, a description of the method was read, and the respondents were asked if they had heard of the method. For each method named or recognized, respondents were asked if they had ever used the method. Finally, women were asked if they (or their partners) were currently using a method. For analytical purposes, contraceptive methods are grouped into two types in Table 5.1: modern and traditional. Modern methods include female sterilization, male sterilization, pill, intra uterine device (IUD), injectables, implants, male condom, female condom, diaphragm, foam/jelly, lactational amenorrhea method (LAM) ${ }^{1}$ and emergency contraception. Traditional methods include periodic abstinence (rhythm method), withdrawal, and folk methods.

Table 5.1 shows that knowledge of contraception is high among both women and men. Almost all respondents know at least one method of contraception. The mean number of methods known is a rough indicator of the breadth of knowledge of family planning methods. On average, currently married women, who have the greatest exposure to the risk of pregnancy, know at least six methods. Knowledge of a modern method is nearly universal. Approximately nine out of every ten married women have heard about the male condom and the IUD. Withdrawal is the most widely known traditional method ( 87 percent).

Married men know an average of over five contraceptive methods, one less than married women. Almost all married men have heard of the condom and two-thirds have heard of the IUD. Eighty-six percent of married men have heard of withdrawal.

[^4]| Percentage of all respondents, currently married respondents, and sexually active unmarried men age 15-49 who know of specific contraceptive methods, Armenia 2005 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Women |  | Men |  |  |
| M ethod | All | Currently married | All | Currently married | Sexually active unmarried ${ }^{1}$ |
| Any method | 95.1 | 98.9 | 97.1 | 99.0 | 99.6 |
| Any modern method | 94.5 | 97.9 | 97.0 | 98.8 | 99.6 |
| Female sterilization | 24.7 | 27.6 | 25.9 | 31.3 | 44.2 |
| M ale sterilization | 12.2 | 13.4 | 22.6 | 26.0 | 43.3 |
| Pill | 76.5 | 82.2 | 52.9 | 60.4 | 62.3 |
| IUD | 85.5 | 93.5 | 53.5 | 67.7 | 66.7 |
| Injectables | 34.2 | 37.4 | 22.7 | 25.5 | 36.3 |
| Implants | 8.3 | 8.8 | 6.3 | 7.7 | 10.5 |
| M ale condom | 90.7 | 95.0 | 96.6 | 98.5 | 99.6 |
| Female condom | 20.9 | 23.0 | 14.6 | 17.1 | 26.7 |
| Diaphragm | 5.9 | 6.1 | 7.5 | 8.6 | 12.4 |
| Foam/jelly | 40.3 | 45.2 | 19.2 | 23.7 | 21.6 |
| Lactational amenorrhea (LAM) | 14.3 | 17.6 | 2.3 | 2.5 | 7.1 |
| Emergency contraception | 15.6 | 17.5 | 20.7 | 25.9 | 31.3 |
| Any traditional method | 70.5 | 90.1 | 75.5 | 86.9 | 92.9 |
| Periodic abstinence | 42.0 | 52.9 | 28.2 | 39.1 | 35.0 |
| W ithdrawal | 66.8 | 87.2 | 75.0 | 86.0 | 92.9 |
| Folk method | 7.9 | 11.1 | 0.5 | 0.5 | 1.3 |
| Mean number of methods known | 5.5 | 6.2 | 4.5 | 5.2 | 5.9 |
| Number | 6,566 | 4,044 | 1,447 | 815 | 143 |

Table 5.2 shows the percentage of currently married women and currently married men who know of at least one method of contraception, by background characteristics. With the exception of married women in Aragatsotn, knowledge of any method and of a modern method does not vary by background characteristics and is virtually universal.

### 5.2 EVER USE OF CONTRACEPTION

All respondents who had heard of a specific method of contraception were asked whether they (or a partner with them) had ever used that method; each known method was inquired about separately. The questionnaire contained an additional probe to be asked of women who reported no contraceptive use. Results are presented in Table 5.3.1 for all women and for currently married women by five-year age groups.

Three-quarters of currently married women have used a contraceptive method at some time in their lives. Levels of ever use among all women are significantly lower than among currently married women because the former includes women who have never been sexually active ( 50 percent versus 76 percent). More married women have tried a traditional method ( 57 percent) than a modern method ( 39 percent). The most common method is, by far, withdrawal. Ever use of withdrawal ( 50 percent) exceeds, by a factor of more than two, ever use of the condom ( 22 percent) or the IUD ( 18 percent). It should be noted that female condoms have never been distributed through the public sector in Armenia or sold in pharmacies; less than 1 percent of all women reported ever use.

| Table 5.2 Knowledge of contraceptive methods by background characteristics |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of currently married women and 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, Armenia 2005 |  |  |  |  |  |  |
|  | W omen |  |  | Men |  |  |
| Background characteristic | Heard of any method | Heard of any any modern method ${ }^{1}$ | Number of women | Heard of any method | Heard of any modern method ${ }^{1}$ | Number of men |
| Age |  |  |  |  |  |  |
| 15-19 | 98.0 | 98.0 | 78 | na | na | 0 |
| 20-24 | 98.7 | 98.2 | 504 | (98.0) | (98.0) | 50 |
| 25-29 | 99.5 | 98.7 | 695 | 98.9 | 98.9 | 126 |
| 30-34 | 99.3 | 99.1 | 601 | 100.0 | 100.0 | 131 |
| 35-39 | 98.7 | 97.5 | 602 | 100.0 | 100.0 | 129 |
| 40-44 | 99.0 | 97.8 | 824 | 97.9 | 97.0 | 180 |
| 45-49 | 98.1 | 96.6 | 741 | 99.1 | 98.8 | 198 |
| Residence |  |  |  |  |  |  |
| Urban | 99.6 | 99.4 | 2,447 | 99.2 | 99.1 | 499 |
| Rural | 97.7 | 95.8 | 1,597 | 98.7 | 98.2 | 315 |
| Region |  |  |  |  |  |  |
| Yerevan | 99.8 | 99.6 | 1,362 | 99.3 | 99.3 | 288 |
| Aragatsotn | 86.1 | 75.6 | 196 | 100.0 | 100.0 | 48 |
| Ararat | 98.0 | 97.2 | 307 | 100.0 | 100.0 | 60 |
| Armavir | 99.7 | 99.7 | 381 | 100.0 | 100.0 | 80 |
| Gegharkunik | 99.6 | 98.1 | 303 | 100.0 | 100.0 | 51 |
| Lori | 100.0 | 99.6 | 343 | (94.1) | (94.1) | 54 |
| Kotayk | 98.8 | 98.2 | 357 | 100.0 | 98.0 | 81 |
| Shirak | 99.4 | 99.2 | 357 | 96.2 | 95.1 | 55 |
| Syunik | 100.0 | 100.0 | 189 | 98.6 | 98.6 | 38 |
| Vayots Dzor | 98.8 | 95.2 | 65 | 100.0 | 100.0 | 19 |
| Tavush | 99.9 | 99.7 | 184 | 100.0 | 100.0 | 42 |
| Education |  |  |  |  |  |  |
| Basic general | 95.9 | 92.8 | 235 | 94.4 | 92.3 | 75 |
| Secondary general | 98.7 | 97.6 | 1,629 | 99.6 | 99.6 | 288 |
| Specialized secondary | 99.0 | 98.1 | 1,353 | 98.9 | 98.7 | 241 |
| Higher | 100.0 | 99.9 | 828 | 100.0 | 100.0 | 212 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 96.5 | 93.4 | 764 | 98.2 | 96.8 | 162 |
| Second | 98.4 | 97.6 | 809 | 99.3 | 99.3 | 162 |
| Middle | 99.7 | 99.1 | 788 | 100.0 | 100.0 | 159 |
| Fourth | 99.9 | 99.8 | 841 | 97.5 | 97.5 | 151 |
| Highest | 99.8 | 99.5 | 842 | 100.0 | 100.0 | 181 |
| Total | 98.9 | 97.9 | 4,044 | 99.0 | 98.8 | 815 |
| Note: Figures in parentheses are based on 25-49 unweighted cases <br> na $=$ Not applicable <br> ${ }^{1}$ Female sterilization, male sterilization, pill, IUD, injectables, implants, male condom, female condom, diaphragm, foam or jelly, lactational amenorrhea method (LAM), and emergency contraception |  |  |  |  |  |  |

In the 2005 ADHS, men were asked only about ever use of male-oriented contraceptive methods, so the data are not comparable to women's data. Two-thirds of currently married men and virtually all sexually active unmarried men reported using a male-oriented method at some time (Table 5.3.2). The most common method is the male condom. Over half of married men have used a condom, as have 95 percent of sexually active unmarried men.

Table 5.3.1 Ever use of contraception: Women
Percentage of all women and currently married women age 15-49 who have ever used any contraceptive method, by specific method and age, Armenia 2005


| Table 5.3.2 Ever use of contraception: Men |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of all men, currently married men, and sexually active unmarried men age 15-49 who have ever used any contraceptive method, by specific method and age, Armenia 2005 |  |  |  |  |  |  |  |  |
|  |  | M odern method |  |  | Traditional method |  |  |  |
| Age | Any method | Any modern method | Male sterilization | M ale condom | Any traditional method | Periodic abstinence | Withdrawal | Number of men |
| ALL M EN |  |  |  |  |  |  |  |  |
| 15-19 | 12.7 | 11.8 | 0.1 | 11.7 | 2.8 | 0.4 | 2.8 | 292 |
| 20-24 | 63.7 | 60.6 | 0.0 | 60.6 | 30.1 | 5.5 | 29.1 | 237 |
| 25-29 | 79.8 | 73.9 | 1.3 | 73.9 | 56.7 | 9.8 | 56.6 | 202 |
| 30-34 | 85.5 | 76.2 | 0.0 | 76.2 | 58.8 | 13.3 | 57.2 | 156 |
| 35-39 | 91.2 | 75.7 | 0.0 | 75.7 | 75.0 | 26.1 | 73.5 | 150 |
| 40-44 | 88.1 | 72.0 | 0.0 | 72.0 | 74.4 | 17.5 | 72.3 | 199 |
| 45-49 | 88.1 | 70.3 | 0.4 | 69.9 | 71.3 | 20.6 | 69.0 | 211 |
| Total | 67.8 | 58.8 | 0.3 | 58.8 | 48.2 | 11.9 | 47.0 | 1,447 |
| CURRENTLY MARRIED MEN |  |  |  |  |  |  |  |  |
| 15-19 | 18.5 | 17.0 | 0.0 | 17.0 | 3.8 | 0.7 | 3.8 | 184 |
| 20-24 | 62.9 | 60.9 | 0.0 | 60.9 | 28.3 | 5.6 | 26.8 | 146 |
| 25-29 | 77.2 | 71.9 | 0.0 | 71.9 | 59.2 | 9.6 | 59.2 | 120 |
| 30-34 | 81.2 | 70.9 | 0.0 | 70.9 | 56.8 | 10.8 | 55.1 | 89 |
| 35-39 | 90.0 | 64.9 | 0.0 | 64.9 | 73.3 | 31.6 | 70.2 | 71 |
| 40-44 | 87.1 | 72.6 | 0.0 | 72.6 | 72.1 | 14.8 | 69.6 | 126 |
| 45-49 | 84.8 | 66.5 | 0.7 | 65.8 | 69.2 | 22.8 | 67.6 | 123 |
| Total | 66.2 | 56.9 | 0.1 | 56.8 | 46.3 | 11.6 | 45.0 | 861 |
| SEXUALLY ACTIVE UNM ARRIED M EN ${ }^{1}$ |  |  |  |  |  |  |  |  |
| Total | 97.9 | 95.3 | 0.0 | 95.3 | 59.9 | 12.7 | 58.3 | 143 |
| ${ }^{1}$ Men who had sexual intercourse in the 30 days preceding the survey |  |  |  |  |  |  |  |  |

### 5.3 Current Use of Contraception

Table 5.4 presents levels of current use of contraception for all women and for currently married women. Approximately one-third of all women of reproductive age are using a method of contraception; almost all users are currently married women. Overall, the ADHS found that 53 percent of married women are currently using a contraceptive method. Among married women, use of traditional methods ( 34 percent) is almost 75 percent higher than the use of modern methods ( 20 percent) (Figure 5.1). The most widely used method is, by far, withdrawal. Among married women, current use of withdrawal (28 percent) exceeds, by a factor of three, current use of the IUD ( 9 percent) or the condom (8 percent).

| Table 5.4 Current use of contraception |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of all women and currently married women age 15-49 by contraceptive method currently used, according to age, Armenia 2005 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Age | Modern method |  |  |  |  |  |  |  | Traditional method |  |  |  |  | Total | Number of women |
|  | $\begin{gathered} \text { Any } \\ \text { metho } \end{gathered}$ | Any modern method | Female steri-lization | Pill | IUD | Male condom | Foam/ jelly | LAM | Any traditional method | Periodic abstinence | Withdrawal | Any folk method | Not currently using |  |  |
| ALL WOMEN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 1.1 | 0.3 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.8 | 0.0 | 98.9 | 100.0 | 1,123 |
| 20-24 | 19.3 | 8.3 | 0.0 | 0.2 | 3.9 | 3.4 | 0.0 | 0.8 | 11.0 | 0.7 | 9.3 | 1.0 | 80.7 | 100.0 | 1,131 |
| 25-29 | 46.7 | 21.1 | 0.2 | 0.9 | 8.7 | 10.3 | 0.6 | 0.4 | 25.6 | 1.9 | 22.3 | 1.4 | 53.3 | 100.0 | 929 |
| 30-34 | 54.4 | 22.6 | 0.0 | 1.6 | 11.7 | 8.8 | 0.2 | 0.3 | 31.8 | 4.8 | 24.7 | 2.3 | 45.6 | 100.0 | 749 |
| 35-39 | 54.3 | 19.5 | 0.9 | 0.7 | 9.7 | 8.3 | 0.0 | 0.0 | 34.8 | 4.5 | 29.1 | 1.2 | 45.7 | 100.0 | 711 |
| 40-44 | 47.8 | 15.6 | 1.1 | 0.7 | 7.3 | 6.5 | 0.0 | 0.0 | 32.2 | 3.2 | 26.9 | 2.1 | 52.2 | 100.0 | 965 |
| 45-49 | 26.2 | 5.7 | 0.6 | 0.1 | 3.3 | 1.6 | 0.0 | 0.0 | 20.5 | 3.4 | 15.7 | 1.5 | 73.8 | 100.0 | 958 |
| Total | 33.1 | 12.3 | 0.4 | 0.5 | 5.9 | 5.1 | 0.1 | 0.2 | 20.8 | 2.4 | 17.1 | 1.3 | 66.9 | 100.0 | 6,566 |
| CURRENTLY MARRIED WOMEN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 16.5 | 4.5 | 0.0 | 0.0 | 3.4 | 0.4 | 0.0 | 0.7 | 12.0 | 0.0 | 12.0 | 0.0 | 83.5 | 100.0 | 78 |
| 20-24 | 42.9 | 18.6 | 0.0 | 0.5 | 8.8 | 7.6 | 0.0 | 1.8 | 24.3 | 1.5 | 20.5 | 2.3 | 57.1 | 100.0 | 504 |
| 25-29 | 61.7 | 27.4 | 0.2 | 1.2 | 11.6 | 13.0 | 0.9 | 0.5 | 34.3 | 2.5 | 29.8 | 1.9 | 38.3 | 100.0 | 695 |
| 30-34 | 67.3 | 27.7 | 0.0 | 1.9 | 14.5 | 10.6 | 0.2 | 0.3 | 39.6 | 6.0 | 30.8 | 2.7 | 32.7 | 100.0 | 601 |
| 35-39 | 62.4 | 21.5 | 0.7 | 0.8 | 10.7 | 9.4 | 0.0 | 0.0 | 40.8 | 5.0 | 34.4 | 1.4 | 37.6 | 100.0 | 602 |
| 40-44 | 55.9 | 18.2 | 1.3 | 0.8 | 8.5 | 7.6 | 0.0 | 0.0 | 37.7 | 3.7 | 31.5 | 2.5 | 44.1 | 100.0 | 824 |
| 45-49 | 33.5 | 7.3 | 0.8 | 0.1 | 4.3 | 2.1 | 0.0 | 0.0 | 26.2 | 4.3 | 20.1 | 1.9 | 66.5 | 100.0 | 741 |
| Total | 53.1 | 19.5 | 0.6 | 0.8 | 9.4 | 8.1 | 0.2 | 0.4 | 33.6 | 3.8 | 27.7 | 2.1 | 46.9 | 100.0 | 4,044 |
| Note: If more than one method is used, only the most effective method is considered in this tabulation. <br> LAM = Lactational amenorrhea method |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Contraceptive use ranges from a low of 17 percent of currently married women age 15-19 to twothirds of currently married women age 30-34. This pattern holds true for specific methods, with a few exceptions. Male condoms are most frequently used by women age $25-29$, while female sterilization is more common among older women. It should be noted, however, that female sterilization is generally performed for medical reasons as opposed to contraceptive purposes.

Overall, use of contraception has decreased from 61 percent of married women in the 2000 ADHS. The data indicate decreases in the use of both modern and traditional methods (Figure 5.2 and Table 5.5).

Figure 5.1 Contraceptive Use among Married Women


Condom 8\%

ADHS 2005

Figure 5.2 Trends in Current Contraceptive Use among Married Women


| Table 5.5 Trends in contraceptive use |  |  |
| :---: | :---: | :---: |
| Percent distribution of currently married women age 15-49 by contraceptive method currently used, Armenia |  |  |
| M ethod | $\begin{gathered} 2000 \\ \text { ADHS } \end{gathered}$ | $\begin{gathered} 2005 \\ \text { ADHS } \end{gathered}$ |
| Any method | 60.5 | 53.1 |
| Any modern method | 22.3 | 19.5 |
| Female sterilization | 2.7 | 0.6 |
| Pill | 1.1 | 0.8 |
| IUD | 9.4 | 9.4 |
| M ale condom | 6.9 | 8.1 |
| Foam/jelly | 0.2 | 0.2 |
| Lactational amenorrhea (LAM) | 1.9 | 0.4 |
| Any traditional method | 38.2 | 33.6 |
| Periodic abstinence | 4.8 | 3.8 |
| W ithdrawal | 31.9 | 27.7 |
| Folk method | 1.5 | 2.1 |
| Not using | 39.5 | 46.9 |
| Total | 100.0 | 100.0 |
| Number of currently married women | 4,125 | 4,044 |

### 5.4 Current Use by Background Characteristics

Table 5.6 shows that levels of current contraceptive use among currently married women vary little by background characteristics. As expected, contraceptive use, particularly the use of modern methods, increases with educational attainment. Almost three times as many women with higher education than general basic education use a modern method ( 29 percent versus 11 percent). In general, women do not begin to use contraception until they have had at least one child. A majority of women with at least one living child use a method of contraception.

There is considerable variation in contraceptive use by region. Regarding withdrawal, the most popular contraceptive method, at least one-fifth of married women in all regions report current use. Vayots Dzor and Armavir are the regions with the highest percentage of women using withdrawal ( 42 percent), while in Ararat less than 20 percent of women rely on withdrawal. Use of a modern method ranges from a high of 25 percent in Yerevan to 11 percent in Kotayk. The IUD is used by at least 10 percent of currently married women in Yerevan, Aragatsotn, Lori, Shirak, and Syunik compared with 3 percent in Vayots Dzor. Condom use is reported by more than one in ten currently married women in Yerevan (12 percent) and Vayots Dzor (15 percent) but less than 1 in 40 women in Syunik (2 percent). Although sampling variation may account for some of the difference, female sterilization appears to be more prevalent in Aragatsotn than in other regions. More than half of women in four regions-Ararat, Gegharkunik, Kotayk, and Shirak-are not using any method of contraception.

| Table 5.6 Current use of contraception by background characteristics |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of currently married women by contraceptive method currently used, according to age, Armenia 2005 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | M odern method |  |  |  |  |  |  |  | Traditional method |  |  |  |  |  |  |
| Background characteristic | $\begin{aligned} & \text { Using } \\ & \text { any } \\ & \text { method } \end{aligned}$ | Any modern method | Female steri-lization | Pill | IUD | Male condom | Foam/ jelly | LAM | Any traditional method | Periodic abstinence | Withdrawal | Any folk method | Not currently using |  |  |
| Number of living children |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0 | 3.6 | 1.8 | 0.0 | 0.0 | 0.0 | 1.8 | 0.0 | 0.0 | 1.8 | 0.0 | 1.8 | 0.0 | 96.4 | 100.0 | 265 |
| 1-2 | 57.2 | 22.7 | 0.2 | 0.8 | 10.5 | 10.3 | 0.3 | 0.5 | 34.5 | 4.1 | 27.8 | 2.6 | 42.8 | 100.0 | 2,458 |
| $3+$ | 55.3 | 17.1 | 1.3 | 1.1 | 9.4 | 5.2 | 0.0 | 0.2 | 38.2 | 4.0 | 32.7 | 1.5 | 44.7 | 100.0 | 1,321 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 54.3 | 21.7 | 0.7 | 1.0 | 9.8 | 9.8 | 0.3 | 0.2 | 32.6 | 4.7 | 25.3 | 2.6 | 45.7 | 100.0 | 2,447 |
| Rural | 51.2 | 16.1 | 0.4 | 0.6 | 8.9 | 5.5 | 0.0 | 0.7 | 35.2 | 2.5 | 31.4 | 1.3 | 48.8 | 100.0 | 1,597 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 58.5 | 25.4 | 0.9 | 1.1 | 10.5 | 12.2 | 0.5 | 0.1 | 33.1 | 5.8 | 24.4 | 2.9 | 41.5 | 100.0 | 1,362 |
| Aragatsotn | 53.6 | 23.0 | 1.5 | 1.5 | 11.8 | 7.3 | 0.0 | 0.9 | 30.6 | 2.5 | 26.9 | 1.2 | 46.4 | 100.0 | 196 |
| Ararat | 41.1 | 16.6 | 0.2 | 0.3 | 8.8 | 5.0 | 0.0 | 2.3 | 24.5 | 3.8 | 19.5 | 1.2 | 58.9 | 100.0 | 307 |
| Armavir | 57.8 | 12.6 | 0.0 | 0.0 | 7.0 | 5.6 | 0.0 | 0.0 | 45.2 | 1.2 | 41.8 | 2.2 | 42.2 | 100.0 | 381 |
| Gegharkunik | 41.0 | 16.4 | 0.7 | 0.9 | 6.4 | 7.8 | 0.0 | 0.5 | 24.7 | 2.9 | 20.6 | 1.1 | 59.0 | 100.0 | 303 |
| Lori | 51.4 | 22.1 | 0.0 | 1.5 | 14.0 | 6.7 | 0.0 | 0.0 | 29.3 | 2.6 | 25.6 | 1.1 | 48.6 | 100.0 | 343 |
| Kotayk | 48.9 | 11.3 | 0.5 | 0.7 | 4.9 | 4.8 | 0.0 | 0.4 | 37.6 | 4.0 | 31.8 | 1.8 | 51.1 | 100.0 | 357 |
| Shirak | 41.7 | 16.3 | 0.3 | 0.5 | 10.7 | 4.7 | 0.0 | 0.0 | 25.3 | 1.5 | 23.2 | 0.6 | 58.3 | 100.0 | 357 |
| Syunik | 61.4 | 16.5 | 0.9 | 0.5 | 11.9 | 2.4 | 0.0 | 0.8 | 44.9 | 2.1 | 38.9 | 3.9 | 38.6 | 100.0 | 189 |
| Vayots Dzor | 66.9 | 18.6 | 0.0 | 1.2 | 2.8 | 14.5 | 0.0 | 0.0 | 48.3 | 5.0 | 42.1 | 1.2 | 33.1 | 100.0 | 65 |
| Tavush | 62.2 | 16.8 | 0.0 | 0.8 | 7.5 | 8.2 | 0.3 | 0.0 | 45.3 | 4.6 | 37.5 | 3.3 | 37.8 | 100.0 | 184 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Basic general | 41.6 | 11.1 | 0.0 | 0.0 | 7.2 | 1.5 | 2.4 | 0.0 | 30.5 | 1.3 | 28.1 | 1.1 | 58.4 | 100.0 | 235 |
| Secondary general | 52.3 | 17.1 | 0.9 | 0.4 | 9.1 | 6.2 | 0.0 | 0.4 | 35.2 | 2.3 | 31.1 | 1.8 | 47.7 | 100.0 | 1,629 |
| Specialized |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| secondary | 52.5 | 18.1 | 0.3 | 1.5 | 9.0 | 7.0 | 0.0 | 0.3 | 34.4 | 4.6 | 27.6 | 2.2 | 47.5 | 100.0 | 1,353 |
| Higher | 58.8 | 28.9 | 0.5 | 0.8 | 11.4 | 15.5 | 0.1 | 0.5 | 30.0 | 6.1 | 21.2 | 2.7 | 41.2 | 100.0 | 828 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 50.8 | 12.4 | 0.3 | 0.8 | 6.0 | 5.0 | 0.0 | 0.2 | 38.4 | 2.0 | 35.6 | 0.7 | 49.2 | 100.0 | 764 |
| Second | 48.4 | 16.0 | 0.3 | 0.3 | 9.6 | 5.2 | 0.0 | 0.6 | 32.4 | 2.4 | 28.7 | 1.3 | 51.6 | 100.0 | 809 |
| Middle | 51.1 | 17.4 | 0.5 | 0.7 | 8.5 | 7.5 | 0.0 | 0.2 | 33.7 | 3.9 | 27.7 | 2.1 | 48.9 | 100.0 | 788 |
| Fourth | 54.7 | 22.1 | 0.8 | 1.0 | 10.8 | 9.0 | 0.0 | 0.4 | 32.7 | 5.7 | 23.4 | 3.6 | 45.3 | 100.0 | 841 |
| Highest | 59.8 | 28.6 | 0.9 | 1.4 | 11.8 | 13.2 | 0.8 | 0.5 | 31.2 | 4.8 | 23.9 | 2.5 | 40.2 | 100.0 | 842 |
| Total | 53.1 | 19.5 | 0.6 | 0.8 | 9.4 | 8.1 | 0.2 | 0.4 | 33.6 | 3.8 | 27.7 | 2.1 | 46.9 | 100.0 | 4,044 |
| Note: If more than one method is used, only the most effective method is considered in this tabulation. LAM = Lactational amenorrhea method |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

### 5.5 Number of Children at First Use

To make an assessment of the motivations for using family planning methods, women were asked how many living children they had at the time they first used a method of family planning. Women who first use a method before having a child presumably want to delay their childbearing to some time in the future. Women who first employ a method after having one or two children may either want to delay the next child or to limit their childbearing. Women who use a method for the first time after having several children are more likely to be using family planning to stop childbearing than to space their births.

Table 5.7 shows the percent distribution of women by number of living children at the time of first use of contraception, according to current age. The data show that it is most common to begin using a method after the birth of at least one child (Table 5.7). Less than 2 percent of all women age 15-49 report that they started using contraception before they began having children, compared with 18 percent of women who began using after having one child and 21 percent who began using after two children.


### 5.6 KNOWLEdGE OF THE FERTILE PERIOD

A basic knowledge of the physiology of reproduction is especially useful for the successful practice of coitusrelated methods such as periodic abstinence. All women in the 2005 ADHS were asked about their knowledge of a woman's fertile period. Table 5.8 shows that one-third of all women correctly identify the fertile period as occurring halfway between periods. Approximately four in ten women said that they did not know when a woman has her fertile period. Among users of periodic abstinence (rhythm method), however, 76 percent were able to correctly identify the fertile period. This is approximately the same proportion as that estimated in the 2000 ADHS.

### 5.7 Access to Family Planning

## Source of Supply

Information on sources of modern contraceptives is useful for family planning managers and implementers. Women who reported they were currently using a modern method of contraception were asked where they obtained the method the last time. Because the distinction between different types of clinics and between public and private sources may not always be clear, the information on the source of supply must be interpreted with caution.

Table 5.9 shows that more than half of modern method users received their method from the public sector. This is due primarily to the fact that the public sector is the source for almost all users ( 97 percent) of the IUD, the most common modern method. Among condom

Table 5.9 Source of modern contraceptive methods
Percent distribution of users of modern contraceptive methods age 15-49 by most recent source of method, according to specific methods, Armenia 2005

| Source | Pill | IUD | Male condom | All modern methods |
| :---: | :---: | :---: | :---: | :---: |
| Public sector | (9.3) | 96.6 | 4.7 | 52.8 |
| Hospital | (5.7) | 20.5 | 1.4 | 12.6 |
| M aternity hospital | (0.0) | 45.5 | 0.0 | 23.6 |
| Polyclinic | (1.9) | 16.7 | 0.4 | 8.4 |
| W omen's health consult center | (1.7) | 13.0 | 1.8 | 7.2 |
| Other public | (0.0) | 0.9 | 1.1 | 0.9 |
| Private medical sector | (88.6) | 1.8 | 84.7 | 41.8 |
| Pharmacy | (88.6) | 0.7 | 83.8 | 40.9 |
| O ther | (0.0) | 1.0 | 1.0 | 0.9 |
| O ther | (1.2) | 1.6 | 2.5 | 2.0 |
| Don't know | (0.9) | 0.0 | 8.1 | 3.5 |
| Total | (100.0) | 100.0 | 100.0 | 100.0 |
| Number of women | 35 | 387 | 337 | 791 |

Note: The total includes 25 users of female sterilization and 8 users of foam/jelly. Figures in parentheses are based on 25-49 unweighted cases. and pill users, the vast majority (more than eight in ten) reported obtaining their most recent supply from the pharmacy. Eight percent of condom users, however, did not know their source of supply, which suggests that their partners obtain the condoms.

## Cost of Modern Contraceptives

One goal of the 2005 ADHS was to obtain information about expenditures on modern contraceptives. Differentials in cost are quite large depending on the type of method (Table 5.10). The IUD is the most expensive method. Of the 84 percent of IUD users who paid and were able to provide information on cost, the median cost was 7,991 drams. This means that approximately half of women paid more than 8,000 drams to have an IUD inserted and approximately half paid less than 8,000 drams.

Among condom users, more than half of women stated either that the condom was free or that they did not know the cost. The small number of pill users means that the estimate is unreliable.

Table 5.10 Cost of modern contraceptive methods
Percent distribution of women age 15-49 who are currently using a modern contraceptive method by cost of method, Armenia 2005

| Cost of method | Pill | IUD | Male condom | All modern methods |
| :---: | :---: | :---: | :---: | :---: |
| M ethod free | (4.7) | 5.3 | 4.8 | 5.0 |
| Cost not known | (7.7) | 10.7 | 53.9 | 30.3 |
| Cost known | (87.6) | 84.0 | 41.3 | 64.7 |
| Total | (100.0) | 100.0 | 100.0 | 100.0 |
| M edian cost ${ }^{1}$ | $(1,498)$ | 7,991 | 990 | 4,997 |
| Number of women | 35 | 387 | 337 | 766 |

Note: Table excludes sterilization and lactational amenorrhea method (LAM). Total includes 8 users of foam/jelly. Costs are based on the last time current users obtained method. Costs include consultation costs, if any. For condom, costs are per package; for pills, per cycle. Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ M edian cost in Armenian drams is based only on those women who reported a cost

## Transportation to Source of Supply

Good access to modern contraception means that the transportation to the source should be quick, easy, and cheap. Figure 5.3 shows that the most common way to get to a source of contraception is public transportation (36 percent), such as minibus or bus/trolley/train. Almost one-third of women (32 percent) walk to their source of supply. Another one-fifth of women report that they either go with a car that the household has ( 15 percent) or by taxi (5 percent).

Figure 5.3 Transportation to Source of Contraceptive Supply


A majority of women (eight in ten) who took transportation to their source of supply had to pay for the transportation. The median cost of transportation varies according to residence with rural women paying more than urban women (299 drams versus 200 drams, data not shown).

Not only do rural women pay more for transportation, it also takes them longer than urban women to reach their source of supply. Just one-third of rural women live within 20 minutes of their source of contraception compared with over half ( 55 percent) of urban women. Overall, just under half of modern method users are within 20 minutes of their source, while 71 percent are within 30 minutes of the source.

### 5.8 Discontinuation Within 12 Months of Use

Table 5.11 shows contraceptive discontinuation rates. Overall, one-third of all users of a contraceptive method discontinued use within 12 months of adopting the method. The first year discontinuation rate is lowest among users of the IUD (7 percent) and highest among users of periodic abstinence (rhythm method) (41 percent). Approximately one-third of users of condoms and withdrawal discontinued using the method during the first year of use.


Table 5.12 shows the distribution of discontinuations of all contraceptive methods during the five years preceding the survey by reason for discontinuation. More than four in ten (43 percent) of all discontinuations were attributed to method failure, i.e., accidental pregnancy (became pregnant while using). The low efficacy of periodic abstinence, withdrawal, and other traditional methods is evidenced by the high failure rate of these methods during use.

As previously noted, withdrawal is the most popular method of contraception. It is used by 28 percent of currently married women and accounts for half of all contraceptive use. Yet, Table 5.11 shows that over one-fifth of users ( 21 percent) discontinued use because of method failure, i.e., accidental pregnancy. Method failure accounts for over half of all discontinuations of withdrawal (Table 5.12). It is striking that method failure is more likely than not among women who are using the most common method of contraception. Stated another way, a substantial proportion of Armenian women who are trying to control their fertility using withdrawal are unable to do so.

Sixty-one percent of discontinuations of periodic abstinence were reported to be method failures. Unexpectedly, method failure was also the most common reason cited for discontinuation of the pill and condom ( 25 percent and 29 percent, respectively). Almost half of IUD users attributed discontinuation to health concerns. Although method failure is the most commonly cited reason for discontinuations, 15 percent of respondents who discontinued reported infrequent sex or the absence of their partner and 14 percent said that they wanted to get pregnant.

| Table 5.12 Reasons for discontinuing contraceptive methods |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Among women age 15-49 who started an episode of contraceptive use in the five years before the survey, percent distribution of episodes discontinued within 12 months by main reason for discontinuation, according to specific method, Armenia 2005 |  |  |  |  |  |  |  |  |
|  |  | Modern | method |  | Tradi | onal meth |  |  |
| Reason for discontinuation | Pill | IUD | Condom | Other | Periodic abstinence | Withdrawal | Other | $\begin{gathered} \text { All } \\ \text { methods } \end{gathered}$ |
| Became pregnant while using | 24.8 | 4.1 | 28.5 | (30.0) | 60.8 | 51.2 | 54.3 | 42.5 |
| W anted to become pregnant | 12.9 | 15.1 | 20.3 | (5.1) | 10.3 | 13.2 | 8.4 | 13.8 |
| Husband disapproved | 1.8 | 0.7 | 9.1 | (3.3) | 2.7 | 3.4 | 0.0 | 3.8 |
| Side effects | 6.9 | 17.7 | 0.2 | (0.0) | 0.0 | 0.1 | 0.0 | 1.9 |
| Health concerns | 16.2 | 49.3 | 1.1 | (0.0) | 0.0 | 1.2 | 0.3 | 5.7 |
| Lack of access/availability | 0.0 | 0.0 | 0.4 | (3.0) | 0.0 | 0.0 | 0.0 | 0.2 |
| W anted a more effective method | 3.4 | 0.6 | 8.5 | (20.9) | 3.8 | 4.5 | 9.9 | 5.5 |
| Inconvenient to use | 8.1 | 1.2 | 4.5 | (7.5) | 1.3 | 0.8 | 4.0 | 2.2 |
| Infrequent sex/husband away | 16.9 | 2.6 | 13.5 | (12.8) | 13.6 | 18.5 | 11.9 | 15.3 |
| Cost too much | 3.6 | 0.0 | 5.4 | (0.0) | 0.0 | 0.2 | 0.0 | 1.2 |
| Fatalistic | 0.0 | 0.0 | 0.0 | (0.0) | 3.3 | 0.1 | 0.0 | 0.3 |
| Difficult to get pregnant/menopausal | 1.8 | 1.1 | 1.9 | (0.0) | 2.6 | 2.2 | 0.8 | 1.9 |
| M arital dissolution/separation | 1.1 | 2.0 | 1.3 | (0.0) | 0.0 | 0.8 | 0.0 | 0.9 |
| O ther | 0.4 | 5.8 | 2.3 | (10.7) | 1.5 | 1.5 | 3.0 | 2.3 |
| Missing | 2.1 | 0.0 | 3.0 | (6.7) | 0.0 | 2.2 | 7.5 | 2.5 |
| Total | 100.0 | 100.0 | 100.0 | (100.0) | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of discontinuations | 90 | 172 | 350 | 55 | 157 | 1,080 | 130 | 2,034 |
| Note: Figures in parentheses are based on 25-49 unweighted cases. Table is based on episodes of contraceptive use that began 3-59 months prior to survey |  |  |  |  |  |  |  |  |

### 5.9 Reasons for Using Traditional Methods

Given the unreliability of traditional methods, why do so many Armenian women opt to use them instead of modern methods? Table 5.13 shows the reasons that users of traditional methods agree are a factor in their decision to use a traditional method. The most common reason, given by 59 percent of women, was that the traditional method is the husband or partner's choice. However, almost half (47 percent) say that fear of or experience with side effects was a concern and more than one-third ( 37 percent) say that the cost of modern methods was a factor in their choice. Furthermore, some women feel that they lack knowledge about modern methods ( 20 percent) or that they are difficult to find or are not readily available (26 percent). Clearly, Armenian women perceive barriers, whether they be related to cost, information, or supply, to the use of modern contraceptives.

### 5.10 Intention to Use Family Planning among Nonusers

The needs and practices of women in the area of contraception change as they go through their reproductive years. Currently married respondents who were not using contraception at the time of the survey were asked whether they intend to use family planning methods in the future. The results are presented in Table 5.14.

Twenty-nine percent of all currently married nonusers stated that they do intend to use a contraceptive method at some time in the future, down from 36 percent in the 2000 ADHS. More than four in ten ( 44 percent) women with one child say they intend to use a contraceptive method in the future. These women are significantly more likely to intend to use than women with no children and women with two or more living children. Indeed, a majority of women with two or more children report that they do not intend to use a method in the future.

| Table 5.13 Reasons for using traditional methods |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Among women using traditional methods of contraception, percentage who cite specific reasons that influenced their decision to use a traditional method, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |  |
| Background characteristic | Modern methods difficult to find/not available | Cost of modern methods | Little knowledge of modern methods | Fear of or experience with side effects | Husband/ partner choice | Religious beliefs | Doctor's recommendation | Another person's advice | Number of women |
| Age |  |  |  |  |  |  |  |  |  |
| 15-19 | * | * | * | * | * | * | * | * | 10 |
| 20-24 | 27.0 | 41.2 | 15.5 | 49.2 | 56.2 | 1.4 | 6.1 | 15.6 | 133 |
| 25-29 | 22.8 | 32.9 | 21.4 | 45.8 | 60.2 | 0.6 | 9.3 | 12.0 | 242 |
| 30-34 | 25.4 | 35.6 | 14.9 | 50.7 | 54.3 | 0.8 | 8.8 | 12.6 | 240 |
| 35-39 | 26.8 | 38.0 | 19.0 | 43.7 | 58.7 | 2.5 | 3.1 | 9.7 | 247 |
| 40-44 | 30.2 | 37.0 | 24.5 | 50.7 | 58.0 | 1.1 | 5.5 | 11.4 | 311 |
| 45-49 | 21.7 | 38.8 | 21.2 | 40.9 | 65.7 | 1.3 | 6.5 | 11.4 | 197 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 20.8 | 33.4 | 20.5 | 50.8 | 57.3 | 1.7 | 6.2 | 11.5 | 807 |
| Rural | 33.3 | 42.0 | 19.5 | 41.7 | 61.0 | 0.6 | 6.8 | 12.0 | 573 |
| Region |  |  |  |  |  |  |  |  |  |
| Yerevan | 18.5 | 33.0 | 23.4 | 52.8 | 55.3 | 1.8 | 7.8 | 8.6 | 456 |
| Aragatsotn | 60.1 | 56.9 | 35.6 | 55.9 | 62.7 | 2.3 | 19.9 | 20.8 | 62 |
| Ararat | 31.8 | 37.0 | 6.8 | 46.0 | 86.1 | 0.3 | 8.6 | 13.4 | 82 |
| Armavir | 36.8 | 45.9 | 12.1 | 72.1 | 60.8 | 1.1 | 3.1 | 12.6 | 172 |
| Gegharkunik | 11.5 | 21.1 | 5.0 | 13.4 | 44.4 | 1.9 | 2.6 | 3.3 | 76 |
| Lori | 19.0 | 27.3 | 2.8 | 6.6 | 62.6 | 0.0 | 7.6 | 6.6 | 101 |
| Kotayk | 23.4 | 25.8 | 22.8 | 38.1 | 45.3 | 2.9 | 6.0 | 13.6 | 138 |
| Shirak | 23.0 | 29.7 | 17.8 | 29.5 | 71.5 | 0.0 | 2.0 | 1.0 | 91 |
| Syunik | 62.0 | 75.5 | 52.3 | 81.9 | 64.6 | 0.0 | 6.5 | 33.6 | 87 |
| Vayots Dzor | 14.4 | 54.7 | 0.6 | 8.7 | 62.4 | 0.0 | 2.4 | 24.4 | 31 |
| Tavush | 9.6 | 31.3 | 26.4 | 49.7 | 54.6 | 0.0 | 2.9 | 13.3 | 83 |
| Education |  |  |  |  |  |  |  |  |  |
| Basic general | 43.8 | 55.6 | 30.1 | 51.2 | 40.3 | 0.0 | 4.6 | 18.9 | 72 |
| Secondary general | 28.1 | 41.2 | 23.3 | 44.0 | 60.0 | 1.1 | 6.0 | 12.3 | 580 |
| Specialized secondary | 27.1 | 35.4 | 17.7 | 45.1 | 63.7 | 0.9 | 6.9 | 10.9 | 471 |
| Higher | 14.2 | 25.1 | 14.4 | 56.3 | 52.5 | 2.5 | 7.2 | 9.8 | 256 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |
| Lowest | 39.0 | 49.5 | 21.4 | 42.6 | 56.2 | 1.2 | 5.6 | 13.9 | 295 |
| Second | 30.4 | 43.1 | 21.8 | 48.3 | 63.0 | 0.6 | 7.5 | 9.7 | 267 |
| Middle | 30.0 | 36.7 | 19.1 | 36.5 | 56.8 | 2.3 | 5.1 | 11.0 | 268 |
| Fourth | 15.3 | 30.9 | 18.0 | 51.9 | 60.5 | 1.3 | 5.8 | 10.4 | 280 |
| Highest | 14.5 | 23.9 | 20.0 | 56.0 | 57.9 | 0.8 | 8.4 | 13.5 | 270 |
| Total | 26.0 | 37.0 | 20.1 | 47.0 | 58.8 | 1.2 | 6.5 | 11.7 | 1,380 |
| Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. |  |  |  |  |  |  |  |  |  |

## Table 5.14 Future use of contraception

Percent distribution of currently married women who are not using a contraceptive method by intention to use in the future, according to number of living children, Armenia 2005

| Intention | Number of living children ${ }^{1}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4+ | Total |
| Intends to use | 28.0 | 43.9 | 27.9 | 22.1 | 16.6 | 28.7 |
| Unsure | 43.4 | 29.8 | 18.4 | 14.0 | 11.3 | 20.9 |
| Does not intend to use | 28.6 | 26.0 | 52.6 | 62.1 | 72.1 | 49.4 |
| Missing | 0.0 | 0.4 | 1.1 | 1.9 | 0.0 | 1.0 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of women | 149 | 362 | 779 | 465 | 142 | 1,898 |

An understanding of the reasons that people do not like to use family planning methods is critical in designing programs that could improve the quality of services. Table 5.15 shows the main reasons for not intending to use family planning cited by currently married women who are not using contraception and do not intend to use a method in the future.

Two-thirds of women report a fertility-related reason for not intending to use, the majority (36 percent) reporting that they are subfecund or infecund ${ }^{2}$. It is worth noting that 15 percent of women report being opposed to contraception and 14 percent cite a method-related reason such as health concerns.

| Table 5.15 Reasons for not intending to use contraception |  |
| :---: | :---: |
| Percent distribution of currently married women who are not using contraception and do not intend to use in the future, by main reason for not intending to use, Armenia 2005 |  |
| Reason | Nonusers who do not intend to use contraception |
| Fertility-related reasons | 65.4 |
| Infrequent sex/no sex | 10.3 |
| Menopausal/had hysterectomy | 17.9 |
| Subfecund/infecund | 35.7 |
| W ants as many children as possible | 1.5 |
| Opposition to use | 16.8 |
| Respondent opposed | 15.0 |
| Husband/partner opposed | 1.4 |
| Religious prohibition | 0.4 |
| Lack of knowledge | 0.8 |
| Knows no method | 0.7 |
| Knows no source | 0.2 |
| Method-related reasons | 13.9 |
| Health concerns | 4.3 |
| Fear of side effects | 1.2 |
| Costs too much | 0.4 |
| Inconvenient to use | 0.2 |
| Interferes with body's normal processes | 7.7 |
| O ther | 1.9 |
| Don't know | 1.0 |
| Total | 100.0 |
| Number of women | 938 |

[^5]Future demand for specific methods of family planning can be assessed by asking nonusers who intend to use in the future which methods they prefer to use. Table 5.16 presents information on method preference among currently married nonusers who say they intend to use in the future. The IUD is the most popular method among women who intend to use in the future ( 31 percent), followed by withdrawal ( 24 percent) and condoms ( 21 percent). Just 7 percent of women report pills as their preferred method.

| Table 5.16 Preferred method of contraception for future use |  |
| :---: | :---: |
| Percent distribution of currently married women who are not using a contraceptive method but who intend to use in the future by preferred method, Armenia 2005 |  |
| Preferred method | Nonusers who intend to use contraception |
| Modern method |  |
| Pill | 7.4 |
| IUD | 31.0 |
| Injectables | 0.2 |
| Implants | 0.1 |
| M ale condom | 21.4 |
| Female condom | 1.0 |
| Foam/jelly | 1.2 |
| Traditional method |  |
| Periodic abstinence | 3.0 |
| W ithdrawal | 23.7 |
| O ther | 1.8 |
| U nsure of method | 9.3 |
| Total | 100.0 |
| Number of women | 544 |

### 5.11 Exposure to Family Planning Messages in the Mass Media

The mass media provide an opportunity to communicate family planning information to a broad spectrum of the population. Information on the level of exposure to such media is important for programmers and planners to effectively target population subgroups for information, education, and communication campaigns. Table 5.17 .1 shows that over half of women have seen a mass media family planning message in the few months preceding the survey.

Television is the most common source of messages on family planning: 48 percent of all female respondents have seen a family planning message on television. Community events and newspapers or magazines are also common sources ( 29 percent and 23 percent, respectively). Women are least likely to report radio or print materials such as brochures or posters as a source; nonetheless, in the months preceding the survey 16 percent of women heard a message on the radio and 12 percent saw a message in a pamphlet or other printed material.

Exposure to family planning messages is closely related to place of residence, level of education and household wealth. Women living in rural areas, women with lower levels of education, and those living in the poorer households are less likely to have been exposed to family planning messages than urban dwellers, women with higher levels of education, and those living in economically advantaged households.

| Table 5.17.1 Exposure to family planning messages: Women |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of women age 15-49 who heard or saw a family planning message in the past few months, by source of message and background characteristics, Armenia 2005 |  |  |  |  |  |  |  |
| Source of family planning message |  |  |  |  |  |  |  |
| Background characteristic | Radio | Television | Newspaper/ magazine | Pamphlet/ poster/leaflet/ booklet | Community event | of the specified sources | Number of women |
| Age |  |  |  |  |  |  |  |
| 15-19 | 9.2 | 33.6 | 16.9 | 7.1 | 21.3 | 57.0 | 1,123 |
| 20-24 | 20.1 | 52.4 | 23.6 | 13.0 | 29.0 | 40.0 | 1,131 |
| 25-29 | 16.6 | 56.0 | 26.5 | 15.3 | 34.5 | 36.2 | 929 |
| 30-34 | 22.4 | 55.6 | 26.2 | 15.9 | 34.3 | 38.3 | 749 |
| 35-39 | 17.5 | 52.1 | 24.5 | 11.6 | 32.2 | 40.3 | 711 |
| 40-44 | 15.5 | 50.4 | 24.6 | 11.9 | 30.8 | 42.9 | 965 |
| 45-49 | 14.9 | 42.1 | 21.2 | 10.4 | 26.5 | 50.7 | 958 |
| Residence |  |  |  |  |  |  |  |
| Urban | 20.8 | 53.1 | 26.7 | 14.7 | 32.7 | 39.3 | 4,194 |
| Rural | 8.3 | 39.8 | 16.7 | 7.1 | 23.4 | 52.9 | 2,372 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 27.2 | 55.1 | 25.0 | 14.2 | 33.1 | 37.7 | 2,468 |
| Aragatsotn | 17.6 | 37.8 | 16.7 | 7.8 | 18.4 | 53.5 | 292 |
| Ararat | 0.2 | 32.3 | 3.2 | 0.6 | 2.1 | 66.3 | 462 |
| Armavir | 10.1 | 50.3 | 30.8 | 9.9 | 22.1 | 45.1 | 567 |
| Gegharkunik | 0.4 | 26.7 | 11.1 | 7.8 | 10.1 | 70.2 | 443 |
| Lori | 18.0 | 57.3 | 36.7 | 15.7 | 39.1 | 33.9 | 537 |
| Kotayk | 17.8 | 44.1 | 26.9 | 19.2 | 44.5 | 42.3 | 563 |
| Shirak | 2.4 | 34.7 | 14.8 | 6.2 | 16.7 | 58.2 | 563 |
| Syunik | 18.7 | 77.2 | 39.7 | 17.6 | 62.8 | 15.1 | 281 |
| Vayots Dzor | 18.0 | 42.1 | 18.9 | 6.2 | 2.1 | 49.7 | 107 |
| Tavush | 1.8 | 46.9 | 16.9 | 12.2 | 49.4 | 35.1 | 285 |
| Education |  |  |  |  |  |  |  |
| Basic general | 7.0 | 26.7 | 8.1 | 4.3 | 18.6 | 68.0 | 529 |
| Secondary general | 10.0 | 40.3 | 15.2 | 5.3 | 24.8 | 51.6 | 2,440 |
| Specialized secondary | 15.9 | 53.2 | 23.8 | 12.6 | 30.8 | 39.6 | 1,997 |
| Higher | 29.6 | 61.3 | 39.1 | 23.9 | 37.8 | 30.7 | 1,600 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 5.6 | 31.5 | 12.3 | 4.5 | 19.6 | 60.9 | 1,164 |
| Second | 6.9 | 43.3 | 16.4 | 6.5 | 22.0 | 50.3 | 1,284 |
| Middle | 10.1 | 45.2 | 20.5 | 10.2 | 27.2 | 46.0 | 1,303 |
| Fourth | 20.4 | 54.3 | 28.8 | 15.6 | 34.6 | 37.2 | 1,375 |
| Highest | 35.1 | 63.2 | 34.6 | 21.0 | 40.4 | 30.2 | 1,440 |
| Total | 16.3 | 48.2 | 23.1 | 12.0 | 29.3 | 44.2 | 6,566 |

Men are far less likely than women to have seen or heard a family planning message during the months preceding the survey (Table 5.17.2). Overall, three-quarters of men were not exposed to a family planning message from any of the specified sources. Differentials by wealth index and residence are not as pronounced among men as women. There is, however, a strong positive relationship with education. Television, reported by 16 percent of men, is the most likely source of a message.

| Table 5.17.2 Exposure to family planning messages: Men |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of men age 15-49 who heard or saw a family planning message in the past few months, by source of message and background characteristics, Armenia 2005 |  |  |  |  |  |  |  |
| Source of family planning message |  |  |  |  |  |  |  |
| Background characteristic | Radio | Television | Newspaper/ magazine | Pamphlet/ poster/leaflet/ booklet | Community event | None of the specified sources | Number of men |
| Age |  |  |  |  |  |  |  |
| 15-19 | 1.8 | 7.7 | 5.2 | 2.6 | 7.5 | 87.1 | 292 |
| 20-24 | 1.9 | 11.0 | 5.5 | 2.8 | 11.5 | 78.5 | 237 |
| 25-29 | 4.2 | 16.1 | 6.5 | 4.9 | 7.3 | 78.3 | 202 |
| 30-34 | 8.9 | 22.0 | 8.9 | 3.5 | 11.5 | 68.1 | 156 |
| 35-39 | 8.7 | 23.5 | 6.9 | 2.3 | 8.5 | 70.0 | 150 |
| 40-44 | 7.7 | 21.3 | 14.0 | 6.4 | 14.7 | 68.4 | 199 |
| 45-49 | 8.0 | 15.9 | 8.5 | 5.4 | 10.3 | 76.7 | 211 |
| Residence |  |  |  |  |  |  |  |
| Urban | 5.6 | 16.3 | 7.6 | 4.5 | 7.5 | 77.0 | 913 |
| Rural | 4.9 | 14.6 | 7.8 | 3.0 | 14.3 | 75.8 | 534 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 6.9 | 17.3 | 6.9 | 3.1 | 6.6 | 77.1 | 547 |
| Aragatsotn | 19.3 | 22.3 | 11.4 | 4.7 | 7.4 | 71.1 | 71 |
| Ararat | 2.1 | 3.1 | 2.2 | 0.3 | 20.8 | 76.4 | 110 |
| Armavir | 6.0 | 9.2 | 4.1 | 3.4 | 4.4 | 87.6 | 139 |
| Gegharkunik | 2.1 | 15.7 | 11.9 | 0.8 | 10.8 | 74.2 | 81 |
| Lori | 6.4 | 17.5 | 13.8 | 22.5 | 24.8 | 55.2 | 87 |
| Kotayk | 2.7 | 15.5 | 6.5 | 0.0 | 10.4 | 80.6 | 151 |
| Shirak | 0.0 | 7.4 | 4.0 | 3.3 | 2.2 | 88.9 | 98 |
| Syunik | 1.5 | 10.3 | 2.2 | 2.2 | 1.5 | 88.3 | 67 |
| Vayots Dzor | (3.2) | (6.5) | (3.2) | (2.5) | (3.2) | (93.5) | 31 |
| Tavush | 2.7 | 50.7 | 29.4 | 8.8 | 38.5 | 36.7 | 64 |
| Education |  |  |  |  |  |  |  |
| Basic general | 0.4 | 4.0 | 2.6 | 3.6 | 4.5 | 90.5 | 205 |
| Secondary general | 3.1 | 9.1 | 3.8 | 2.0 | 7.9 | 84.2 | 586 |
| Specialized secondary | 5.5 | 18.2 | 8.5 | 3.5 | 10.9 | 73.7 | 310 |
| Higher | 12.0 | 31.3 | 16.4 | 8.0 | 16.2 | 58.0 | 346 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 3.9 | 11.4 | 6.1 | 1.1 | 8.5 | 81.7 | 261 |
| Second | 3.8 | 11.0 | 5.5 | 3.3 | 10.8 | 82.6 | 264 |
| Middle | 2.9 | 15.6 | 7.0 | 4.6 | 10.5 | 75.1 | 326 |
| Fourth | 4.9 | 17.1 | 8.6 | 6.5 | 7.8 | 76.1 | 316 |
| Highest | 11.6 | 22.6 | 11.0 | 3.5 | 12.8 | 68.2 | 280 |
| Total | 5.4 | 15.7 | 7.7 | 3.9 | 10.1 | 76.5 | 1,447 |

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

### 5.12 Contact of Nonusers with Family Planning Providers

Table 5.18 shows the percent age of female nonusers who were exposed to a family planning provider. The vast majority of women not using a method of contraception had no discussions about family planning with a health professional during the 12 months preceding the survey. Very few nonusers discussed family planning with a health worker either inside or outside a health facility ( 4 percent and 5 percent, respectively). Approximately one-quarter of nonusers visited a health facility but did not discuss family planning.

Table 5.18 Contact of nonusers with family planning providers
Among women age 15-49 who are not using contraception, the percentage who were visited in the past 12 months 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 background characteristics, Armenia 2005

| Background characteristic | Percentage who were visited by a fieldworker who discussed family planning | Among women who visited a health facility in the past 12 months: |  | ```Percentage who neither discussed family planning with a fieldworker nor at a health facility``` | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Percentage who discussed family planning | Percentage who did not discuss family planning |  |  |
| Age |  |  |  |  |  |
| 15-19 | 1.9 | 1.0 | 13.9 | 97.8 | 1,110 |
| 20-24 | 5.9 | 5.7 | 23.6 | 92.2 | 913 |
| 25-29 | 9.9 | 7.7 | 36.7 | 88.3 | 495 |
| 30-34 | 4.8 | 4.9 | 35.1 | 92.4 | 342 |
| 35-39 | 3.9 | 5.8 | 24.2 | 92.9 | 325 |
| 40-44 | 4.7 | 2.6 | 28.4 | 94.1 | 503 |
| 45-49 | 2.7 | 0.9 | 28.5 | 96.9 | 707 |
| Residence |  |  |  |  |  |
| Urban | 4.6 | 3.2 | 28.3 | 94.6 | 2,842 |
| Rural | 4.2 | 4.3 | 18.7 | 93.6 | 1,553 |
| Region |  |  |  |  |  |
| Yerevan | 4.0 | 2.3 | 33.2 | 95.4 | 1,652 |
| Aragatsotn | 5.5 | 6.7 | 16.4 | 91.8 | 187 |
| Ararat | 0.8 | 0.2 | 8.9 | 99.0 | 336 |
| Armavir | 2.7 | 2.5 | 21.6 | 96.1 | 347 |
| Gegharkunik | 2.3 | 10.0 | 19.0 | 88.2 | 319 |
| Lori | 7.5 | 4.4 | 22.4 | 92.1 | 360 |
| Kotayk | 9.6 | 6.8 | 26.1 | 89.3 | 384 |
| Shirak | 2.1 | 1.1 | 17.2 | 97.9 | 414 |
| Syunik | 8.1 | 8.4 | 19.9 | 90.7 | 164 |
| Vayots Dzor | 7.8 | 0.6 | 9.3 | 92.2 | 63 |
| Tavush | 5.1 | 2.5 | 35.7 | 94.7 | 170 |
| Education |  |  |  |  |  |
| Basic general | 0.9 | 0.8 | 19.5 | 99.0 | 432 |
| Secondary general | 3.8 | 3.8 | 23.1 | 94.3 | 1,582 |
| Specialized secondary | 5.8 | 4.2 | 25.7 | 92.9 | 1,281 |
| Higher | 5.1 | 3.6 | 28.8 | 93.8 | 1,100 |
| Wealth quintile |  |  |  |  |  |
| Lowest | 3.6 | 3.6 | 17.0 | 94.6 | 771 |
| Second | 3.5 | 3.5 | 21.7 | 94.5 | 892 |
| Middle | 2.9 | 2.4 | 26.4 | 95.9 | 894 |
| Fourth | 5.5 | 3.5 | 30.0 | 93.7 | 911 |
| Highest | 6.5 | 4.9 | 28.2 | 92.6 | 927 |
| Total | 4.5 | 3.6 | 24.9 | 94.2 | 4,395 |

### 5.13 Men’s Attitudes toward Family Planning

Use of effective contraceptive methods is facilitated when couples have a positive attitude toward family planning. Attitudinal data were collected by asking men whether they agreed or disagreed with three statements about family planning use: 1) contraception is a woman's business and a man should not have to worry about it; 2) women who use contraception may become promiscuous; and 3) a woman is the one who gets pregnant so she should be the one who gets sterilized. Results are shown in Figure 5.4.

Figure 5.4 Men's Attitudes Toward Contraception


The data show that approximately one-fifth of men believe that contraception is a woman's business only, and one-quarter of men believe that women are the ones who should be sterilized. Just 13 percent of men think that women who use contraception may become promiscuous. Rural men are more likely than urban men to agree with each statement. It is particularly notable that 31 percent of rural men believe that women should bear the burden of dealing with contraception.

Married women who were using a contraceptive method were also asked if their husbands knew that they were using family planning. Almost all (98 percent) reported that their husbands know that they are using family planning (data not shown).

### 5.14 Informed Choice

Women should make decisions about contraceptive use after having been fully informed of the various methods and side effects or risks associated with the methods. Table 5.19 shows the percentage of current users of modern contraception who were told about the side effects of methods and the different methods available by a health or family planning worker at the time they accepted their current method.

Almost half of contraceptive users were informed about side effects (46 percent) and were told what to do if they did experience side effects ( 44 percent). This compares with approximately one-third of users in the 2000 ADHS ( 36 and 32 percent, respectively). Furthermore, 35 percent were informed about other methods of contraception, up from 23 percent in 2000. Despite the improvements suggested by the comparison of the 2000 and 2005 ADHS surveys, it is clear that both public and private health and family planning workers in Armenia need to provide women with more information about contraceptive methods in order to help women make informed choices.

| Table 5.19 Informed choice |  |  |  |
| :---: | :---: | :---: | :---: |
| Among current users of modern methods age 15-49 who started the last 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 source, Armenia 2005 |  |  |  |
| Type of information |  |  |  |
| Method and initial source | Percentage who were informed about side effects or problems of method used | Percentage who were informed what to do if experienced side effects | Percentage who were informed by a family planning worker of other methods that could be used |
| Method |  |  |  |
| Pill | (24.4) | (26.3) | (34.1) |
| IUD | 49.5 | 47.7 | 37.2 |
| Initial source of method ${ }^{1}$ |  |  |  |
| Hospital | (55.8) | (54.1) | (42.7) |
| M aternity hospital | 75.6 | 68.2 | 61.0 |
| W omen's health consulting center | (60.9) | (60.6) | (54.0) |
| Pharmacy | (30.0) | (35.5) | (35.9) |
| Other | * | * | (28.8) |
| Missing | 16.1 | 15.7 | 12.9 |
| Total | 45.6 | 44.2 | 35.0 |
| 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 excludes users who obtained their method from friends/relatives. ${ }^{1}$ Source at start of current episode of use |  |  |  |

## ABO RTIO N

In Armenia, as in all former Soviet countries, induced abortion was the primary means of fertility control for many years. Induced abortion was first legalized in the Soviet Union in 1920 but was banned in 1936 as part of a pronatalist policy. This decision was reversed in 1955 when abortion for nonmedical reasons was again legalized throughout the former Soviet Union. In 2002 the Parliament of Armenia adopted a new law, "About Reproductive Health and Reproductive Human Rights", that confirmed the legality of induced abortion up to 12 weeks of gestation. As published in the ADHS 2000 final report, between 10 and 20 percent of maternal deaths were from induced abortion. Over the past five years, this figure has declined substantially to an average of 5 percent of maternal deaths due to induced abortion (2 of 46 cases).

The practice of induced abortion can adversely affect a woman's health, reduce her chances for further childbearing, and contribute to maternal and perinatal mortality. In an effort to reduce the number of induced abortions, the Ministry of Health (MOH), with assistance from UNFPA, implemented the Armenian National Family Planning Program in 1997. As published in the ADHS 2000 final report, between 10 and 20 percent of maternal deaths were from induced abortion. Over the past five years, this figure has declined substantially to an average of 5 percent of maternal deaths due to induced abortion (2 of 46 cases).

Information about induced abortion was collected in the ADHS through a detailed reproductive history. In collecting the histories, each woman was first asked about the total number of pregnancies that had ended in live births, induced abortions, miscarriages, and stillbirths. After obtaining these aggregate data, an event-by-event pregnancy history was collected. For each pregnancy, the duration, the month and year of termination, and the outcome of the pregnancy were recorded. ${ }^{1}$

### 6.1 Pregnancy Outcomes

Table 6.1 shows the percent distribution of pregnancy outcomes occurring during the three-year period preceding the survey (approximately from October 2002 to October 2005). Almost half of pregnancies resulted in a live birth ( 48 percent), and approximately the same proportion resulted in an induced abortion (45 percent). ${ }^{2}$ Miscarriages compose 7 percent of all pregnancy outcomes, while stillbirths compose less than 1 percent.

[^6]

The proportion of pregnancies that end in induced abortion rises dramatically with age of the woman and with pregnancy order. Less than 10 percent of pregnancies to teenagers end in abortion, compared with one-quarter of pregnancies among women age 20-24, half of those to women age 25-34, and almost three-quarters of pregnancies among women age 35-44. There is an even steeper increase by pregnancy order, from 2 percent of first pregnancies to 79 percent of fifth or higher pregnancies.

There is little difference in pregnancy outcome by urban-rural residence, although rural women are slightly more likely than urban women to have had a recent pregnancy end in an induced abortion. It is interesting to note that there is a curvilinear relationship between induced abortion and education. Women with a basic general education have the lowest percentage of pregnancies resulting in induced abortion ( 38 percent), and women with a secondary general education have approximately one-quarter more pregnancies resulting in induced abortion (48 percent). Among women with specialized secondary and higher education, the percentage of pregnancies ending in abortion decreases ( 44 percent and 42 percent, respectively).

There is substantial variation in pregnancy outcomes by region, ranging from a low of 31 percent of pregnancies resulting in induced abortion in Ararat to a high of 56 percent in Shirak.

The proportion of pregnancies ending in induced abortion has declined over the past five years, from 55 percent in 2000 to 45 percent in 2005 (Figure 6.1). Conversely, the proportion of pregnancies ending in live births has increased.

Figure 6.1 Trends in Pregnancy Outcomes


### 6.2 LIfetime Experience with Induced Abortion

Table 6.2 shows women's lifetime experience with abortion. The statistics on the proportion of women who have ever had an abortion are based on all women 15-49 irrespective of their exposure to the risk of pregnancy.

Over one-third of all respondents have had an induced abortion (37 percent). Among women who have had an abortion, the mean number of abortions per woman is 2.6 . As expected, the frequency of abortions increases with age: among women 20-24 years of age, 8 percent have had an abortion, compared with 44 percent of women age 25-34 and 60 percent of women age 35 and older. There is also a positive relationship between having had an induced abortion and number of living children. Less than 1 percent of women with no living children have had an abortion, compared with 22 percent of women with one child, 64 percent of women with two to three children, and 69 percent of women with four or more children.

## Table 6.2 Lifetime experience with induced abortion

Percentage of women who have had at least one induced abortion, and among these women, percent distribution by number of abortions, and the mean number of abortions, according to background characteristics, Armenia 2005

| Background characteristic | Percentage of women with an induced abortion | Number of women | Among women who had an abortion, percent distribution by number of abortions |  |  |  |  | Mean number of abortions | Number of women with abortions |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 1 | 2-3 | 4-5 | $6+$ | Total |  |  |
| Age |  |  |  |  |  |  |  |  |  |
| <20 | 0.2 | 1,123 | * | * | * | * | * | * | 2 |
| 20-24 | 8.1 | 1,131 | 74.0 | 23.3 | 2.7 | 0.0 | 100.0 | 1.4 | 92 |
| 25-34 | 44.4 | 1,679 | 43.1 | 42.0 | 9.4 | 5.6 | 100.0 | 2.3 | 745 |
| 35+ | 60.1 | 2,633 | 29.9 | 48.1 | 12.9 | 9.0 | 100.0 | 2.8 | 1,582 |
| Number of living children |  |  |  |  |  |  |  |  |  |
| 0 | 0.6 | 2,352 | * | * | * | * | * | * | 13 |
| 1 | 21.6 | 743 | 51.7 | 36.8 | 7.6 | 3.8 | 100.0 | 2.0 | 160 |
| 2-3 | 64.4 | 3,194 | 34.6 | 46.6 | 11.3 | 7.6 | 100.0 | 2.6 | 2,056 |
| 4+ | 69.0 | 278 | 30.4 | 40.3 | 17.1 | 12.2 | 100.0 | 3.2 | 192 |
| Marital status |  |  |  |  |  |  |  |  |  |
| Never married | 0.5 | 2,043 | * | * | * | * | * | * | 10 |
| Currently married | 54.5 | 4,044 | 35.1 | 45.4 | 11.8 | 7.7 | 100.0 | 2.6 | 2,203 |
| Formerly married | 43.3 | 479 | 42.3 | 44.5 | 7.5 | 5.7 | 100.0 | 2.2 | 208 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 35.0 | 4,194 | 36.6 | 44.7 | 11.0 | 7.6 | 100.0 | 2.6 | 1,467 |
| Rural | 40.2 | 2,372 | 34.3 | 46.1 | 12.0 | 7.6 | 100.0 | 2.6 | 955 |
| Region |  |  |  |  |  |  |  |  |  |
| Yerevan | 34.4 | 2,468 | 38.7 | 43.1 | 10.4 | 7.8 | 100.0 | 2.6 | 849 |
| Aragatsotn | 38.0 | 292 | 33.7 | 42.7 | 13.2 | 10.4 | 100.0 | 2.6 | 111 |
| Ararat | 38.2 | 462 | 38.9 | 50.9 | 8.0 | 2.2 | 100.0 | 2.1 | 177 |
| Armavir | 35.1 | 567 | 39.5 | 52.4 | 7.3 | 0.7 | 100.0 | 1.9 | 199 |
| Gegharkunik | 45.7 | 443 | 24.2 | 36.1 | 17.7 | 22.0 | 100.0 | 3.9 | 202 |
| Lori | 39.0 | 537 | 39.7 | 54.9 | 4.8 | 0.6 | 100.0 | 1.9 | 209 |
| Kotayk | 41.7 | 563 | 22.2 | 44.9 | 19.0 | 13.9 | 100.0 | 3.6 | 235 |
| Shirak | 35.4 | 563 | 35.7 | 45.4 | 12.6 | 6.2 | 100.0 | 2.7 | 199 |
| Syunik | 28.9 | 281 | 64.2 | 33.9 | 1.3 | 0.7 | 100.0 | 1.5 | 81 |
| Vayots Dzor | 34.4 | 107 | 29.5 | 50.2 | 14.4 | 5.9 | 100.0 | 2.6 | 37 |
| Tavush | 42.9 | 285 | 26.8 | 48.2 | 18.6 | 6.4 | 100.0 | 2.7 | 122 |
| Education |  |  |  |  |  |  |  |  |  |
| Basic general | 27.2 | 529 | 39.7 | 42.8 | 13.7 | 3.8 | 100.0 | 2.4 | 144 |
| Secondary general | 40.8 | 2,440 | 32.5 | 44.4 | 12.6 | 10.5 | 100.0 | 2.9 | 995 |
| Specialized secondary | 42.6 | 1,997 | 37.8 | 45.1 | 11.2 | 5.8 | 100.0 | 2.4 | 850 |
| Higher | 27.0 | 1,600 | 37.4 | 48.2 | 8.5 | 5.9 | 100.0 | 2.4 | 432 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |
| Lowest | 39.3 | 1,164 | 35.8 | 44.9 | 11.1 | 8.2 | 100.0 | 2.6 | 457 |
| Second | 37.8 | 1,284 | 34.7 | 45.5 | 12.0 | 7.8 | 100.0 | 2.7 | 485 |
| Middle | 39.3 | 1,303 | 38.0 | 44.6 | 10.8 | 6.6 | 100.0 | 2.4 | 513 |
| Fourth | 36.6 | 1,375 | 34.4 | 46.6 | 11.9 | 7.1 | 100.0 | 2.6 | 504 |
| Highest | 32.0 | 1,440 | 35.4 | 44.7 | 11.2 | 8.7 | 100.0 | 2.7 | 461 |
| Total | 36.9 | 6,566 | 35.7 | 45.3 | 11.4 | 7.6 | 100.0 | 2.6 | 2,421 |

Note: Currently married includes respondents in consensual union (living together). Formerly married includes divorced, separated, and widowed respondents. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

There are no pronounced differentials in lifetime prevalence of induced abortions by urban-rural residence. There is a curvilinear relationship between level of education and induced abortion with both the least educated women and the most educated women less likely to have an induced abortion than other women. It is possible that reduced access to abortion services among less educated women accounts for the low recourse to abortion (i.e., when a woman gets pregnant, she is more likely to give birth); at the same time, it is possible that women with higher education, who use more reliable methods of birth control, are less likely to become accidentally pregnant in the first place. There is significant variation in lifetime experience of induced abortion by region, ranging from a low of 29 percent in Syunik to a high of 46 percent in Gegharkunik.

Among women who have ever had an abortion, almost two-thirds have had more than one abortion. Forty-five percent of women who ever had an abortion reported 2 to 3 abortions, and 11 percent reported 4 to 5 abortions. Eight percent had 6 or more abortions; for these women, abortion is the main method of fertility control. There is considerable variation by region.

### 6.3 Rates of Induced Abortion

In Table 6.3, rates of induced abortion are shown for the three-year period preceding the ADHS survey (approximately October 2002 to October 2005). Three types of rates are presented: age-specific abortion rates, the total abortion rate, and the general abortion rate. Age-specific abortion rates (ASARs), which are shown per 1,000 women, express the number of abortions among women of a given age, divided by the total number of women in that age group. The total abortion rate (TAR), which is expressed per woman, is a summary measure of the age-specific rates. The TAR is interpreted as the number of abortions a woman would have in her lifetime if she experienced the currently observed age-specific rates during her childbearing years.

At the national level, the age-specific rates for induced abortion increase in the first few age groups of women, peak among women age 25-29 (123 per 1,000 women), and decline in the older age group. Agespecific abortion rates are lower than the fertility rates

| Table 6.3 Induced abortion rates |  |  |  |
| :---: | :---: | :---: | :---: |
| Age-specific induced abortion rates (per 1,000 women), total abortion rates (TAR), and general abortion rate (GAR) for the three-year period preceding the survey, Armenia 2005 |  |  |  |
| Age group | Place | ence |  |
|  | Urban | Rural | Total |
| 15-19 | 5 | 2 | 4 |
| 20-24 | 53 | 73 | 60 |
| 25-29 | 112 | 144 | 123 |
| 30-34 | 75 | 122 | 92 |
| 35-39 | 39 | 73 | 53 |
| 40-44 | 15 | 16 | 16 |
| 45-49 | 9 | 2 | 7 |
| Rate ${ }^{1}$ |  |  |  |
| TAR 15-49 | 1.5 | 2.2 | 1.8 |
| TAR 15-44 | 1.5 | 2.2 | 1.7 |
| GAR | 48 | 64 | 54 |
| ${ }^{1}$ Total abortion rate (TAR) expressed per woman. General abortion rate (GAR) (abortions divided by number of women 15-44) expressed per 1,000 women. |  |  |  | of women under age 25 but are greater than the fertility rates for older women (Figure 6.2).

The total abortion rate is 1.8. The rural TAR is almost 50 percent higher than the urban TAR (2.2 versus 1.5). The age-specific abortion rates are higher among rural women than among urban women for all but the youngest and oldest cohorts.

Figure 6.2 Age-specific Fertility Rates and Abortion Rates, 2005


ADHS 2005

Table 6.4 shows induced abortion rates by background characteristics. There are significant differentials by background characteristics. The total abortion rates vary by region from a low of 1.1 in Ararat and Syunik to a high of 2.9 in Gegharkunik. Yerevan has a TAR of 1.6. The women with the highest education have the lowest TAR.

### 6.4 Trends in Induced Abortion

The 2005 ADHS TAR of 1.8 is significantly lower than the 2000 ADHS rate of 2.6. The decline is evident at every age group except the oldest (Figure 6.3). The reason for such a difference is not clear, particularly given the accompanying decline in contraceptive use. It is notable that more married women reported that their husbands were residing elsewhere in 2005 than in 2000 ( 14 percent versus 11 percent; data not shown).

Table 6.4 Induced abortion rates by background characteristics
Total induced abortion rates for the three years preceding the survey and mean number of abortions among women age 40-49, by background characteristics, Armenia 2005

|  | Total abortion rate | M ean number of |
| :--- | :---: | :---: |
| Background <br> characteristic | among women | abortions among |
|  | age 15-49 | women age 40-49 |


| Residence |  |  |
| :--- | :---: | :--- |
| Urban | 1.5 | 1.7 |
| Rural | 2.2 | 1.8 |
|  |  |  |
| Region | 1.6 | 1.6 |
| Yerevan | 2.6 | 1.9 |
| Aragatsotn | 1.1 | 1.3 |
| Ararat | 2.1 | 1.0 |
| Armavir | 2.9 | 3.1 |
| Gegharkunik | $1.4)$ | 1.2 |
| Lori | 2.1 | 3.1 |
| Kotayk | 1.8 | 1.8 |
| Shirak | 1.1 | 0.6 |
| Syunik | $1.4)$ | 1.7 |
| Vayots Dzor | 1.9 | 2.1 |
| Tavush |  |  |
| Education | 1.7 | 1.5 |
| Basic general | 2.1 | 2.0 |
| Secondary general | 1.7 | 1.6 |
| Specialized secondary | 1.4 | 1.4 |
| Higher |  |  |
| Wealth quintile | 2.4 | 1.6 |
| Lowest | 2.0 | 1.8 |
| Second | 1.4 | 1.7 |
| Middle | 1.5 | 1.7 |
| Fourth | 1.6 | 1.8 |
| Highest | 1.8 | 1.7 |
| Total |  |  |

N ote: Figures in parentheses are based on 250-499 unweighted women.

Figure 6.3 Trends in Age-Specific Abortion Rates, 2000 and 2005


Although it is possible that a decline in sexual activity could have contributed to a lower TAR, approximately the same proportion of women in both surveys reported being sexually active during the month preceding the survey (Table 7.6.1). Thus, the data do not suggest a decline in sexual activity.

Furthermore, even if there was a recent decline in the prevalence of induced abortion, an accompanying decline in lifetime abortion measures would not be expected. For example, whereas almost half (47 percent) of all respondents in the 2000 ADHS had had an induced abortion, just 37 percent reported having an induced abortion according to the 2005 ADHS. Furthermore, according to the 2000 ADHS, women age 40-49 had an average of 2.8 abortions, compared with 1.7 in the current survey.

Detailed analysis is beyond the scope of this report. However, a number of factors could contribute to this anomaly. First, the apparent trend could be due to underreporting of abortions in 2005 compared with 2000. Anecdotal evidence suggests that the drug Cytotec ${ }^{\circledR}$-the trade name of a synthetic prostaglandin analogue, misoprostol-recently became available in Armenia. This drug was originally used for treatment of ulcers but currently is widely used for induction of abortion in early stages of pregnancy before 49 days of gestation. Typically, a woman whose menstrual period is delayed for a week or more might obtain the drug in tablet form in a private pharmacy. Private pharmacy sales are not regulated in Armenia, and Cytotec can be purchased without a physician’s prescription or a positive pregnancy test. Combination of the drug taken both by mouth and in the vagina for a period of two to three days is effective in inducing an abortion. The total cost is approximately 1,000 drams, significantly cheaper than a medically induced abortion for a pregnancy of up to 12 weeks of gestation performed under medical supervision. Thus, compared with an induced abortion performed in a clinic, a Cytotec-induced abortion usually is self-prescribed and can be performed at home. In this case, the woman might consider it a menstrual regulation procedure and might not report the event as an abortion in the survey.

Second, if social norms are beginning to change, then it is possible that women feel an increased reluctance to openly answer questions about abortion. Third, underreporting might be due to the interviewer performance, as the interviewers were not trained to ask specifically about any types of menstrual regulation procedures performed by the woman at home. In the case of using Cytotec or similar medication at home, the woman may not consider herself to be pregnant and may not report this event, contrary to a more advanced pregnancy terminated in the clinic.

### 6.5 Use of Contraceptive Methods Before Abortion

It is important to know the contraceptive behavior of women that leads to an induced abortion. This information is of particular interest to both family planning counselors and abortion providers because a woman who has an abortion is either not using a method of contraception at the time of conception or is using (perhaps incorrectly) a method that failed. For each pregnancy that terminated in the three years preceding the survey, respondents were asked whether they were using a method of contraception at the time they became pregnant, and if so, which method.

Table 6.5 shows use of contraception at the time of conception. Approximately half of respondents who had an induced abortion were using a method of contraception at the time they became pregnant ( 52 percent). Thus, these abortions were the result of contraceptive failure. The majority of these contraceptive failures ( 43 percent overall) occurred after failure of a traditional contraceptive method- 33 percent while using withdrawal and 6 percent using periodic abstinence.

| Table 6.5 Use of a contraception before pregnancy |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Percent distribution of pregnancy outcomes in the three years preceding the survey, by contraceptive method used at the time of conception, Armenia 2005 |  |  |  |  |
|  | Pregnancy outcome |  |  | All pregnancies |
| Contraceptive method | Live birth | Induced abortion | M iscarriage |  |
| No method used | 84.0 | 48.1 | 80.5 | 67.6 |
| Any method | 16.0 | 51.9 | 19.5 | 32.4 |
| Any modern method | 4.1 | 9.2 | 3.9 | 6.3 |
| Pill | 0.1 | 1.1 | 0.6 | 0.6 |
| IUD | 1.2 | 0.3 | 0.0 | 0.7 |
| Injection | 0.0 | 0.0 | 0.0 | 0.0 |
| M ale condom | 2.8 | 7.0 | 3.3 | 4.7 |
| Foam/jelly | 0.0 | 0.8 | 0.0 | 0.4 |
| Any traditional method | 11.9 | 42.7 | 15.7 | 26.1 |
| Lactational amenorrhea | 0.4 | 0.0 | 0.0 | 0.2 |
| Periodic abstinence | 0.2 | 5.7 | 0.0 | 2.7 |
| W ithdrawal | 9.9 | 33.0 | 10.5 | 20.4 |
| O ther | 1.3 | 4.0 | 5.2 | 2.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of pregnancies | 959 | 892 | 133 | 1,990 |
| Note: Total includes 6 stillbirths that are not shown separately. |  |  |  |  |

In addition to a high level of contraceptive failure, it is important to note that almost half of pregnancies resulting in induced abortion occurred to women not using any method of contraception to prevent the pregnancy. It seems clear that access to and use of more reliable methods of contraception would reduce the incidence of induced abortion, thus improving the reproductive health of the women of Armenia.

## OTHER PROXIMATE DETERMINANTS OF FERTILITY

Given the biological capacity to reproduce, the social environment in which people live largely determines whether couples will have children and, if so, how many and with what kind of spacing. This chapter addresses the principal factors other than contraception and abortion that influence fertility. These factors include marriage (including consensual unions), sexual activity, postpartum amenorrhea and abstinence from sexual relations, and menopause.

Marriage is a primary indicator of a woman's exposure to the risk of pregnancy. More direct measures of exposure are age at first sexual intercourse and the frequency of intercourse. Postpartum amenorrhea and abstinence affect the interval between births. Menopause is important because it marks the end of a woman's period of exposure to the risk of pregnancy. None of these determining factors are independent; they interact and influence each other and affect fertility levels and trends. Their contribution varies from person to person, from region to region, and from time to time.

### 7.1 Marital Status

Table 7.1 and Figure 7.1 show the distribution of all women age $15-49$ by current marital status at the time of the survey. The term "married" refers to legal or formal marriages (civil or religious), while "living together" refers to informal unions. In subsequent tables, these two categories are merged and referred to collectively as "currently married." Persons who are widowed, divorced, or separated are considered to be "formerly married." According to the 2005 ADHS, a majority of women ( 62 percent) are either formally married or cohabiting, 5 percent are either divorced or separated, and 2 percent are widowed. Thirty-one percent of women have never been married.

| Table 7.1 Current marital status |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of women and men age 15-49 by current marital status, according to age, Armenia 2005 |  |  |  |  |  |  |  |  |
|  | M arital status |  |  |  |  |  |  | Number |
| Age | Never married | M arried | Living together | Divorced | Separated | Widowed | Total | respondents |
| WOMEN |  |  |  |  |  |  |  |  |
| 15-19 | 92.9 | 6.8 | 0.2 | 0.1 | 0.0 | 0.0 | 100.0 | 1,123 |
| 20-24 | 54.2 | 43.9 | 0.7 | 1.1 | 0.1 | 0.0 | 100.0 | 1,131 |
| 25-29 | 21.2 | 74.4 | 0.4 | 2.8 | 1.0 | 0.3 | 100.0 | 929 |
| 30-34 | 9.0 | 79.9 | 0.3 | 5.5 | 2.1 | 3.3 | 100.0 | 749 |
| 35-39 | 4.6 | 83.6 | 1.0 | 6.6 | 2.3 | 1.9 | 100.0 | 711 |
| 40-44 | 4.6 | 84.1 | 1.2 | 5.1 | 1.0 | 4.0 | 100.0 | 965 |
| 45-49 | 4.6 | 76.0 | 1.4 | 6.8 | 3.4 | 7.9 | 100.0 | 958 |
| Total | 31.1 | 60.8 | 0.7 | 3.7 | 1.3 | 2.4 | 100.0 | 6,566 |
| M EN |  |  |  |  |  |  |  |  |
| 15-19 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 292 |
| 20-24 | 79.0 | 18.8 | 2.2 | 0.0 | 0.0 | 0.0 | 100.0 | 237 |
| 25-29 | 37.3 | 52.8 | 9.7 | 0.0 | 0.2 | 0.0 | 100.0 | 202 |
| 30-34 | 12.8 | 79.5 | 4.8 | 2.3 | 0.5 | 0.0 | 100.0 | 156 |
| 35-39 | 13.1 | 73.9 | 12.1 | 0.8 | 0.0 | 0.0 | 100.0 | 150 |
| 40-44 | 7.4 | 78.7 | 11.7 | 2.3 | 0.0 | 0.0 | 100.0 | 199 |
| 45-49 | 3.0 | 82.7 | 11.3 | 0.9 | 0.0 | 2.1 | 100.0 | 211 |
| Total | 42.5 | 49.6 | 6.7 | 0.8 | 0.1 | 0.3 | 100.0 | 1,447 |

These data confirm the near universality of marriage in Armenia. The proportion of women currently married increases with age up to age 40-44 and then declines among the oldest women as the likely proportions of women widowed, divorced, or separated increase. Among women age 45-49, only 5 percent have never married, 77 percent are married or cohabiting with a man, and 18 percent are formerly married. The main reason for marital disruption among this age group is widowhood (8 percent).

Table 7.1 shows that, compared with women, men are more likely to have never married (43 percent of men and 31 percent of women). This difference is largely explained by the tendency of men to marry at later ages. For example, 45 percent of women between the ages of 20 and 24 are in union compared with 21 percent of men of the same age.

Figure 7.1 Marital Status of Respondents


### 7.2 Age at First Marriage and Sexual Intercourse

Marriage is an important demographic and social indicator; it generally marks the point in a person's life when parenthood becomes welcome. Information on age at first marriage was obtained by asking all ever-married respondents the month and year they started living together with their first spouse. The ADHS also asked women to state the age at which they first had sexual intercourse.

Overall, the 2005 ADHS results indicate that among Armenian women, age at first marriage and age at first intercourse correspond almost exactly. Tables 7.2 and 7.3 indicate that by age 20 virtually the same proportion have married ( 42 percent) as has had sexual intercourse ( 43 percent). By age 25,80 percent of women have married and the same proportion has had sexual intercourse. The relationship between first marriage and first sexual intercourse is observed among women of all ages. The median age of both first marriage and first intercourse appears to be increasing among younger women (age 25-29) after having decreased slightly from just over 21 among women age 45-49 to just under 20 among women age $30-34$. Among all women age 25-49, the median age at both first marriage and first intercourse was 20.7 years.

Unlike women, it is common for Armenian men to report having sexual intercourse before marriage. For example, although very few men are married by age 20 (just 3 percent), more than half ( 53 percent) have had sexual intercourse by the same age. The median age at first intercourse among men age $30-34$ is six years older than median age at first marriage (26 versus 20).

| Percentage of women and men age 15-49 who were first married by specific exact ages, percentage who never married, and median age at first marriage, by current age, Armenia 2005 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Perce were | f respo arried | s who t age: |  | Percentage | Number | Median age at |
| Current age | 15 | 18 | 20 | 22 | 25 | married | respondents | marriage ${ }^{1}$ |
| WOMEN |  |  |  |  |  |  |  |  |
| 15-19 | 0.3 | na | na | na | na | 92.9 | 1,123 | a |
| 20-24 | 0.3 | 9.9 | 26.8 | na | na | 54.2 | 1,131 | a |
| 25-29 | 0.9 | 20.6 | 39.7 | 57.3 | 72.4 | 21.2 | 929 | 21.2 |
| 30-34 | 0.3 | 23.9 | 52.7 | 67.6 | 80.6 | 9.0 | 749 | 19.8 |
| 35-39 | 0.7 | 17.5 | 49.8 | 69.8 | 87.1 | 4.6 | 711 | 20.0 |
| 40-44 | 0.2 | 11.4 | 40.8 | 65.2 | 81.7 | 4.6 | 965 | 20.7 |
| 45-49 | 0.6 | 10.8 | 32.7 | 55.6 | 78.6 | 4.6 | 958 | 21.5 |
| 25-49 | 0.5 | 16.4 | 42.3 | 62.5 | 79.7 | 8.9 | 4,312 | 20.7 |
| M EN |  |  |  |  |  |  |  |  |
| 15-19 | 0.0 | na | na | na | na | 100.0 | 292 | a |
| 20-24 | 0.0 | 0.2 | 1.6 | na | na | 79.0 | 237 | a |
| 25-29 | 0.0 | 1.3 | 2.4 | 13.0 | 41.1 | 37.3 | 202 | a |
| 30-34 | 0.0 | 1.1 | 6.1 | 16.2 | 37.7 | 12.8 | 156 | 25.9 |
| 35-39 | 0.0 | 0.0 | 2.2 | 14.5 | 41.6 | 13.1 | 150 | 25.9 |
| 40-44 | 0.0 | 1.4 | 3.3 | 19.1 | 49.9 | 7.4 | 199 | 25.0 |
| 45-49 | 0.0 | 0.0 | 1.2 | 20.0 | 49.8 | 3.0 | 211 | 25.0 |
| 25-49 | 0.0 | 0.8 | 2.9 | 16.7 | 44.5 | 14.8 | 918 | a |
| na $=$ Not applicable due to censoring <br> $a=0$ mitted because less than 50 percent of the respondents married for the first time before reaching the beginning of the age group <br> ${ }^{1}$ The median is the midpoint of the distribution of respondents by exact age at first marriage |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |


| Table 7.3 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, Armenia 2005 |  |  |  |  |  |  |  |  |
|  | Percentage of respondents who had first sexual intercourse by exact age: |  |  |  |  | Percentage who | Number | Median age at |
| Current age | 15 | 18 | 20 | 22 | 25 | intercourse | respondents | intercourse ${ }^{1}$ |
| WOMEN |  |  |  |  |  |  |  |  |
| 15-19 | 0.3 | na | na | na | na | 92.9 | 1,123 | a |
| 20-24 | 0.2 | 9.0 | 26.2 | na | na | 54.2 | 1,131 | a |
| 25-29 | 0.9 | 20.1 | 39.2 | 56.6 | 73.0 | 20.4 | 929 | 21.2 |
| 30-34 | 0.3 | 22.9 | 52.4 | 65.9 | 79.8 | 8.3 | 749 | 19.8 |
| 35-39 | 0.4 | 16.9 | 50.8 | 69.8 | 86.4 | 4.4 | 711 | 20.0 |
| 40-44 | 0.2 | 11.5 | 41.6 | 63.2 | 82.0 | 3.8 | 965 | 20.7 |
| 45-49 | 0.7 | 10.7 | 34.1 | 57.1 | 79.5 | 4.3 | 958 | 21.4 |
| 25-49 | 0.5 | 16.0 | 42.8 | 62.0 | 79.9 | 8.4 | 4,312 | 20.7 |
| M EN |  |  |  |  |  |  |  |  |
| 15-19 | 2.6 | na | na | na | na | 86.6 | 292 | a |
| 20-24 | 3.0 | 29.5 | 56.1 | na | na | 26.4 | 237 | 19.4 |
| 25-29 | 0.8 | 24.9 | 50.5 | 72.9 | 86.2 | 7.9 | 202 | 19.9 |
| 30-34 | 2.2 | 27.4 | 54.8 | 71.8 | 83.9 | 0.3 | 156 | 19.6 |
| 35-39 | 0.4 | 21.9 | 56.9 | 76.8 | 88.4 | 1.6 | 150 | 19.6 |
| 40-44 | 0.4 | 20.8 | 49.6 | 68.5 | 87.3 | 0.5 | 199 | 20.0 |
| 45-49 | 0.9 | 19.6 | 52.7 | 73.4 | 89.4 | 0.2 | 211 | 19.7 |
| 25-49 | 0.9 | 22.7 | 52.6 | 72.5 | 87.2 | 2.2 | 918 | 19.8 |
| na $=$ Not applicable due to censoring <br> $a=0$ mitted because less than 50 percent of the respondents had had sexual intercourse before reaching the beginning of the age group <br> ${ }^{1}$ The median is the midpoint of the distribution of respondents by exact age at first sexual intercourse. |  |  |  |  |  |  |  |  |

The median age at first marriage by background characteristics is shown in Table 7.4 for women and men, and for women, by age group. The median age at first sexual intercourse is shown in Table 7.5 and Figure 7.2. Both medians are higher among urban women than rural women. As expected, there is a positive relationship between level of education and age at first marriage (and first intercourse); among women with a basic general education, the median age at first marriage is approximately 19. The median age increases steadily with increasing education to almost 24 among women with higher education.

Figure 7.2 Median Age at First Sexual Intercourse among Respondents, by Residence and Education


Median age at first marriage and first intercourse varies little by region. The highest median age for women is in Yerevan (21.8 for first marriage and first sexual intercourse) and the lowest is in Gegharkunik (19.6 for first marriage and 19.5 for first intercourse). There has been little change in age at first marriage or age at first intercourse among women over time.

Tables 7.4 and 7.5 show the median age at first marriage for men age 30-49 and the median age at first intercourse for men age 25-49. Because of the small number of men, data are not shown by age groups. Men in urban areas are more likely to have sex earlier than men in rural areas but get married later. Similarly, although the median age at first marriage is three years older among men with higher education than men with basic education, the most educated men have first sex one year before the least educated men. The median age at first sex for men varies significantly by region, from 17.8 in Ararat to 24.9 in Shirak.

| Table 7.4 Median age at first marria |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Median age at first marriage among women 25-49 and men 30-49, by current age (women) and background characteristics, Armenia 2005 |  |  |  |  |  |  |  |
|  | Current age |  |  |  |  | W omen | Men |
| Background characteristic | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 29-49 | $\begin{gathered} \text { age } \\ 30-49 \end{gathered}$ |
| Residence |  |  |  |  |  |  |  |
| Urban | 22.1 | 21.0 | 20.5 | 21.3 | 21.8 | 21.4 | 26.1 |
| Rural | 19.6 | 18.8 | 19.6 | 20.0 | 21.1 | 19.8 | 24.5 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 22.4 | 21.8 | 20.8 | 21.9 | 22.1 | 21.8 | 27.4 |
| Aragatsotn | 20.2 | 18.8 | 19.7 | 20.4 | 21.4 | 20.3 | 24.9 |
| Ararat | 20.2 | 19.6 | 20.3 | 20.9 | 20.9 | 20.3 | 24.7 |
| Armavir | 19.6 | 18.5 | 19.6 | 20.2 | 22.0 | 20.0 | 24.1 |
| Gegharkunik | 18.7 | 18.9 | 19.4 | 19.6 | 20.9 | 19.6 | 25.1 |
| Lori | 20.1 | 19.3 | (19.8) | 19.8 | 20.9 | 20.0 | 23.3 |
| Kotayk | 20.4 | 19.8 | 19.5 | 19.9 | 20.0 | 19.9 | 24.7 |
| Shirak | 22.5 | 18.8 | 20.4 | 20.9 | 21.5 | 20.8 | 24.4 |
| Syunik | 21.8 | 20.4 | 19.9 | 20.7 | 21.1 | 20.8 | 24.2 |
| Vayots Dzor | (21.3) | (19.2) | (19.6) | 20.7 | 21.6 | 20.5 | 24.3 |
| Tavush | 20.1 | 19.4 | 19.7 | 20.3 | 21.3 | 20.3 | 24.5 |
| Education |  |  |  |  |  |  |  |
| Basic general | 17.0 | (17.7) | (17.9) | (18.8) | (20.2) | 18.6 | 24.2 |
| Secondary general | 18.8 | 18.4 | 18.8 | 19.7 | 20.4 | 19.3 | 24.5 |
| Specialized secondary | 22.4 | 19.7 | 20.3 | 20.9 | 21.3 | 20.8 | 25.4 |
| Higher | 24.0 | 23.3 | 23.0 | 23.7 | 24.1 | 23.6 | 27.4 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 18.9 | 18.5 | 19.6 | 20.2 | 21.5 | 19.8 | 24.4 |
| Second | 20.4 | 19.2 | 19.8 | 20.1 | 21.6 | 20.2 | 25.4 |
| Middle | 20.9 | 20.4 | 19.9 | 20.9 | 21.1 | 20.8 | 25.5 |
| Fourth | 22.3 | 20.1 | 20.2 | 21.0 | 21.0 | 21.0 | 25.6 |
| Highest | 22.5 | 21.8 | 20.9 | 21.5 | 22.3 | 21.8 | 26.7 |
| Total women | 21.2 | 19.8 | 20.0 | 20.7 | 21.5 | 20.7 | na |
| Total men | a | 25.9 | 25.9 | 25.0 | 25.0 | na | 25.5 |
| Note: The median is the midpoint of the distribution of respondents by exact age at first marriage. Figures in parentheses are based on 25-49 unweighted cases. <br> na $=$ Not applicable <br> $a=0$ mitted because less than 50 percent of respondents had married before reaching the beginning of the age group |  |  |  |  |  |  |  |


| Table 7.5 M edian age at first sexual intercourse |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Median age at first sexual intercourse among women and men age 25-49 years, by current age (women) and background characteristics, Armenia 2005 |  |  |  |  |  |  |  |
|  | Current age |  |  |  |  | W omen | M en |
| Background |  |  |  |  |  | age | age |
| characteristic | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 25-49 | 25-49 |
| Residence |  |  |  |  |  |  |  |
| Urban | 22.1 | 21.0 | 20.4 | 21.3 | 21.5 | 21.4 | 19.4 |
| Rural | 19.7 | 18.8 | 19.6 | 20.0 | 21.2 | 19.8 | 20.3 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 22.4 | 22.0 | 20.8 | 22.1 | 21.7 | 21.8 | 18.8 |
| Aragatsotn | 20.2 | 18.7 | 20.2 | 20.6 | 21.4 | 20.4 | 20.2 |
| Ararat | 20.3 | 19.9 | 20.2 | 21.2 | 21.5 | 20.6 | 17.8 |
| Armavir | 19.6 | 18.5 | 19.5 | 20.0 | 21.6 | 19.9 | 20.0 |
| Gegharkunik | 18.7 | 18.8 | 19.3 | 19.5 | 20.6 | 19.5 | 21.6 |
| Lori | 20.1 | 19.3 | (19.7) | 19.8 | 21.2 | 20.0 | 20.1 |
| Kotayk | 20.5 | 20.0 | 19.5 | 19.9 | 19.6 | 19.9 | 19.4 |
| Shirak | 22.6 | 19.1 | 20.3 | 21.0 | 21.6 | 20.8 | 24.9 |
| Syunik | 21.8 | 20.5 | 19.9 | 20.7 | 21.3 | 20.8 | 22.5 |
| Vayots Dzor | (22.0) | (20.1) | (19.7) | 20.8 | 21.6 | 20.6 | 19.0 |
| Tavush | 20.1 | 19.4 | 19.7 | 20.3 | 21.3 | 20.3 | 22.2 |
| Education |  |  |  |  |  |  |  |
| Basic general | 17.0 | (17.6) | (18.4) | (18.8) | (19.6) | 18.5 | 20.8 |
| Secondary general | 19.0 | 18.5 | 18.8 | 19.7 | 20.2 | 19.4 | 19.6 |
| Specialized secondary | 22.5 | 19.8 | 20.2 | 21.0 | 21.4 | 20.9 | 19.5 |
| Higher | 23.9 | 23.3 | 23.1 | 23.7 | 24.0 | 23.6 | 19.7 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 19.0 | 18.6 | 19.6 | 20.4 | 21.4 | 19.8 | 21.0 |
| Second | 20.5 | 19.3 | 19.7 | 19.9 | 21.5 | 20.1 | 19.7 |
| M iddle | 20.8 | 20.7 | 19.9 | 21.0 | 21.0 | 20.8 | 19.8 |
| Fourth | 22.3 | 20.1 | 20.2 | 20.9 | 20.9 | 20.9 | 18.9 |
| Highest | 22.7 | 22.0 | 20.8 | 21.6 | 22.3 | 21.9 | 19.2 |
| Total women | 21.2 | 19.8 | 20.0 | 20.7 | 21.4 | 20.7 | na |
| Total men | 19.9 | 19.6 | 19.6 | 20.0 | 19.7 | na | 19.8 |
| Note: The median is the midpoint of the distribution of respondents by exact age at first marriage. Figures in parentheses are based on 25-49 unweighted cases. <br> na $=$ Not applicable |  |  |  |  |  |  |  |

### 7.3 Recent Sexual Activity

In the absence of contraceptive use, frequency of sexual intercourse is a direct determinant of pregnancy; therefore, knowledge of frequency is a useful indicator of exposure to pregnancy. The 2005 ADHS asked women the timing of their last sexual intercourse. Table 7.6.1 shows the percent distribution of women by time since their last sexual intercourse. Respondents were considered to be sexually active if they had sexual intercourse at least once in the four weeks prior to the survey.

In the four weeks preceding the survey, approximately half of women were sexually active (49 percent). Ten percent of women had sexual intercourse in the year preceding the survey, but not in the month before the survey, and 9 percent reported sexual intercourse more than a year before. At the time of the survey, 31 percent of all female respondents had never had sexual intercourse. Among married women, some of the lack of recent sexual activity may be attributed to the fact that approximately 14 percent of married women reported that their husbands were residing elsewhere (data not shown).

The proportion of women who were recently sexually active increases with age to peak at 70 percent among women age $35-39$ and then declines to 55 percent among women age 45-49. Only 6 percent of women age 15-19 reported recent sexual activity; the majority ( 93 percent) have never had sexual intercourse. As previously noted, very few women reported sexual activity outside of marriage: 99 percent of never-married women reported that they never had intercourse.

Women with a basic general education are the least likely to have been sexually active in the recent period ( 35 percent) and women with a specialized secondary education the most likely ( 54 percent). There are differences in recent sexual activity by region. Less than half of women in Yerevan, Gegharkunik, Lori, and Shirak had sexual intercourse during the four weeks preceding the survey, compared with six in ten women in Ararat and Syunik.

Overall, men are more likely to have had recent sexual intercourse than women (Table 7.6.2). Sixty-three percent had sexual intercourse in the four weeks before the survey, 11 percent had sexual intercourse in the past year but not in the previous four weeks, 3 percent had sex one or more years ago, and 23 percent have never had sexual intercourse. Men’s sexual activity increases with age. Among men age 30 and older, close to nine in ten had sex in the month preceding the interview, compared with 6 percent of men age 15-19 and 49 percent of men age 20-24.

As is the case with women, men who are currently married or living with a woman are most likely to have had recent sexual intercourse: 94 percent compared with 23 percent of never married men. Variations in sexual activity are observed at the regional level. The proportion of men who had sex in the past four weeks ranges from 53 percent in Shirak to 71 percent in Aragatsotn.

Table 7.6.1 Recent sexual activity: Women
Percent distribution of women age 15-49 by timing of last sexual intercourse, according to background characteristics, Armenia 2005

| Background characteristic | 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 ago | Missing |  |  |  |
| Age |  |  |  |  |  |  |  |
| 15-19 | 5.5 | 1.2 | 0.0 | 0.4 | 92.9 | 100.0 | 1,123 |
| 20-24 | 36.7 | 7.1 | 1.0 | 1.1 | 54.2 | 100.0 | 1,131 |
| 25-29 | 63.7 | 10.4 | 3.7 | 1.8 | 20.4 | 100.0 | 929 |
| 30-34 | 67.4 | 12.2 | 9.9 | 2.2 | 8.3 | 100.0 | 749 |
| 35-39 | 69.7 | 11.4 | 13.4 | 1.2 | 4.4 | 100.0 | 711 |
| 40-44 | 65.3 | 16.8 | 13.8 | 0.3 | 3.8 | 100.0 | 965 |
| 45-49 | 55.1 | 16.2 | 22.5 | 1.9 | 4.3 | 100.0 | 958 |
| Marital status |  |  |  |  |  |  |  |
| Never married | 0.4 | 0.6 | 0.2 | 0.0 | 98.8 | 100.0 | 2,043 |
| Currently married | 79.0 | 15.5 | 4.5 | 1.0 | 0.0 | 100.0 | 4,044 |
| Formerly married | 4.9 | 8.1 | 79.2 | 7.8 | 0.0 | 100.0 | 479 |
| Marital duration ${ }^{2}$ |  |  |  |  |  |  |  |
| M arried only once |  |  |  |  |  |  |  |
| $0-4$ years | 82.2 | 13.7 | 1.2 | 2.9 | 0.0 | 100.0 | 732 |
| 5-9 years | 83.7 | 12.9 | 1.9 | 1.5 | 0.0 | 100.0 | 591 |
| 10-14 years | 85.8 | 10.4 | 3.4 | 0.5 | 0.0 | 100.0 | 649 |
| 15-19 years | 79.1 | 15.6 | 4.6 | 0.7 | 0.0 | 100.0 | 676 |
| 20-24 years | 71.1 | 20.1 | 8.6 | 0.2 | 0.0 | 100.0 | 784 |
| $25+$ years | 72.1 | 21.2 | 6.4 | 0.3 | 0.0 | 100.0 | 548 |
| M arried more than once | 82.5 | 8.0 | 7.3 | 2.2 | 0.0 | 100.0 | 64 |
| Residence |  |  |  |  |  |  |  |
| Urban | 47.7 | 8.7 | 9.9 | 1.2 | 32.5 | 100.0 | 4,194 |
| Rural | 51.7 | 13.2 | 6.3 | 1.3 | 27.5 | 100.0 | 2,372 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 46.7 | 7.5 | 10.6 | 1.3 | 33.9 | 100.0 | 2,468 |
| Aragatsotn | 51.7 | 13.0 | 4.9 | 1.2 | 29.2 | 100.0 | 292 |
| Ararat | 58.6 | 2.5 | 9.3 | 2.5 | 27.1 | 100.0 | 462 |
| Armavir | 55.7 | 8.0 | 8.7 | 0.7 | 27.0 | 100.0 | 567 |
| Gegharkunik | 45.0 | 22.0 | 5.8 | 0.4 | 26.9 | 100.0 | 443 |
| Lori | 47.1 | 13.7 | 7.8 | 0.5 | 30.9 | 100.0 | 537 |
| Kotayk | 50.8 | 12.3 | 6.7 | 0.9 | 29.4 | 100.0 | 563 |
| Shirak | 41.3 | 17.8 | 6.8 | 2.6 | 31.5 | 100.0 | 563 |
| Syunik | 58.6 | 6.6 | 6.7 | 0.9 | 27.2 | 100.0 | 281 |
| Vayots Dzor | 51.2 | 6.8 | 7.3 | 1.7 | 33.1 | 100.0 | 107 |
| Tavush | 51.9 | 11.7 | 9.2 | 0.2 | 27.1 | 100.0 | 285 |
| Education |  |  |  |  |  |  |  |
| Basic general | 34.6 | 8.9 | 6.8 | 2.2 | 47.5 | 100.0 | 529 |
| Secondary general | 51.6 | 12.5 | 8.3 | 1.3 | 26.2 | 100.0 | 2,440 |
| Specialized secondary | 54.1 | 11.3 | 10.0 | 1.1 | 23.5 | 100.0 | 1,997 |
| Higher | 43.9 | 6.4 | 7.8 | 0.9 | 41.0 | 100.0 | 1,600 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 50.8 | 12.5 | 8.9 | 1.7 | 26.1 | 100.0 | 1,164 |
| Second | 47.7 | 12.7 | 8.5 | 1.0 | 30.0 | 100.0 | 1,284 |
| Middle | 47.6 | 11.9 | 9.7 | 1.1 | 29.6 | 100.0 | 1,303 |
| Fourth | 50.4 | 8.1 | 9.7 | 1.3 | 30.6 | 100.0 | 1,375 |
| Highest | 49.3 | 7.3 | 6.3 | 1.0 | 36.2 | 100.0 | 1,440 |
| Total | 49.1 | 10.4 | 8.6 | 1.2 | 30.7 | 100.0 | 6,566 |

Note: Currently married includes women in consensual union (living together). Formerly married includes divorced, sepa-
rated, or widowed women.
${ }^{1}$ Excludes women who had sexual intercourse in the past 4 weeks
${ }^{2}$ Excludes women who are not currently married

| Table 7.6.2 Recent sexual activity: Men |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of men age 15-49 by timing of last sexual intercourse, according to background characteristics, Arme nia 2005 |  |  |  |  |  |  |  |
| Timing of last sexual intercourse |  |  |  |  |  |  |  |
| Background characteristic | Within the past 4 weeks | Within 1 year $^{1}$ | One or more years ago | Missing | Never had sexual intercourse | Total | Number of men |
| Age |  |  |  |  |  |  |  |
| 15-19 | 5.6 | 6.7 | 1.1 | 0.0 | 86.6 | 100.0 | 292 |
| 20-24 | 49.3 | 16.2 | 8.1 | 0.0 | 26.4 | 100.0 | 237 |
| 25-29 | 68.2 | 20.2 | 2.9 | 0.8 | 7.9 | 100.0 | 202 |
| 30-34 | 88.8 | 10.0 | 0.9 | 0.0 | 0.3 | 100.0 | 156 |
| 35-39 | 89.7 | 7.4 | 1.3 | 0.0 | 1.6 | 100.0 | 150 |
| 40-44 | 90.3 | 5.0 | 4.1 | 0.1 | 0.5 | 100.0 | 199 |
| 45-49 | 86.1 | 8.1 | 4.5 | 1.1 | 0.2 | 100.0 | 211 |
| Marital status |  |  |  |  |  |  |  |
| N ever married | 22.8 | 16.6 | 6.1 | 0.0 | 54.5 | 100.0 | 615 |
| Currently married | 93.5 | 5.2 | 0.8 | 0.5 | 0.0 | 100.0 | 815 |
| Formerly married | * | * | * | * | * | * | 17 |
| Marital duration ${ }^{2}$ |  |  |  |  |  |  |  |
| M arried only once |  |  |  |  |  |  |  |
| $0-4$ years | 89.6 | 9.5 | 0.1 | 0.9 | 0.0 | 100.0 | 190 |
| $5-9$ years | 93.2 | 6.0 | 0.8 | 0.0 | 0.0 | 100.0 | 141 |
| 10-14 years | 99.7 | 0.3 | 0.0 | 0.0 | 0.0 | 100.0 | 137 |
| 15-19 years | 95.0 | 3.2 | 1.8 | 0.0 | 0.0 | 100.0 | 152 |
| 20-24 years | 90.8 | 5.9 | 1.3 | 2.0 | 0.0 | 100.0 | 123 |
| $25+$ years | 93.8 | 6.0 | 0.0 | 0.2 | 0.0 | 100.0 | 54 |
| $M$ arried more than once | * | * | * | * | * | * | 17 |
| Residence |  |  |  |  |  |  |  |
| Urban | 63.0 | 12.6 | 3.4 | 0.2 | 20.8 | 100.0 | 913 |
| Rural | 61.9 | 7.0 | 3.4 | 0.4 | 27.3 | 100.0 | 534 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 65.0 | 14.2 | 3.5 | 0.0 | 17.2 | 100.0 | 547 |
| Aragatsotn | 70.7 | 4.5 | 6.0 | 0.0 | 18.7 | 100.0 | 71 |
| Ararat | 63.6 | 7.6 | 1.5 | 0.2 | 27.0 | 100.0 | 110 |
| Armavir | 65.0 | 12.1 | 2.7 | 0.0 | 20.1 | 100.0 | 139 |
| Gegharkunik | 63.1 | 8.7 | 5.8 | 0.0 | 22.4 | 100.0 | 81 |
| Lori | 58.8 | 6.4 | 4.1 | 2.0 | 28.7 | 100.0 | 87 |
| Kotayk | 56.8 | 13.5 | 3.6 | 1.1 | 25.0 | 100.0 | 151 |
| Shirak | 53.4 | 2.6 | 2.5 | 0.0 | 41.6 | 100.0 | 98 |
| Syunik | 57.9 | 7.2 | 3.3 | 0.0 | 31.6 | 100.0 | 67 |
| Vayots Dzor | 59.9 | 6.8 | 0.9 | 1.9 | 30.5 | 100.0 | 31 |
| Tavush | 63.7 | 6.0 | 2.4 | 0.0 | 27.9 | 100.0 | 64 |
| Education |  |  |  |  |  |  |  |
| Basic general | 39.9 | 16.3 | 4.3 | 0.9 | 38.6 | 100.0 | 205 |
| Secondary general | 56.4 | 10.2 | 3.4 | 0.4 | 29.7 | 100.0 | 586 |
| Specialized secondary | 83.6 | 6.8 | 2.0 | 0.1 | 7.6 | 100.0 | 310 |
| Higher | 67.5 | 11.2 | 4.2 | 0.0 | 17.1 | 100.0 | 346 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 63.0 | 7.1 | 4.2 | 0.2 | 25.6 | 100.0 | 261 |
| Second | 63.4 | 5.9 | 3.5 | 0.0 | 27.2 | 100.0 | 264 |
| M iddle | 58.4 | 12.0 | 3.1 | 0.6 | 25.9 | 100.0 | 326 |
| Fourth | 57.7 | 13.7 | 3.8 | 0.6 | 24.2 | 100.0 | 316 |
| Highest | 71.6 | 12.9 | 2.5 | 0.0 | 13.0 | 100.0 | 280 |
| Total | 62.6 | 10.5 | 3.4 | 0.3 | 23.2 | 100.0 | 1,447 |
| Note: Currently married includes men in consensual union (living together). Formerly married includes divorced, sepa rated, or widowed men. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. <br> ${ }^{1}$ Excludes men who had sexual intercourse in the past 4 weeks <br> ${ }^{2}$ Excludes men who are not currently married |  |  |  |  |  |  |  |

### 7.4 Postrartum Amenorrhea, Abstinence, and Insusceptibility

Postpartum amenorrhea refers to the interval between childbirth and the return of menstruation. During this period, the risk of pregnancy is reduced. The duration of reduced risk of conception largely depends on two factors: the length and intensity of breastfeeding, which tends to suppress the resumption of ovulation, and the length of time before the resumption of sexual intercourse. Women who are either amenorrheic or abstaining (or both) are considered insusceptible to the risk of pregnancy.

Among births that occurred in the three years preceding the survey, the percentage of mothers who were postpartum amenorrheic, abstaining, or insusceptible at the time of the survey is shown in Table 7.7. At the time of the survey, 18 percent of women who had given birth during the three years preceding the survey were amenorrheic and 8 percent were abstaining. Overall, 20 percent of these women were insusceptible to the risk of pregnancy.

During the first year after birth, there is a rapid decline in postpartum amenorrhea from 94 percent during the first two months after birth to 20 percent of women 10 to 11 months after giving birth. Postpartum abstinence declines rapidly after birth from 77 percent of women in the first two months to 26 percent of women after 2-3 months to less than 1 percent of women after 10-11 months. Overall, the median duration of insusceptibility after birth is 5 months.

Table 7.7 Postpartum amenorrhea, abstinence, and insusceptibility
Percentage of births in the three years preceding the survey for which the mother is postpartum amenorrheic, abstaining, and insusceptible, by number of months since birth, and median and mean durations, Armenia 2005

| Months since birth | Percentage of births for which the mother is: |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Amenorrh | staining | Insusceptible ${ }^{1}$ | Number of births |
| $<2$ | (93.8) | (76.8) | (97.2) | 42 |
| 2-3 | 60.3 | 26.3 | 67.4 | 64 |
| 4-5 | (47.9) | (6.9) | (54.8) | 51 |
| 6-7 | (33.1) | (20.0) | (33.1) | 51 |
| 8-9 | (16.7) | (5.8) | (22.5) | 59 |
| 10-11 | (20.4) | (0.3) | (20.7) | 54 |
| 12-13 | (4.7) | (2.9) | (7.6) | 53 |
| 14-15 | (7.8) | (2.9) | (7.8) | 41 |
| 16-17 | (2.7) | (3.4) | (6.1) | 42 |
| 18-19 | 0.9 | 0.3 | 0.9 | 63 |
| 20-21 | (4.1) | (7.3) | (11.4) | 45 |
| 22-23 | 0.0 | 1.5 | 1.5 | 64 |
| 24-25 | 0.6 | 0.0 | 0.6 | 76 |
| 26-27 | 15.3 | 1.6 | 15.3 | 58 |
| 28-29 | (4.3) | (2.6) | (4.3) | 47 |
| 30-31 | (3.9) | (0.0) | (3.9) | 51 |
| 32-33 | 6.5 | 5.7 | 12.3 | 36 |
| 34-35 | (0.0) | (0.0) | (0.0) | 45 |
| 12-15 | 6.0 | 2.9 | 7.7 | 94 |
| 16-19 | 1.6 | 1.5 | 3.0 | 105 |
| 20-23 | 1.7 | 3.9 | 5.6 | 109 |
| 24-29 | 6.3 | 1.2 | 6.3 | 181 |
| 30-35 | 3.3 | 1.6 | 4.9 | 133 |
| Total | 17.5 | 8.4 | 19.9 | 943 |
| M edian | 4.3 | 1.8 | 4.9 | na |
| M ean | 7.1 | 3.9 | 8.2 | na |

Note: Estimates are based on status at the time of the survey. Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable
${ }^{1}$ Includes births for which mothers are either still amenorrheic or still abstaining (or both) following birth

### 7.5 Menopause

After age 30, the risk of pregnancy declines as increasing proportions of women become menopausal. Although the onset of menopause is difficult to determine for an individual woman, methods are available for estimating the proportion of women who are menopausal for the population as a whole. Table 7.8 shows data on the percentage of women age 30 and older who are menopausal, that is, who are not pregnant or postpartum amenorrheic and who have not menstruated for six months or longer in the period preceding the survey.

According to the 2005 ADHS, 10 percent of women age 30-49 are menopausal. The proportion of women menopausal increases with age from less than 2 percent of women age 30-34 to 31 percent of women age 48-49.

| Table 7.8 Menopause |  |  |
| :---: | :---: | :---: |
| Percentage of women age 30-49 who are menopausal, Armenia 2005 |  |  |
| Age | Percentage menopausal ${ }^{1}$ | Number of women |
| 30-34 | 1.5 | 749 |
| 35-39 | 2.6 | 711 |
| 40-41 | 3.9 | 345 |
| 42-43 | 10.6 | 416 |
| 44-45 | 14.4 | 418 |
| 46-47 | 19.7 | 423 |
| 48-49 | 30.6 | 321 |
| Total | 9.7 | 3,383 |
| ${ }^{1}$ Percentage of all women who are not pregnant and not postpartum amenorrheic whose last menstrual period occurred six or more months preceding the survey |  |  |

## FERTILITY PREFERENCES

Insight into the fertility desires of a population is important both for predicting future fertility and for estimating the potential unmet need for family planning. This chapter presents data from the 2005 ADHS on the fertility intentions of Armenian women, the need for family planning services, and desired family size. It also considers the potential effect on fertility if unwanted pregnancies were prevented.

### 8.1 Fertility Preferences

In the 2005 ADHS, women were asked a series of questions about their fertility preferences. Table 8.1 shows the future reproductive intentions of currently married women and men by number of living children (including any current pregnancy). The majority of married Armenian women express a desire to control their future fertility. Seven in ten respondents ( 70 percent) do not want to have any more children (Figure 8.1). The desire to limit fertility increases significantly by number of living children. For example, almost all married women with no children want to have a child; three-fourths say that they want to have a child soon. On the other hand, almost eight in ten women with two children say they want no more, as do nine in ten women with three or more children.


Overall, men's fertility preferences are similar to women's. However, a lower proportion of men than women report that they want no more children ( 62 percent versus 70 percent).

## Figure 8.1 Desire for More Children among Currently Married Women and Men



ADHS 2005

Since 2000, there has been little change in women's desires for future childbearing. The proportion of married women who say they want no more children or who are sterilized has declined slightly, from 74 percent in 2000 to 71 percent in 2005.

Table 8.2 shows the percentage of currently married women who want no more children, by number of living children and background characteristics. Women living in urban areas are less likely than those living in rural areas to want to stop childbearing ( 69 percent and 74 percent, respectively). The relationship between desire to stop childbearing and the woman's education is unclear. However, wealth status seems to have a negative association with the desire to limit childbearing. At parities two and higher, women in the highest wealth quintile are more likely than women in lower wealth quintiles to want to limit childbearing.

| Table 8.2 Desire to limit childbearing |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of currently married women age 15-49 who want no more children, by number of living children and background characteristics, Armenia 2005 |  |  |  |  |  |  |
| Number of living children ${ }^{1}$ |  |  |  |  |  |  |
| Desire for children | 0 | 1 | 2 | 3 | 4+ | Total |
| Residence |  |  |  |  |  |  |
| Urban | 0.5 | 17.7 | 79.6 | 91.8 | 95.1 | 68.5 |
| Rural | 1.4 | 19.5 | 78.3 | 90.8 | 89.0 | 74.1 |
| Region |  |  |  |  |  |  |
| Yerevan | (0.0) | 17.6 | 81.2 | 94.5 | * | 67.7 |
| Aragatsotn | * | (22.1) | 75.8 | 92.0 | (80.7) | 73.0 |
| Ararat | * | 15.4 | 69.7 | 85.5 | (74.0) | 64.9 |
| Armavir | * | (23.0) | 81.0 | 93.7 | (94.9) | 77.3 |
| Gegharkunik | * | (20.0) | 82.3 | 95.1 | (96.5) | 77.3 |
| Lori | * | (18.7) | 81.8 | 84.9 | * | 72.9 |
| Kotayk | * | 19.8 | 73.1 | 93.0 | (90.4) | 68.3 |
| Shirak | * | 16.0 | 80.4 | 88.3 | * | 71.4 |
| Syunik | * | 10.0 | 71.3 | 91.4 | * | 68.0 |
| Vayots Dzor | * | (4.5) | 72.8 | 85.1 | (80.4) | 66.5 |
| Tavush | * | (29.5) | 81.8 | 90.5 | (100.0) | 78.8 |
| Education |  |  |  |  |  |  |
| Basic general | * | (33.7) | 71.4 | 89.1 | (80.1) | 67.9 |
| Secondary general | 0.9 | 14.8 | 79.2 | 90.2 | 93.1 | 73.8 |
| Specialized secondary | (0.0) | 16.9 | 81.0 | 92.1 | 90.5 | 72.0 |
| Higher | (2.2) | 19.4 | 77.9 | 94.1 | * | 63.1 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | (0.0) | 27.0 | 79.1 | 90.5 | 87.3 | 74.6 |
| Second | (0.0) | 17.2 | 77.0 | 90.7 | 86.3 | 72.8 |
| Middle | (5.0) | 22.4 | 82.3 | 88.9 | 99.4 | 73.5 |
| Fourth | (0.0) | 17.7 | 76.7 | 92.4 | (100.0) | 65.7 |
| Highest | (0.0) | 11.0 | 80.3 | 95.7 | * | 67.4 |
| Total | 0.9 | 18.2 | 79.2 | 91.3 | 91.0 | 70.7 |
| Note: Women who have been sterilized are considered to want no more children. 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. <br> ${ }^{1}$ Includes current pregnancy |  |  |  |  |  |  |

### 8.2 Need for Family Planning

Maternal health care services are concerned with defining the size of the population of women who have a potential need for family planning services and identifying women whose need for contraception is not being met. Currently married fecund women who either want no more children or want to wait at least two years before having another child, but who are not using contraception, are considered to have an unmet need for family planning. ${ }^{1}$ Current users of family planning methods are said to have a met need for family planning. The total demand for family planning is the sum of the met need and unmet need for family planning.

Table 8.3 shows the demand for family planning services by background characteristics. The total demand for family planning among all women is 67 percent, and 80 percent of the demand is satisfied. The demand for limiting purposes (52 percent) is higher than the demand for spacing purposes ( 15 percent). Compared with the 2000 ADHS, total demand for family planning has declined from 74 percent in 2000 to 67 percent in 2005; however, the percentage of demand satisfied has also declined slightly from 84 percent to 80 percent.

[^7]Table 8.3 Need for family planning
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 demand satisfied, by background characteristics, Armenia 2005

| Background characteristic | Unmet need for family planning ${ }^{1}$ |  |  | M et need for family planning (currently using) ${ }^{2}$ |  |  | Total demand for family planning ${ }^{3}$ |  |  | Percentage of demand satisfied | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | For spacing | For limiting | Total | For spacing | For limiting | Total | For spacing | For limiting | Total |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 19.2 | 0.0 | 19.2 | 14.6 | 1.9 | 16.5 | 33.8 | 1.9 | 35.7 | 46.1 | 78 |
| 20-24 | 13.3 | 6.1 | 19.4 | 27.9 | 15.0 | 42.9 | 42.1 | 21.1 | 63.3 | 69.3 | 504 |
| 25-29 | 5.8 | 12.2 | 18.0 | 24.0 | 37.7 | 61.7 | 30.7 | 50.2 | 80.9 | 77.8 | 695 |
| 30-34 | 2.5 | 9.8 | 12.3 | 13.8 | 53.5 | 67.3 | 16.3 | 63.4 | 79.7 | 84.5 | 601 |
| 35-39 | 0.9 | 10.6 | 11.5 | 7.3 | 55.1 | 62.4 | 8.2 | 65.7 | 73.9 | 84.5 | 602 |
| 40-44 | 0.1 | 11.6 | 11.7 | 1.5 | 54.4 | 55.9 | 1.6 | 66.2 | 67.8 | 82.8 | 824 |
| 45-49 | 0.2 | 7.8 | 8.0 | 0.3 | 33.2 | 33.5 | 0.5 | 41.0 | 41.5 | 80.8 | 741 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 3.3 | 7.9 | 11.2 | 13.3 | 40.9 | 54.3 | 17.0 | 48.8 | 65.8 | 83.0 | 2,447 |
| Rural | 4.0 | 12.5 | 16.5 | 8.4 | 42.9 | 51.2 | 12.6 | 55.6 | 68.2 | 75.8 | 1,597 |
| Region |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 3.0 | 5.8 | 8.8 | 16.0 | 42.5 | 58.5 | 19.3 | 48.3 | 67.6 | 87.0 | 1,362 |
| Aragatsotn | 2.4 | 8.3 | 10.7 | 11.2 | 42.4 | 53.6 | 13.7 | 50.7 | 64.4 | 83.4 | 196 |
| Ararat | 4.4 | 10.8 | 15.3 | 7.2 | 33.9 | 41.1 | 11.6 | 44.7 | 56.4 | 72.9 | 307 |
| Armavir | 1.1 | 10.4 | 11.6 | 10.1 | 47.7 | 57.8 | 11.8 | 58.6 | 70.4 | 83.6 | 381 |
| Gegharkunik | 6.5 | 22.4 | 28.8 | 4.9 | 36.1 | 41.0 | 11.7 | 58.5 | 70.2 | 59.0 | 303 |
| Lori | 4.0 | 14.1 | 18.2 | 8.1 | 43.3 | 51.4 | 12.1 | 57.5 | 69.6 | 73.9 | 343 |
| Kotayk | 3.4 | 10.8 | 14.2 | 12.2 | 36.7 | 48.9 | 16.1 | 47.9 | 63.9 | 77.9 | 357 |
| Shirak | 5.2 | 8.4 | 13.6 | 4.6 | 37.0 | 41.7 | 10.1 | 45.4 | 55.5 | 75.5 | 357 |
| Syunik | 3.9 | 8.2 | 12.1 | 14.3 | 47.1 | 61.4 | 19.0 | 55.3 | 74.3 | 83.7 | 189 |
| Vayots Dzor | 3.5 | 3.6 | 7.1 | 13.5 | 53.4 | 66.9 | 17.3 | 57.1 | 74.3 | 90.4 | 65 |
| Tavush | 3.8 | 11.7 | 15.6 | 11.3 | 50.9 | 62.2 | 15.3 | 62.9 | 78.2 | 80.1 | 184 |
| Education |  |  |  |  |  |  |  |  |  |  |  |
| Basic general | 4.5 | 13.8 | 18.4 | 8.2 | 33.3 | 41.6 | 12.7 | 48.0 | 60.8 | 69.8 | 235 |
| Secondary general | 3.3 | 11.2 | 14.5 | 9.3 | 43.0 | 52.3 | 12.8 | 54.4 | 67.2 | 78.4 | 1,629 |
| Specialized secondary | 2.8 | 9.4 | 12.2 | 11.2 | 41.3 | 52.5 | 14.2 | 50.7 | 64.9 | 81.1 | 1,353 |
| Higher | 5.1 | 5.9 | 11.0 | 16.6 | 42.2 | 58.8 | 22.3 | 48.1 | 70.4 | 84.3 | 828 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 3.6 | 12.2 | 15.7 | 7.6 | 43.2 | 50.8 | 11.2 | 55.6 | 66.8 | 76.4 | 764 |
| Second | 3.6 | 11.0 | 14.6 | 8.7 | 39.8 | 48.4 | 12.8 | 51.0 | 63.8 | 77.0 | 809 |
| Middle | 3.8 | 10.2 | 14.0 | 7.6 | 43.5 | 51.1 | 11.5 | 53.8 | 65.3 | 78.6 | 788 |
| Fourth | 3.7 | 8.5 | 12.2 | 14.8 | 39.9 | 54.7 | 18.7 | 48.4 | 67.1 | 81.8 | 841 |
| Highest | 3.2 | 6.8 | 10.0 | 17.5 | 42.3 | 59.8 | 21.2 | 49.2 | 70.4 | 85.8 | 842 |
| Total | 3.6 | 9.7 | 13.3 | 11.4 | 41.7 | 53.1 | 15.2 | 51.5 | 66.7 | 80.1 | 4,044 |

${ }^{1}$ Unmet need for spacing includes pregnant women whose pregnancy was mistimed, amenorrheic women who are not using family planning and whose last birth was mistimed, and fecund women who are neither pregnant nor amenorrheic and who are not using any method of family planning and say they want to wait two or more years for their next birth. Also included in unmet need for spacing are fecund women who are not using any method of family planning and say they are unsure whether they want another child or who want another child but are unsure when to have the birth.
Unmet need for limiting refers to pregnant women whose pregnancy was unwanted, amenorrheic women whose last child was unwanted, and to fecund women who are neither pregnant nor amenorrheic and who are not using any method of family planning and who want no more children. Excluded from the unmet need category are pregnant and amenorrheic women who became pregnant while using a method (these women are in need of better contraception).
${ }^{2} U$ sing for spacing is defined as women who are using some method of family planning and say they want to delay their next 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.
${ }^{3}$ N onusers who are pregnant or amenorrheic and whose pregnancy was the result of a contraceptive failure are not included in the category of unmet need, but are included in the total demand for contraception (because they would have been using had their method not failed).

Overall, approximately 13 percent of married women have an unmet need for family planning, of which 4 percent is for spacing and 10 percent is for limiting. Unmet need is highest among the youngest women, among women with lower levels of educational attainment, and women living in less economically advantaged households. Unmet need for family planning ranges from a low of 7 percent in Vayots Dzor to a high of 29 percent in Gegharkunik. Unmet need has hardly changed since 2000, rising from 12 to 13 percent of married women.

### 8.3 Fertility Planning

In the 2005 ADHS, women were asked a series of questions about each of their children born in the five years preceding the survey-and, if pregnant, their current pregnancy-to determine whether the pregnancy was wanted then (planned), wanted later (mistimed), or not wanted (unplanned).

Table 8.4 shows the percent distribution of births in the five years before the survey by whether the birth was wanted then, wanted later, or not wanted. The data show that 82 percent of the births in the past five years were wanted at the time of conception. Ten percent of births were wanted later, and 7 percent of the births were not wanted at all at the time of conception. These proportions suggest that there has been no change in the level of unwanted and mistimed births in Armenia since 2000.

There is a strong relationship between planning status and birth order. For example, while 97 percent of first births were wanted at the time of conception, 39 percent of fourth and higher order births were not wanted at all. Younger women are more likely than older women to want their births at the time they were conceived, while older women are more likely than younger women to want no more children.

| Table 8.4 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, Armenia 2005 |  |  |  |  |  |  |
| Planning status of birth |  |  |  |  |  |  |
| and mother's age at birth | W anted then | W anted later | W anted no more | Missing | Total | of births |
| Birth order |  |  |  |  |  |  |
| 1 | 96.5 | 1.3 | 0.2 | 2.0 | 100.0 | 816 |
| 2 | 73.7 | 22.0 | 3.6 | 0.7 | 100.0 | 581 |
| 3 | 64.6 | 8.0 | 24.8 | 2.6 | 100.0 | 211 |
| 4+ | 49.6 | 7.4 | 39.4 | 3.5 | 100.0 | 99 |
| Age at birth |  |  |  |  |  |  |
| <20 | 93.2 | 4.2 | 0.7 | 2.0 | 100.0 | 207 |
| 20-24 | 84.0 | 10.8 | 3.4 | 1.9 | 100.0 | 829 |
| 25-29 | 78.9 | 12.1 | 7.6 | 1.3 | 100.0 | 432 |
| 30-34 | 77.5 | 7.1 | 13.3 | 2.1 | 100.0 | 151 |
| 35-39 | 70.3 | 2.9 | 26.6 | 0.3 | 100.0 | 66 |
| 40-44 | * | * | * | * | * | 21 |
| 45-49 | * | * | * | * | * | , |
| Total | 82.1 | 9.5 | 6.7 | 1.7 | 100.0 | 1,708 |
| Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. |  |  |  |  |  |  |

### 8.4 Ideal Number of Children

In the 2005 ADHS, respondents were asked what they considered the ideal family size. This information was obtained by asking the respondents two questions. Respondents who had no children were asked, "If you could choose exactly the number of children to have in your whole life, how many would that be?" For respondents who had children, the question was, "If you could go back to the time when 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?" Responses to these questions are meant to be independent of the number of children that a respondent already has. However, there is typically a correlation between the actual number of children that respondents have and their reported ideal. This correlation may be because respondents who want larger families have more children or because respondents adjust their ideal family size to match their actual family size or because of a combination of these factors. The percent distribution of women and men age 15-49 by ideal number of children is detailed in Table 8.5 according to the number of living children.

| Table 8.5 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, Armenia 2005 |  |  |  |  |  |  |
| Number of living children |  |  |  |  |  |  |
| Ideal number of children | 0 | 1 | 2 | 3 | 4+ | Total |
| WOMEN ${ }^{1}$ |  |  |  |  |  |  |
| 0 | 2.1 | 0.5 | 0.3 | 0.5 | 0.8 | 1.0 |
| 1 | 5.4 | 6.0 | 1.9 | 1.9 | 1.5 | 3.6 |
| 2 | 64.1 | 60.5 | 54.3 | 18.6 | 22.4 | 50.8 |
| 3 | 17.5 | 21.9 | 27.6 | 56.1 | 14.9 | 27.9 |
| 4+ | 8.9 | 10.0 | 15.0 | 21.4 | 57.2 | 15.3 |
| Non-numeric responses | 1.9 | 1.1 | 0.9 | 1.4 | 3.2 | 1.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of women | 2,245 | 786 | 2,111 | 1,144 | 281 | 6,566 |
| Mean ideal number of children for: ${ }^{2}$ |  |  |  |  |  |  |
| All women | 2.3 | 2.4 | 2.6 | 3.0 | 3.5 | 2.6 |
| Number of women | 2,202 | 777 | 2,091 | 1,127 | 272 | 6,470 |
| Currently married women | $2.2$ | 2.4 | 2.6 | 3.0 | 3.5 | 2.7 |
| Number of married women | $159$ | 618 | 1,905 | 1,065 | 254 | 4,000 |
| MEN ${ }^{3}$ |  |  |  |  |  |  |
| 0 | 2.6 | 0.0 | 0.9 | 0.0 |  | 1.4 |
| 1 | 2.1 | 2.7 | 0.4 | 0.9 | (2.0) | 1.5 |
| 2 | 52.5 | 45.8 | 45.9 | 14.4 | (13.5) | 43.5 |
| 3 | 26.8 | 38.0 | 26.5 | 42.6 | (27.1) | 30.1 |
| 4+ | 6.6 | 12.4 | 24.3 | 40.1 | (52.6) | 18.0 |
| Non-numeric responses | 9.5 | 1.0 | 2.0 | 2.0 | (4.7) | 5.4 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | (100.0) | 100.0 |
| Number of men | 663 | 149 | 390 | 204 | 41 | 1,447 |
| Mean ideal number of children for: ${ }^{2}$ |  |  |  |  |  |  |
| All men | 2.4 | 2.6 | 3.0 | 3.7 | (3.8) | 2.8 |
| Number of men | 599 | 147 | 382 | 200 | 39 | 1,368 |
| Currently married men | (2.2) | 2.6 | 3.0 | 3.7 | (3.9) | 3.1 |
| Number of married men | 44 | 142 | 378 | 196 | 39 | 799 |
| Note: Figures in parentheses are based on 25-49 unweighted cases. |  |  |  |  |  |  |
| ${ }^{1}$ Number of living children includes current pregnancy for women. |  |  |  |  |  |  |
| ${ }^{2} \mathrm{M}$ eans are calculated excluding respondents who gave non-numeric responses. |  |  |  |  |  |  |
| ${ }^{3} \mathrm{~N}$ umber of living children includes wife's current pregnancy. |  |  |  |  |  |  |

Virtually all Armenian women desire a family with several children. Half of all women (51 percent) say that two children are ideal and 28 percent say that three children are ideal. One in six women ( 15 percent) states that she prefers to have four or more children. Overall, the mean ideal number of children is 2.6 among all women and 2.7 among married women. There is a positive correlation between the actual and ideal number of children. Among all women, the mean ideal number of children increases from 2.3 among women with no children to 3.5 among women with four or more children.

The data do not indicate any substantial change in ideal family size among women since 2000; the mean number of children considered ideal was 2.7 among all women in 2000 and 2.6 in 2005.

| Table 8.6 Mean ideal number of children |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Mean ideal number of children for all women and men age 15-49, by background characteristics, Armenia 2005 |  |  |  |  |
| Background characteristic | Women |  | Men |  |
|  | Mean | Number ${ }^{1}$ | Mean | Number ${ }^{1}$ |
| Age |  |  |  |  |
| 15-19 | 2.3 | 1,105 | 2.5 | 252 |
| 20-24 | 2.4 | 1,108 | 2.4 | 221 |
| 25-29 | 2.4 | 922 | 2.4 | 195 |
| 30-34 | 2.5 | 735 | 2.7 | 150 |
| 35-39 | 2.7 | 703 | 3.0 | 148 |
| 40-44 | 2.8 | 951 | 3.6 | 196 |
| 45-49 | 2.9 | 946 | 3.2 | 207 |
| Residence |  |  |  |  |
| Urban | 2.5 | 4,117 | 2.7 | 870 |
| Rural | 2.6 | 2,353 | 2.9 | 499 |
| Region |  |  |  |  |
| Yerevan | 2.5 | 2,413 | 2.8 | 542 |
| Aragatsotn | 2.7 | 292 | 3.5 | 71 |
| Ararat | 2.6 | 462 | 2.7 | 110 |
| Armavir | 2.5 | 566 | 2.6 | 129 |
| Gegharkunik | 2.5 | 438 | 2.6 | 81 |
| Lori | 2.4 | 530 | 3.0 | 75 |
| Kotayk | 2.7 | 551 | 3.1 | 125 |
| Shirak | 2.5 | 548 | 2.3 | 74 |
| Syunik | 2.8 | 281 | 2.7 | 67 |
| Vayots Dzor | 2.5 | 106 | 2.8 | 29 |
| Tavush | 2.7 | 284 | 3.2 | 64 |
| Education |  |  |  |  |
| Basic general | 2.5 | 512 | 2.6 | 183 |
| Secondary general | 2.5 | 2,406 | 2.7 | 547 |
| Specialized secondary | 2.6 | 1,975 | 3.0 | 306 |
| Higher | 2.5 | 1,576 | 2.9 | 333 |
| Wealth quintile |  |  |  |  |
| Lowest | 2.6 | 1,149 | 3.0 | 248 |
| Second | 2.6 | 1,261 | 2.8 | 245 |
| Middle | 2.5 | 1,285 | 2.8 | 301 |
| Fourth | 2.6 | 1,352 | 2.8 | 300 |
| Highest | 2.5 | 1,423 | 2.7 | 274 |
| Total | 2.6 | 6,470 | 2.8 | 1,368 |
| ${ }^{1}$ Respondents who gave a numeric response |  |  |  |  |

In general, men want a slightly larger number of children than women. Forty-four percent of men say that two children are ideal, 30 percent say that three children are ideal, and 18 percent say that four or more children are ideal. Overall, the mean ideal number of children among all men is 2.8 children and among married men is 3.1 children. As in the case of women, there is a positive correlation between the actual and ideal number of children among men.

Table 8.6 shows the mean ideal number of children by background characteristics. In general, there are no significant variations in the mean ideal number of children by the woman's background characteristics. However, the mean ideal number of children among both women and men increases with age. For example, women age $15-19$ want 2.3 children and women age 45-49 want 2.9 children. Among men, the differential is even greater. The mean ideal number of children increases from 2.5 among men age $15-19$ to 3.2 among men age 45-49.

Among men, regional variation is striking: the ideal number of children ranges from a low of 2.3 in Shirak to 3.5 in Aragatsotn, a difference of more than one child.

### 8.5 WANTED and UnWanted Fertility

Table 8.7 presents wanted fertility rates, which indicate the theoretical level of fertility that would result if all unwanted births were prevented. Unwanted births are those that exceed the respondent's ideal number. The comparison of observed total fertility rates and wanted fertility rates indicates the extent to which couples in a population successfully control their fertility in a given period. In Armenia, there is little difference between the observed total fertility rate ( 1.7 children per woman) and the wanted total fertility rate ( 1.6 children per woman). Similarly, only minor differences exist between actual and wanted fertility for population subgroups.

Table 8.7 W anted fertility rates
Total wanted fertility rates and total fertility rates for the three years preceding the survey, by background characteristics, Armenia 2005

| Background characteristic | Total wanted fertility rate | Total fertility rate |
| :---: | :---: | :---: |

## Residence

| Resdence | 1.6 | 1.6 |
| :--- | :--- | :--- |
| Urban | 1.6 | 1.8 |
| Rural |  |  |

Region

| Region |  |  |
| :--- | :---: | :---: |
| Yerevan | 1.7 | 1.7 |
| Aragatsotn | 2.1 | 2.5 |
| Ararat | 1.9 | 2.0 |
| Armavir | 1.6 | 1.7 |
| Gegharkunik | 1.9 | 2.1 |
| Lori | 1.1 | $(1.4)$ |
| Kotayk | 1.7 | 1.8 |
| Shirak | 1.1 | 1.2 |
| Syunik | 1.7 | 1.8 |
| Vayots Dzor | 0.9 | $(0.9)$ |
| Tavush | 1.5 | 1.6 |

## Education

$\begin{array}{lll}\text { Basic general } & 1.7 & 1.9\end{array}$

| Secondary general | 1.6 | 1.8 |
| :--- | :--- | :--- |
| Specialized secondary | 1.7 | 1.9 |


| Higher | 1.4 | 1.5 |
| :--- | :--- | :--- |

Wealth quintile

| Lowest | 1.6 | 1.8 |
| :--- | :--- | :--- |
| Second | 1.9 | 2.0 |
| Middle | 1.7 | 1.9 |
| Fourth | 1.6 | 1.6 |
| Highest | 1.4 | 1.5 |
| Total | 1.6 | 1.7 |
| ------------------------------------------------ |  |  |

Note: Rates are calculated based on births to women 15-49 in the period 1-36 months preceding the survey. The total fertility rates are the same as those presented in Table 4.2. Figures in parentheses are based on 250-499 unweighted women.

## INFANT AND CHILD MORTALITY

This chapter presents information on mortality among children under five years of age. The rates shown provide information on the levels and trends in mortality as well as mortality differentials between population subgroups. Mortality differentials are useful because they identify population subgroups exposed to elevated risks of mortality.

The mortality rates presented in this chapter are expressed as deaths per 1,000 live births, except in the case of child mortality, which is expressed as deaths per 1,000 children surviving to age one. Rates are presented for the following age intervals:

- Neonatal mortality (NN): the probability of dying within the first month of life
- Postneonatal mortality (PNN): the difference between infant and neonatal mortality
- Infant mortality $\left({ }_{1} \mathrm{q}_{0}\right)$ : the probability of dying between birth and exact age one
- Child mortality $\left({ }_{4} q_{1}\right)$ : the probability of dying between exact ages one and five
- Under-five mortality $\left(5 \mathrm{q}_{0}\right)$ : the probability of dying between birth and exact age five

The questionnaire for the 2005 ADHS included a reproductive history in which questions were asked about each of a woman's pregnancies. Respondents were asked to report the outcome of each pregnancy in terms of standard international definitions. A live birth was defined as any birth, irrespective of the duration of pregnancy, that after separation from the mother showed any sign of life (for example, breathing, beating of the heart, or movement of voluntary muscles). An infant death was defined as the death of a child under one year of age (WHO, 1993).

For each live birth reported in the pregnancy history, information was collected on the date of birth (month and year), sex, survivorship, and current age (for surviving children) or age at death (for deceased children). Thus, respondents were asked to report about events that occurred throughout their reproductive lives. For older respondents, women age 40 and over, this means events that occurred as long as 25 to 30 years ago. Mortality rates for specific periods preceding the survey were calculated using direct estimation procedures.

### 9.1 Assessment of Data Quality

The accuracy of mortality estimates from the ADHS depends on two factors: sampling error (i.e., variability) and non-sampling error (i.e., all sources of error other than sampling error, which primarily means the completeness and accuracy with which births and deaths are reported by respondents and recorded by interviewers).

Sampling variability arises because the mortality data are based on the births and deaths for a specific time period reported by women in the sampled households rather than on all births and deaths in the entire population during that period. If the sampling procedure had selected a different sample of households, a different set of births and deaths would have been reported on by different women and the mortality estimates would be different. The potential variability between mortality estimates from different samples is the source of sampling variability. Nevertheless, the estimated rates presented in this report are representative for Armenia. The sampling variability associated with each estimated rate is represented as a confidence interval within which there is a 95 percent confidence that the true rate resides. These 95 percent confidence intervals are measurable based on sampling theory. The 95 percent confidence intervals for mortality estimates for the total population and for its urban/rural components are presented in Appendix B of this report and are cited in this chapter where appropriate.

Non-sampling error arises primarily from errors in data collection. The most likely source of nonsampling error is the underreporting of deceased children. It is well established that underreporting of deceased children by survey respondents is most likely 1) for time periods more remote from the survey date and 2) for deaths that occurred in early infancy (i.e., in the neonatal period, before a child becomes fully integrated into the family). Underreporting of events that occurred in the more distant past is due either to forgetfulness or to conscious avoidance of recalling the tragedy of losing a child. In this report, the focus is on mortality rates for the 15 -year period prior to the survey; rates for earlier time periods are not reported. This eliminates showing mortality estimates for the time periods most susceptible to respondent forgetfulness. Of course, this does not ensure that events occurring in the 15 -year period prior to the survey are fully reported.

In the case of underreporting of early infant deaths, the data for the 15 -year period prior to the survey can be assessed to determine whether significant underreporting of neonatal deaths occurred. Significant underreporting would result in an implausibly low value for the ratio of neonatal to infant mortality (United Nations, 1982). The assessment consists of comparing the neonatal/infant mortality ratios from the survey with values for national populations that have approximately the same level of infant mortality as observed in the survey and which are known to have relatively complete infant mortality data. In countries at a level of infant mortality of about 33 per 1,000 (the midpoint of the range of the infant mortality rates from the 2005 ADHS; see Table 9.1), the value of this ratio is typically 0.60 or higher. ${ }^{1}$

Table 9.1 shows neonatal and infant mortality rates from the 2005 ADHS for five-year time periods preceding the survey. The neonatal-to-infant mortality ratio for the periods 0-4 years (2001-2005), 5-9 years (1996-2000), and $10-14$ years (1991-1995) preceding the survey are $0.65,0.67$, and 0.41 , respectively. It can be concluded that there is no underreporting of neonatal deaths for the two time periods in the 10 years preceding the survey. However, the relatively low neonatal/infant mortality ratio of 0.40 for the period 10-14 years preceding the survey strongly suggests that there was underreporting of neonatal deaths for that period.

This analysis of data quality is based on the relative magnitude of the observed neonatal and infant mortality rates and does not preclude the possibility that there was underreporting of events for both the neonatal period and for all of the first year of life-an eventuality that would be undetected by this methodology. Nevertheless, based on this analysis, it is reasonable to conclude that the reporting of neonatal deaths was not a significant problem in the 10-year period immediately preceding the survey but that it was a problem for the period 10-14 years preceding the survey. Accordingly, much greater confidence can be placed in the estimates for 1996-2000 and 2001-2005 than in the estimate for 1991-1995.

### 9.2 Levels and Trends in Childhood Mortality

Table 9.1 shows infant and child mortality estimates based on data from the 2005 ADHS. For the five years preceding the survey (2001-2005), the infant mortality estimate is 26 per 1,000 live births. The estimates of neonatal and postneonatal mortality are 17 and 9 per 1,000 , respectively. The estimate of child mortality (age one to four) is much lower: 4 per 1,000. The overall under-five mortality rate for the period is 30 per 1,000 .

[^8]Trends in mortality over the 15 -year period prior to the survey can also be examined from Table 9.1. The data suggest that mortality has decreased substantially over the past 15 years. In the case of infant mortality, the estimated rates show a decline by 37 percent over the 10 -year interval from the midpoint of the 1991-1995 estimate of infant mortality (41 per 1,000) to the midpoint of the 2001-2005 estimate ( 26 per 1,000 ) or by about 3.7 percent per year. The actual pace of the mortality decline was probably greater than this because, as indicated above, the rate estimated for 1991-1995 is likely to be an underestimate. Over the 10 -year interval, neonatal mortality was stable at 17 per 1,000 and postneonatal mortality declined by 63 percent ( 24 per 1,000 to 9 per 1,000).

No doubt many factors have contributed to the observed mortality decline in Armenia between 1991-1995 and 2001-2005. To some degree, the decline was probably hastened by health interventions initiated by the MOH in 1994 (i.e., programs in the case management of diarrhea and acute respiratory infection [ARI] as well as programs in support of breastfeeding). These programs are likely to have had more impact on postneonatal mortality than on neonatal mortality, which is consistent with the observed mortality declines in those subintervals of infancy.

| Table 9.1 Early childhood mortality rates |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Neonatal, postneonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey, Ar menia 2005 |  |  |  |  |  |  |
| Years preceding the survey | Approximate calendar period ${ }^{1}$ | Neonatal mortality (NN) | Postneonatal mortality ${ }^{2}$ (PNN) | Infant mortality $\left({ }_{1} q_{0}\right)$ | Child mortality $\left({ }_{4} q_{1}\right)$ | Under-five mortality (5 $\mathrm{q}_{0}$ ) |
| 0-4 | 2001-2005 | 17 | 9 | 26 | 4 | 30 |
| 5-9 | 1996-2000 | 20 | 10 | 30 | 7 | 36 |
| 10-14 | 1991-1995 | 17 | 24 | 41 | 7 | 48 |
| ${ }^{1}$ Because survey fieldwork began in early September 2005 and was completed by early December 2005, the rates for the five-year period 2001-2005 actually apply approximately to the calendar period from October 2000 to September 2005. Similarly for the other five-year periods. <br> ${ }^{2}$ Computed as the difference between the infant and the neonatal mortality rates. |  |  |  |  |  |  |

Comparison with the results of the 2000 ADHS also suggests a significant decline in the infant mortality rate (IMR). Figure 9.1 shows the infant mortality rates for the 15 -year period preceding each survey. Overall, the infant mortality estimates across both surveys show a clear and sustained trend of declining mortality. It should be noted that the 2005 ADHS infant mortality estimates of 41 per 1,000 (1991-1995) and 30 per 1,000 (1996-2000) are lower than the estimates from the 2000 ADHS for the same time periods ( 51 per 1,000 and 36 , per 1,000 , respectively). ${ }^{2}$
${ }^{2}$ The differences between the 2000 ADHS and the 2005 ADHS in the IMR estimates for 1991-1995 and 1996-2000 are not statistically significant as indicated by the fact that the 95 percent confidence intervals of the rates for the same time period overlap. For example, for the period 1996-2000, the IMR estimate from the 2000 ADHS is 36, with a 95 percent confidence interval from 25 to 47, and the IMR estimate from the 2005 ADHS is 30 with a 95 percent confidence interval from 21 to 39, which means that the confidence intervals overlap. Nevertheless, the fact that the estimates for both time periods (1991-1995 and 1996-2000) are lower in the 2005 ADHS is convincing evidence of underreporting of deaths in the 2005 ADHS. The large confidence intervals associated with each estimated rate is due to the relatively small number of observed births on which the estimates are based (between 1,500 and 2,500 for the various time periods; see Appendix B, Estimates of Sampling Errors, for the number of births on which specific estimates are based). Indeed, the large confidence intervals associated with infant and childhood mortality rates in most surveys can only be substantially narrowed by considerable increases in sample size, especially in low-fertility countries such as Armenia.

## Figure 9.1 Trends in Infant Mortality, According to 2000 ADHS and 2005 ADHS



Note: Rates are means for four-year periods.

### 9.3 INFANT MORTALITY RATES FROM THE NATIONAL STATISTICAL SERVICE AND THE ADHS

Armenia has a long history of demographic and health data collection-primarily through the use of national registration systems. In the case of births and infant deaths, the National Statistical Service collects the data through a system in which reports from local health officials-which primarily document events occurring in health facilities - are forwarded up the reporting hierarchy to the regional (marz) level and to the NSS and ultimately to the MOH. Official government statistics on infant mortality based on these administrative records are published in the annual statistical reports of the NSS.

Prior to 1995, live births and infant deaths in Armenia were defined according to protocols established during the time of the former Soviet Union. The criteria for classifying pregnancy outcomes in the Soviet protocols differed from those recommended by the World Health Organization (WHO). The most important difference relates to pregnancies ending at a gestational age of less than 28 weeks. The Soviet protocols classify such pregnancies as miscarriages (even if signs of life are present at the time of delivery) unless the child survives for seven days. ${ }^{3}$ Alternatively, WHO defines a birth showing any sign of life (i.e., breathing, beating of the heart, or movement of voluntary muscles) as a live birth, irrespective of the gestational age at delivery (WHO, 1993). There is also a difference for pregnancies terminating at 28 or more weeks of gestation. The Soviet system classifies such events as live births if the child breathes and as stillbirths if breathing is not evident at delivery. WHO defines these events as live births if any sign of life is present at delivery and otherwise as stillbirths.

In 1995, Armenia officially changed to the WHO definitions of live birth and infant death. However, it is thought that many maternity wards have not fully converted to the new definitions and are still using the Soviet-era definitions (Government of Armenia et al., 1999), which would cause neonatal mortality rates reported by the NSS to be less than the neonatal rates reported in the 2005 ADHS.

[^9]Subsequent to the 2000 ADHS and based on the analysis of infant mortality rates from the 2000 ADHS and NSS, a new package of infant mortality rate norms and instructions was developed in Armenia with the aim of improving the registration of infant mortality cases. The package was approved and adopted by the government and introduced in November 2005. According to the new norms, Armenia in late 2005, on the federal level, fully introduced the International Classification of Diseases (IDC-10) recommended by the WHO. Following these recommendations, the perinatal period is determined as starting at 22 weeks, and all newborns over 500 grams are to be registered and the data to be reflected in the official statistics. This is expected to overcome the above-mentioned confusion with definitions of live births. Despite the fact that the listed changes are not reflected in this analysis of the ADHS and NSS infant mortality rates (the survey was conducted in the autumn of 2005), it is necessary to present the new rules pertinent to the registration of infant deaths.

Table 9.2 and Figure 9.2 show infant mortality rates reported by NSS and the 2005 ADHS over the past 15 years. For all three time periods shown, the NSS estimates of infant mortality are substantially less than 2005 ADHS estimates: 49 percent less for the periods 2001-2005 and 1996-2000, and 60 percent less for the period 1991-1995. A thorough investigation of the differences between the two sets of estimates is beyond the scope of this report. However, it is clear that the differences in infant mortality rates arise from both the neonatal and postneonatal periods. For example, the difference between the 2001-2005 rates ( 12.9 deaths per 1,000 ) is due to the difference between neonatal and postneonatal rates ( 8.2 and 4.7 deaths per 1,000 , respectively).

The fact that differences exist between postneonatal as well as neonatal rates has important implications for evaluating the completeness of the registration system. While differences in the definitions of pregnancy outcomes can contribute to the differences in the neonatal estimates, they do not affect the postneonatal estimates. Under the reasonable assumption that survey respondents have not overreported postneonatal deaths, it appears that defects in the registration, which are distinct from the definitional problems associated with the reporting of neonatal deaths, are resulting in the underreporting of postneonatal deaths in the registration system. Accordingly, it is likely the case that underreporting of neonatal deaths in the registration system is the joint result of some level of generalized underreporting of events and definitions of live births that have not been fully implemented, and that the postneonatal rates suffer from the problem of generalized underreporting of events. Official government statistics on infant mortality based on these administrative records are published in the annual statistical reports of the NSS.

| Table 9.2 Comparison of infant mortality rat |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Neonatal, postneonatal, and infant mortality rates for five-year periods preceding the survey, National Statistical Service (NSS) and 2005 ADHS |  |  |  |  |  |  |  |
| Approximate calendar period ${ }^{1}$ | Neonatal mortality ${ }^{2}$ |  | Postneonatal mortality ${ }^{3}$ |  | Infant mortality |  |  |
|  | NSS | ADHS | NSS | ADHS | NSS | ADHS | Shortfall ${ }^{4}$ |
| 2001-2005 | 8.8 | 17 | 4.3 |  | 13.1 | 26 | 49 |
| 1996-2000 | 9.1 | 20 | 6.2 | 10 | 15.3 | 30 | 49 |
| 1991-1995 | 8.0 | 17 | 8.5 | 24 | 16.5 | 41 | 60 |
| Source: NSS (2006) <br> ${ }^{1}$ Because survey fieldwork began in early September 2005 and was completed by early December 2005, the rates for the five-year period 2001-2005 actually apply approximately to the calendar period from October 2000 to September 2005. Similarly for the other five-year periods. <br> ${ }^{2}$ Neonatal mortality estimates are based on deaths under 27 days for NSS rates and under one month for ADHS rates. <br> ${ }^{3}$ Computed as the difference between the infant and the neonatal mortality rates <br> ${ }^{4}$ Percent shortfall: NSS relative to ADHS |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

Figure 9.2 Trends in Infant Mortality Based on Estimates from the National Statistical Service (NSS) and the 2005 ADHS


### 9.4 Socioeconomic Differentials in Childhood Mortality

Table 9.3 shows infant and child mortality estimates for the 10 -year period preceding the survey, by socioeconomic variables (urban-rural residence, education, and wealth quintile). A 10-year period is used to calculate the rates for population subgroups to reduce sampling variability. The infant mortality rates are shown in Figure 9.3 by urban-rural residence and wealth quintile.

As is the case in most countries, mortality rates in infancy and early childhood are higher in rural areas than in urban areas ( 31 per 1,000 versus 25 per 1,000). Most of this difference arises from the postneonatal rates. In the case of child mortality, rural rates ( 11 per 1,000 ) are five times the level of urban rates (2 per 1,000). In terms of under-five mortality, rural children have higher rates (42 per 1,000) than urban children ( 26 per 1,000 ) by a factor of 1.6 .

Overall, under-five mortality levels decline as the mother's education increases, although the relatively small numbers of cases in each education subgroup means that large confidence intervals are associated with these estimates. Differentials by education can be seen most clearly at the postneonatal level. Levels of neonatal mortality seem curiously low among women with either a basic general or a secondary general education compared with more educated women. This could indicate some misreporting of early deaths or recall problems among women with lower levels of education.

As expected, mortality rates are highest among children born to women residing in households in the lowest wealth quintile. Mortality rates are higher among the lowest wealth quintile than among any other socioeconomic characteristic.

| Neonatal, postneonatal, infant, child, and under-five mortality rates for the 10 -year period preceding the survey, by socioeconomic characteristics, Armenia 2005 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Background characteristic | Neonatal mortality (NN) | Postneonatal mortality ${ }^{1}$ (PNN) | Infant mortality ( $1 q_{0}$ ) | Child mortality $\left({ }_{4} q_{1}\right)$ | Under-five mortality (5 $\mathrm{q}_{0}$ ) |
| Residence |  |  |  |  |  |
| Urban | 18 | 7 | 25 | 2 | 26 |
| Yerevan | 19 | 5 | 24 | 3 | 26 |
| Other urban | 16 | 10 | 26 | 1 | 27 |
| Rural | 19 | 12 | 31 | 11 | 42 |
| Education |  |  |  |  |  |
| Basic general | (14) | (28) | (43) | (0) | (43) |
| Secondary general | 14 | 10 | 24 | 9 | 33 |
| Specialized secondary | 25 | 7 | 32 | 3 | 35 |
| Higher | 21 | 2 | 22 | 5 | 27 |
| Wealth quintile |  |  |  |  |  |
| Lowest | 24 | 17 | 41 | 11 | 52 |
| Second | 18 | 8 | 26 | 5 | 30 |
| Middle | 17 | 6 | 23 | 1 | 24 |
| Fourth | 19 | 12 | 31 | 2 | 33 |
| Highest | 14 | 0 | 14 |  | 23 |
| Note: Rates are expressed per 1,000 births. Rates based on 250 to 499 exposed children are in parentheses. ${ }^{1}$ Computed as the difference between the infant and neonatal mortality rates |  |  |  |  |  |

Figure 9.3 Infant Mortality Rates for the 10-year Period Preceding the Survey, by Residence and Wealth Quintile


### 9.6 Demographic Differentials in Childhood Mortality

Table 9.4 shows the relationship between early childhood mortality and demographic variables. As was the case with the socioeconomic differentials, the rates are shown for the 10 -year period preceding the survey. There has been a consistent fertility pattern in Armenia over the last decade by which a large majority of births occur to women in their twenties, and there are relatively few births of birth order 4 and higher or at birth intervals of two and three years. Accordingly, the rates in Table 9.4 for women less than 20 years of age, 40-49 years of age, birth order 4 and higher, and birth intervals of two and three years are based on fewer than 500 births and must be interpreted with caution.

As expected, mortality rates are generally higher for boys than for girls. There appear to be substantial differences in mortality risks associated with mother's age, birth order, and previous birth interval. Some of these differentials are surprising. For example, infant and child mortality are higher among births that are spaced after the longest interval (four or more years) than births that are spaced the closest together (less than two years). This is an interesting result because while the risks of having a short birth interval are well documented, the potential risks of having children spaced too far apart are currently being studied by experts.

| Table 9.4 Early childhood mortality rates by demographic characteristics |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Neonatal, postneonatal, infant, child, and under-five mortality rates for the 10 -year period preceding the survey, by demographic characteristics, Armenia 2005 |  |  |  |  |  |
| Demographic characteristic | Neonatal mortality (NN) | Postneonatal mortality ${ }^{1}$ (PNN) | Infant mortality $\left({ }_{1} q_{0}\right)$ | Child mortality $\left(4 q_{1}\right)$ | Under-five mortality (59 $\mathrm{q}_{0}$ ) |
| Child's sex |  |  |  |  |  |
| Male | 21 | 8 | 29 | 8 | 37 |
| Female | 16 | 10 | 26 | 3 | 29 |
| Mother's age at birth |  |  |  |  |  |
| <20 | (13) | (4) | (18) | (3) |  |
| 20-29 | 17 | 7 | 24 | 3 | 27 |
| 30-39 | 30 | 13 | 43 | 19 | 61 |
| 40-49 | * | * | * | * | * |
| Birth order |  |  |  |  |  |
| 1 | 19 | 2 | 21 | 0 | 21 |
| 2-3 | 17 | 10 | 27 | 6 | 33 |
| 4+ | (24) | (43) | (67) | (34) | (99) |
| Previous birth interval ${ }^{2}$ |  |  |  |  |  |
| <2 years | 11 | 16 | 27 | 6 | 33 |
| 2 years | (27) | (9) | (36) | (13) |  |
| 3 years | (1) | (13) | (15) | (4) |  |
| $4+$ years | 24 | 16 | 39 | 15 | 54 |
| Birth size ${ }^{3}$ |  |  |  |  |  |
| Small/very small | (0) | (44) | (44) | na | na |
| Average or larger | 4 | 4 | 8 | na | na |
| Note: Rates are expressed per 1,000 births. Rates in parentheses are based on 250 to 499 exposed children. |  |  |  |  |  |
| An asterisk indicates that a rate is based on fewer than 250 exposed children and has been suppressed. na $=$ Not applicable |  |  |  |  |  |
| ${ }^{1}$ Computed as the difference between the infant and neonatal mortality rates |  |  |  |  |  |
| ${ }^{2}$ Excludes first-order births |  |  |  |  |  |
| ${ }^{3}$ Rates are for births occurring during the five-year period before the survey. |  |  |  |  |  |

### 9.6 Perinatal Mortality

Perinatal mortality rates indicate the level of mortality from the time of prenatal viability (i.e., the late fetal period beginning at the 28th week of gestation) through labor, delivery, and the early neonatal period of life (i.e., the 0-6 day period after birth). Pregnancies that terminate without signs of life after the 28th week of gestation are referred to as stillbirths. Stillbirths and early neonatal deaths share many of the same underlying causes leading to mortality (e.g., congenital malformations), and for this reason these events are aggregated into the perinatal mortality rate.

Table 9.5 shows perinatal mortality rates per 1,000 pregnancies by selected background characteristics. Perinatal mortality rates are reported for the five-year period preceding the survey. It should be noted that data quality is always an issue when considering perinatal mortality rates, as both stillbirths and early neonatal deaths are susceptible to underreporting. Moreover, in general, there are too few cases by subcategories of background characteristics to produce reliable perinatal mortality rates.

The overall perinatal mortality rate is 19 per 1,000 . Stillbirths and early neonatal deaths (deaths under seven days) contributed almost equally to the overall perinatal rate, with neonatal deaths being slightly higher than stillbirths. Although research has not yet established a firm relationship between the two components of the perinatal mortality rate, a number of countries with perinatal mortality rates between 20 and 30 per 1,000 have reported stillbirth and early neonatal mortality rates of approximately the same order of magnitude (Hoffman et al., 1984).

As was the case with overall infant mortality, the estimates of perinatal mortality from the survey are higher than the rate based on data from the MOH, which, for the period 2001-2005, was 15.6 per 1,000.

## Table 9.5 Perinatal mortality

Number of stillbirths and early neonatal deaths, and the perinatal mortality rate for the five-year period preceding the survey, by selected background characteristics, Armenia 2005

| Background characteristic | Number of stillbirths ${ }^{1}$ | Number of early neonatal deaths ${ }^{2}$ | Perinatal mortality rate ${ }^{3}$ | Number of pregnancies of 7 or more months duration |
| :---: | :---: | :---: | :---: | :---: |
| Mother's age at birth |  |  |  |  |
| <20 | 2 | 0 | * | 192 |
| 20-29 | 7 | 11 | 16 | 1,120 |
| 30-39 | 3 | 5 | * | 192 |
| 40-49 | 0 | 0 | * | 20 |


| Previous pregnancy interval in months |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| First pregnancy | 4 | 9 | 19 | 651 |
| <15 | 4 | 2 | * | 182 |
| 15-26 | 1 | 1 | 9 | 293 |
| 27-38 | 0 | 3 | * | 131 |
| 39+ | 3 | 1 | (18) | 267 |
| Residence |  |  |  |  |
| Urban | 5 | 11 | 17 | 935 |
| Rural | 7 | 6 | 22 | 589 |
| Education |  |  |  |  |
| Basic general | 3 | 0 | * | 140 |
| Secondary general | 5 | 6 | 19 | 584 |
| Specialized secondary | 3 | 2 | (12) | 451 |
| Higher | 2 | 8 | (28) | 349 |
| Wealth quintile |  |  |  |  |
| Lowest | 6 | 5 | (38) | 292 |
| Second | 1 | 0 | (3) | 295 |
| Middle | 1 | 2 | (9) | 290 |
| Fourth | 4 | 8 | (37) | 339 |
| Highest | 0 | 2 | (6) | 308 |
| Total | 12 | 16 | 19 | 1,524 |

Note: Rates in parentheses are based on 250-499 exposed children. An asterisk indicates that a rate is based on fewer than 250 exposed children and has been suppressed.
${ }^{1}$ Stillbirths are fetal deaths in pregnancies lasting seven or more months.
${ }^{2}$ Early neonatal deaths are deaths among live-born children age 0 to 6 days. ${ }^{3}$ Perinatal mortality rate is the sum of the number of stillbirths and early neonatal deaths divided by the number of pregnancies of seven or more months duration.

### 9.7 High-Risk Fertility Behavior

Previous research has shown a strong relationship between the fertility patterns of women and the mortality risks of their children. Typically, mortality risks are greater for children who are born to mothers who are too young or too old, who are born after a short birth interval, or who have a high birth order. In this analysis, a mother is classified as too young if she is younger than 18 years of age and too old if she is older than 34 years of age. A short birth interval is defined as a birth occurring within 24 months of the previous birth, and a child is of high birth order if the mother had already given birth to three or more children.

Table 9.6 shows the distribution of children born in the five years before the survey by risk category (see also Figure 9.4). Although first births to women age 18-34 are considered an unavoidable risk, they are included in the analysis and are shown as a separate risk category. Column 1 of Table 9.6 shows that in the five-year period before the survey, 23 percent of births were in a single high-risk category and 4 percent were in a multiple high-risk category. Column 2 shows risk ratios for births in various high-risk categories relative to births not having any high-risk characteristics. Overall, the risk ratio for children in any high-risk category (1.4) was about 40 percent higher than for children who were not in any high-risk category.

| Table 9.6 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 the percent distribution of currently married women by category of risk if they were to conceive a child at the time of the survey, Armenia 2005 |  |  |  |
|  | Births in the 5 years preceding the survey |  | Percentage of currently married women ${ }^{1}$ |
| Risk category | Percentage of births | Risk ratio |  |
| Not in any high-risk category | 29.2 | 1.00 | $23.9{ }^{\text {a }}$ |
| Unavoidable risk category First order births between ages 18 and 34 years | 44.3 | 0.95 | 5.4 |
| In any avoidable high-risk category | 26.5 | 1.87 | 70.8 |
| Single high-risk category | 22.8 | 1.35 | 39.8 |
| M other's age <18 | 1.7 | 0.00 | 0.1 |
| M other's age > 34 | 2.8 | 0.00 | 25.9 |
| Birth interval < 24 months | 15.5 | 0.77 | 7.6 |
| Birth order > 3 | 2.8 | 6.82 | 6.1 |
| M ultiple high-risk category | 3.7 | 5.06 | 31.0 |
| Age $<18$ \& birth interval < 24 months ${ }^{2}$ | 0.1 | 0.00 | 0.0 |
| Age $>34 \&$ birth interval < 24 months | 0.1 | 0.00 | 0.2 |
| Age > $34 \&$ birth order $>3$ | 2.5 | 6.07 | 29.2 |
| Age $>34 \&$ birth interval $<24$ months \& birth order $>3$ | 0.0 | * | 0.2 |
| Birth interval < 24 months \& birth order >3 | 1.0 | 3.69 | 1.4 |
| Total | 100.0 | na | 100.0 |
| Number of births/women | 1,512 | na | 4,044 |
| 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 (first row). An asterisk indicates that the value cannot be calculated. <br> na $=$ Not applicable <br> ${ }^{1}$ 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 occurred less than 15 months ago, or latest birth being of order 3 or higher. <br> ${ }^{2}$ Includes the combined categories age $<18$ \& birth order >3 <br> ${ }^{\text {a }}$ Includes sterilized women |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Column 3 looks to the future and addresses the question of how many currently married women have the potential for having a high-risk birth. The results were obtained by simulating the risk category into which a birth to a currently married woman would fall if she were to become pregnant at the time of the survey. For example, a woman who was 37 years old at the time of the survey and had three previous births, the last of which occurred three years earlier, would be classified in the multiple high-risk category for being too old ( 35 or older) and at risk of having a high order birth (greater than three).

Overall, 71 percent of married women have the potential to give birth to a child with an elevated risk of mortality. It should be noted that this figure is hypothetical and based on all women who could potentially have a high-risk birth if they were to become pregnant as of the date of being interviewed. However, this is quite unlikely to occur as some of the potentially at-risk women are practicing contraception and some have passed menopause and are infecund.

Figure 9.4 Births in the Past Five Years in Categories of High-Risk Fertility Behavior


ADHS 2005

## REPRODUCTIVE HEALTH

Reproductive and maternal health care in Armenia is implemented through an extensive system of ambulatory polyclinics and hospitals. The network of ambulatory health care is organized around geographical regions and is offered through women's consultation polyclinics and rural health facilities. Obstetric care is offered at hospital obstetric-gynecological departments, regional delivery hospitals located in urban areas, and at republican centers for specialized (tertiary) care.

This chapter presents findings on several areas of importance to reproductive and maternal health: antenatal, delivery, and postnatal care; visits to the gynecologist; and breast exams. These data are of great value in identifying subgroups of women who do not utilize or receive specific health services and is useful in planning for improvements in service delivery.

### 10.1 Antenatal Care

The health care that a mother receives during pregnancy and at the time of delivery is important for the survival and well-being of both the mother and the child. Antenatal care (ANC) is described according to the type of provider, number of ANC visits, stage of pregnancy at the time of the first visits, and number of visits, as well as the services and information provided during ANC.

## Antenatal Care Provider

Table 10.1 presents data on the utilization of different types of antenatal care providers. Overall, the 2005 ADHS found that 93 percent of women who had a live birth in the five years preceding the survey received antenatal care at least once from a doctor ( 90 percent) or a nurse or trained midwife ( 3 percent) (Figure 10.1). In urban areas, 94 percent of care was provided by doctors and 2 percent was provided by nurses or trained midwives. In rural areas, 83 percent of women received antenatal care from a doctor and 6 percent from a nurse or a midwife.

In almost all regions, at least nine in ten mothers received antenatal care from a trained professional. However, antenatal care from a health professional (doctor, nurse, or midwife) is received by only 78 percent of mothers in Shirak and 74 percent in Gegharkunik.

In the five years since the 2000 ADHS, a significant change has taken place in the coverage of antenatal care. Antenatal care by a doctor has increased from 84 percent to 90 percent, while care by a nurse or a midwife decreased from 9 percent to 3 percent.

## Table 10.1 Antenatal care

Percent distribution of women who had a live birth in the five years preceding the survey by antenatal care (ANC) provider during pregnancy for the most recent birth, according to background characteristics, Armenia 2005

| Background characteristic | Doctor | Nurse/ midwife | Other | No one | Missing | Total | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age at birth |  |  |  |  |  |  |  |
| <20 | 86.6 | 3.4 | 0.5 | 9.5 | 0.0 | 100.0 | 111 |
| 20-34 | 90.3 | 3.4 | 0.2 | 5.6 | 0.5 | 100.0 | 991 |
| 35-49 | 88.2 | 0.2 | 0.0 | 11.7 | 0.0 | 100.0 | 74 |
| Birth order |  |  |  |  |  |  |  |
| 1 | 94.2 | 3.1 | 0.2 | 2.5 | 0.0 | 100.0 | 455 |
| 2-3 | 88.9 | 3.6 | 0.2 | 6.9 | 0.3 | 100.0 | 638 |
| 4+ | 73.2 | 0.7 | 0.0 | 22.8 | 3.4 | 100.0 | 82 |
| Residence |  |  |  |  |  |  |  |
| Urban | 93.7 | 1.9 | 0.1 | 4.2 | 0.1 | 100.0 | 736 |
| Rural | 83.4 | 5.5 | 0.4 | 9.9 | 0.9 | 100.0 | 440 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 95.4 | 1.8 | 0.0 | 2.8 | 0.0 | 100.0 | 456 |
| Aragatsotn | 92.8 | 0.8 | 0.0 | 6.4 | 0.0 | 100.0 | 59 |
| Ararat | 87.3 | 5.6 | 0.0 | 7.1 | 0.0 | 100.0 | 102 |
| Armavir | 88.9 | 4.0 | 0.5 | 6.6 | 0.0 | 100.0 | 95 |
| Gegharkunik | 65.9 | 8.0 | 0.0 | 24.4 | 1.7 | 100.0 | 87 |
| Lori | 83.0 | 9.7 | 1.5 | 5.8 | 0.0 | 100.0 | 76 |
| Kotayk | 96.6 | 0.0 | 0.0 | 2.3 | 1.2 | 100.0 | 104 |
| Shirak | 76.7 | 1.7 | 0.9 | 18.8 | 1.8 | 100.0 | 72 |
| Syunik | 95.7 | 2.2 | 0.0 | 1.1 | 0.9 | 100.0 | 50 |
| Vayots Dzor | 88.1 | 6.7 | 3.2 | 1.9 | 0.0 | 100.0 | 16 |
| Tavush | 93.4 | 2.7 | 0.0 | 4.0 | 0.0 | 100.0 | 61 |
| Education |  |  |  |  |  |  |  |
| Basic general | 79.9 | 1.8 | 0.0 | 16.4 | 1.8 | 100.0 | 99 |
| Secondary general | 87.2 | 2.8 | 0.3 | 9.1 | 0.6 | 100.0 | 442 |
| Specialized secondary | 91.8 | 3.4 | 0.4 | 4.3 | 0.0 | 100.0 | 359 |
| Higher | 95.0 | 4.1 | 0.0 | 0.9 | 0.0 | 100.0 | 276 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 80.9 | 3.7 | 0.2 | 13.3 | 1.9 | 100.0 | 212 |
| Second | 83.2 | 4.3 | 0.8 | 11.5 | 0.2 | 100.0 | 229 |
| Middle | 91.8 | 3.4 | 0.2 | 4.6 | 0.0 | 100.0 | 224 |
| Fourth | 93.5 | 3.6 | 0.0 | 2.9 | 0.0 | 100.0 | 265 |
| Highest | 98.0 | 1.2 | 0.0 | 0.8 | 0.0 | 100.0 | 245 |
| Total | 89.8 | 3.2 | 0.2 | 6.3 | 0.4 | 100.0 | 1,176 |

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

Figure 10.1 Antenatal Care Provider


Note: Refers to most recent birth in the five years before the survey

## Number and Timing of ANC Visits

The prevention of complications during pregnancy and delivery and the successful outcome of the pregnancy for both mother and child is associated with the quality of antenatal care, the number of visits, and the timing of the first visit. In terms of timing, the Ministry of Health recommends the first visit by 12 weeks of gestation. The Ministry of Health has adopted the World Health Organization guideline of at least four to six antenatal care visits for a normal pregnancy.

Seventy-one percent of women who had a live birth in the five years preceding the survey made four or more antenatal care visits (Table 10.2) for their most recent birth. There is a significant urban-rural differential. The percentage of women who make four or more antenatal care visits in rural areas is much lower than that in urban areas ( 53 percent compared with 82 percent).

In general, urban women appears to make their first ANC visit earlier than rural women; more than half of urban women (51 percent) have their first antenatal visit in the first four months of pregnancy, compared with 43 percent of rural women. However,

## Table 10.2 Number of antenatal care visits and timing of first visit

Percent distribution of women who had a live birth in the five years preceding the survey by number of antenatal care (ANC) visits for the most recent birth, and by the timing of the first visit; and among women with ANC, median months pregnant at first visit, according to residence, Armenia 2005

|  | Residence |  |  |
| :--- | ---: | ---: | ---: |
| Number and timing of ANC visits | Urban | Rural | Total |
| Number of ANC visits |  |  |  |
| None | 4.2 | 9.9 | 6.3 |
| 1 | 1.9 | 4.6 | 2.9 |
| $2-3$ | 11.8 | 28.5 | 18.1 |
| 4+ | 81.6 | 53.0 | 70.9 |
| Don't know/missing | 0.4 | 4.0 | 1.7 |
| Total | 100.0 | 100.0 | 100.0 |
| Number of months pregnant at |  |  |  |
| time of first ANC visit |  |  |  |
| No antenatal care | 4.2 | 9.9 | 6.3 |
| $\quad$ 4 | 51.4 | 42.9 | 48.2 |
| 4-5 | 35.1 | 39.3 | 36.6 |
| 6-7 | 7.5 | 4.4 | 6.4 |
| $8+$ | 1.6 | 0.5 | 1.2 |
| Dont know/missing | 0.2 | 3.0 | 1.2 |
|  |  |  |  |
| Total | 100.0 | 100.0 | 100.0 |
|  |  |  |  |
| Number of women | 736 | 440 | 1,176 |
| Median months pregnant at first |  |  |  |
| visit (for those with ANC) | 4.0 | 4.1 | 4.0 |
| Number of women with ANC | 704 | 393 | 1,097 | there is virtually no difference between urban and rural women in the median number of months pregnant at time of first visit (4.0 and 4.1 months, respectively).

## Antenatal Care Content

Determining the extent of care given during antenatal visits is important in judging the value of antenatal care services. In Armenia, antenatal care should include the testing of blood and urine samples; a bacterioscopic vaginal examination; and height, weight, and blood pressure measurement. Additional examinations are performed on pregnant women who are ill or at higher risk of complications. Finally, antenatal care includes the health education of pregnant women, which informs them about pregnancy complications.

Table 10.3 presents information on the percentage of women who were informed about the signs of pregnancy complications and who received routine antenatal care procedures during their last pregnancy in the five years preceding the survey, by background characteristics. These procedures are helpful in the early diagnosis of pregnancy complications, which are important sources of maternal and child mortality and morbidity.

| Table 10.3 Components of antenatal care |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of women with a live birth in the five years preceding the survey who received antenatal care (ANC) for the most recent birth, by content of ANC, and percentage of women with a live birth in the five years preceding the survey who received iron tablets or syrup for the most recent birth, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |
|  | Among women who received ANC for their most recent birth in the past 5 years, percentage who received specific services |  |  |  |  | Number of women with ANC | Women with a live birth in the past five years |  |
| Background characteristic | Informed of signs of pregnancy complications | W eight measured | Blood pressure measured | Urine sample taken | Blood sample taken |  | Percentage who received iron tablets or syrup | Number of women |
| Age at birth |  |  |  |  |  |  |  |  |
| <20 | 45.0 | 94.6 | 93.7 | 95.6 | 95.6 | 100 | 15.0 | 111 |
| 20-34 | 44.8 | 98.6 | 98.9 | 98.5 | 98.7 | 931 | 18.6 | 991 |
| 35-49 | 68.4 | 100.0 | 100.0 | 100.0 | 100.0 | 65 | 12.5 | 74 |
| Birth order |  |  |  |  |  |  |  |  |
| 1 | 46.3 | 98.6 | 98.5 | 99.2 | 99.2 | 444 | 18.9 | 455 |
| 2-3 | 44.6 | 98.1 | 98.4 | 97.7 | 97.9 | 592 | 17.9 | 638 |
| 4+ | 61.6 | 98.2 | 100.0 | 98.2 | 98.2 | 61 | 12.4 | 82 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 50.7 | 99.4 | 99.2 | 99.1 | 99.4 | 704 | 21.1 | 736 |
| Rural | 38.2 | 96.4 | 97.3 | 97.1 | 96.7 | 393 | 12.7 | 440 |
| Region |  |  |  |  |  |  |  |  |
| Yerevan | 54.0 | 99.3 | 99.1 | 98.8 | 99.3 | 443 | 23.3 | 456 |
| Aragatsotn | 51.6 | 88.5 | 93.0 | 94.8 | 92.5 | 55 | 21.7 | 59 |
| Ararat | 7.6 | 100.0 | 100.0 | 100.0 | 100.0 | 94 | 8.6 | 102 |
| Armavir | 52.3 | 99.5 | 99.5 | 100.0 | 100.0 | 89 | 11.0 | 95 |
| Gegharkunik | 64.5 | 93.0 | 93.0 | 93.0 | 93.0 | 64 | 10.4 | 87 |
| Lori | 41.4 | 98.4 | 98.4 | 98.4 | 98.4 | 71 | 32.1 | 76 |
| Kotayk | 51.8 | 98.9 | 99.1 | 100.0 | 100.0 | 100 | 16.2 | 104 |
| Shirak | 14.1 | 100.0 | 100.0 | 98.9 | 98.9 | 57 | 8.1 | 72 |
| Syunik | 48.3 | 100.0 | 100.0 | 100.0 | 100.0 | 49 | 8.6 | 50 |
| Vayots Dzor | 23.7 | 100.0 | 100.0 | 100.0 | 100.0 | 15 | 17.3 | 16 |
| Tavush | 47.6 | 97.5 | 97.5 | 94.0 | 94.5 | 58 | 15.3 | 61 |
| Education |  |  |  |  |  |  |  |  |
| Basic general | 41.9 | 94.8 | 94.8 | 92.6 | 92.6 | 81 | 5.5 | 99 |
| Secondary general | 42.7 | 97.3 | 98.0 | 98.3 | 98.0 | 399 | 14.3 | 442 |
| Specialized secondary | 44.7 | 99.3 | 99.6 | 99.3 | 99.3 | 343 | 16.9 | 359 |
| Higher | 54.7 | 99.7 | 99.0 | 99.0 | 99.9 | 273 | 29.6 | 276 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 37.1 | 94.4 | 95.7 | 95.1 | 94.5 | 180 | 11.7 | 212 |
| Second | 40.6 | 99.2 | 99.3 | 99.0 | 99.0 | 202 | 13.6 | 229 |
| M iddle | 45.1 | 97.5 | 97.6 | 98.2 | 98.2 | 214 | 16.6 | 224 |
| Fourth | 46.4 | 100.0 | 100.0 | 100.0 | 100.0 | 258 | 18.8 | 265 |
| Highest | 58.6 | 99.5 | 99.2 | 98.6 | 99.5 | 243 | 27.5 | 245 |
| Total | 46.2 | 98.3 | 98.5 | 98.4 | 98.5 | 1,097 | 17.9 | 1,176 |

Overall, virtually all women who had a live birth in the five years preceding the survey in Armenia received all of the specified procedures. However, less than half of these women were informed of the signs of pregnancy complications. The proportion of women who were given information about pregnancy complications has declined from 57 percent in 2000 to 46 percent in 2005. Women in Ararat and Shirak are the least likely to be informed of potential complications during pregnancy (8 percent and 14 percent, respectively).

Older women and urban women are slightly more likely than other women to have received the specified antenatal care procedures. Similarly, better educated women and women living in more economically advantaged households are slightly more likely to receive all of the specified antenatal care services-especially information about pregnancy complications-than women with less education or lower wealth status.

## Iron Supplements

Mothers are recommended to take iron supplements during pregnancy because maternal anemia is a principal cause of both maternal and neonatal mortality. Table 10.3 shows that less than one-fifth of mothers (18 percent) received iron supplementation during pregnancy. Coverage varies as expected by residence and education. Mothers who live in urban areas are more likely to take iron supplements than women in rural areas ( 21 and 13 percent, respectively). Prevalence also increases significantly with increasing education; 30 percent of women with higher education take iron supplements during pregnancy, compared with only 6 percent with general basic education.

### 10.2 Assistance and Medical Care at Delivery

Hygienic conditions during delivery and supervision of delivery by trained medical staff reduce the risk of infections and ensure that complications of delivery are effectively handled. The 2005 ADHS collected information on the place of delivery for all children born in the five years preceding the survey and the type of medical staff assisting during delivery.

Table 10.4 indicates that almost all births ( 97 percent) were delivered at a health facility. The proportion of births delivered at home has declined from 9 percent in 2000 to 2 percent in 2005. Home deliveries are more likely to occur among higher order births, births in rural areas, births to the least educated women, and to women in the lowest wealth quintile. The highest percentage of home delivery is among births with no antenatal care visit (18 percent).

There is considerable variation by region in the extent of home delivery. While in most regions, only about 1 percent or less of births are delivered at home, this proportion is 14 percent in Gegharkunik and 11 percent in Aragatsotn. The large proportion of home deliveries in Gegharkunik could be due to a variety of factors, including greater distances to health facilities and financial constraints among the population, a significant percentage of whom are refugees from Azerbaijan. Nonetheless, Gegharkunik shows a large decline in home deliveries, from 41 percent of births in 2000 to 14 percent in 2005.

Assistance at delivery from a health professional is nearly universal in Armenia (Table 10.5). Ninety-eight percent of live births during the five years preceding the survey were attended by a doctor ( 93 percent) or nurse or trained midwife ( 4 percent). There are significant variations by region. In Gegharkunik, for example, only 71 percent of births were assisted by a doctor, compared with 98 percent in Syunik. The role of nurses and midwives in assisting deliveries is prominent in Gegharkunik and Vayots Dzor (20 percent and 17 percent, respectively).

| Table 10.4 Place of delivery |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of live births in the five years preceding the survey by place of delivery, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |
|  | Health facility |  | Home | Other | Missing | Total |  |
| Background characteristic | Public sector | Private sector |  |  |  |  |  |
| Mother's age at birth |  |  |  |  |  |  |  |
| <20 | 98.6 | 0.8 | 0.6 | 0.0 | 0.0 | 100.0 | 190 |
| 20-34 | 95.3 | 0.7 | 2.3 | 0.3 | 1.4 | 100.0 | 1,241 |
| 35-49 | 95.7 | 0.0 | 4.3 | 0.0 | 0.0 | 100.0 | 82 |
| Birth order |  |  |  |  |  |  |  |
| 1 | 97.3 | 1.1 | 0.3 | 0.3 | 0.9 | 100.0 | 716 |
| 2-3 | 96.2 | 0.3 | 2.4 | 0.2 | 1.0 | 100.0 | 702 |
| 4+ | 80.5 | 0.0 | 15.8 | 0.0 | 3.7 | 100.0 | 94 |
| Antenatal care visits ${ }^{1}$ |  |  |  |  |  |  |  |
| None | 80.5 | 0.0 | 17.8 | 1.6 | 0.0 | 100.0 | 75 |
| 1-3 | 98.2 | 0.0 | 1.8 | 0.0 | 0.0 | 100.0 | 247 |
| 4+ | 98.0 | 1.0 | 0.7 | 0.3 | 0.0 | 100.0 | 834 |
| Residence |  |  |  |  |  |  |  |
| Urban | 97.6 | 1.0 | 0.2 | 0.2 | 1.0 | 100.0 | 930 |
| Rural | 92.8 | 0.2 | 5.5 | 0.2 | 1.3 | 100.0 | 582 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 97.5 | 0.7 | 0.0 | 0.4 | 1.5 | 100.0 | 584 |
| Aragatsotn | 87.9 | 0.6 | 11.4 | 0.0 | 0.2 | 100.0 | 83 |
| Ararat | 98.3 | 0.0 | 1.7 | 0.0 | 0.0 | 100.0 | 127 |
| Armavir | 97.4 | 0.0 | 1.2 | 0.0 | 1.5 | 100.0 | 125 |
| Gegharkunik | 84.2 | 0.0 | 13.5 | 1.0 | 1.2 | 100.0 | 120 |
| Lori | 97.5 | 0.0 | 2.5 | 0.0 | 0.0 | 100.0 | 96 |
| Kotayk | 95.2 | 1.8 | 1.1 | 0.0 | 1.9 | 100.0 | 129 |
| Shirak | 96.0 | 1.8 | 0.7 | 0.0 | 1.4 | 100.0 | 90 |
| Syunik | 95.5 | 2.6 | 0.0 | 0.0 | 1.9 | 100.0 | 63 |
| Vayots Dzor | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 19 |
| Tavush | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 75 |
| Mother's education |  |  |  |  |  |  |  |
| Basic general | 92.2 | 2.0 | 4.9 | 0.0 | 0.9 | 100.0 | 138 |
| Secondary general | 94.4 | 0.2 | 4.2 | 0.6 | 0.7 | 100.0 | 579 |
| Specialized secondary | 98.1 | 0.4 | 0.6 | 0.0 | 0.8 | 100.0 | 448 |
| Higher | 96.4 | 1.3 | 0.0 | 0.0 | 2.3 | 100.0 | 347 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 86.5 | 0.4 | 9.9 | 0.4 | 2.7 | 100.0 | 286 |
| Second | 97.1 | 0.3 | 1.5 | 0.0 | 1.1 | 100.0 | 294 |
| Middle | 98.9 | 1.1 | 0.0 | 0.0 | 0.0 | 100.0 | 289 |
| Fourth | 96.6 | 0.6 | 0.4 | 0.6 | 1.8 | 100.0 | 335 |
| Highest | 99.1 | 0.9 | 0.0 | 0.0 | 0.0 | 100.0 | 308 |
| Total | 95.8 | 0.7 | 2.2 | 0.2 | 1.1 | 100.0 | 1,512 |
| Note: Totals include cases with missing information. <br> ${ }^{1}$ Includes only the most recent birth in the five years preceding the survey |  |  |  |  |  |  |  |

Table 10.5 presents information on the extent of caesarean delivery. According to the World Health Organization, the caesarean delivery rate should not exceed 10 percent. In Armenia, 9 percent of babies are delivered by caesarean section. Caesarean deliveries increase with the woman's age, education, and wealth quintile. First births are more likely to be delivered by caesarean section than higher order births. Women living in urban areas are more likely to have caesarean deliveries. Delivery by caesarean section ranges from 1 percent in Gegharkunik to 14 percent in Tavush and 15 percent in Lori.

| Table 10.5 Assistance during delivery |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

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

### 10.3 Postnatal Care

The postnatal period is defined as the time between the delivery of the placenta and 42 days after delivery. Postnatal care is important both for the mother and for the child to treat complications arising from the delivery as well as to provide the mother with important information on how to care for herself and her child. Because most maternal and neonatal deaths occur during the first few days after delivery, the timing of postnatal care is important.

Table 10.6 presents information on the timing of postnatal care after the most recent birth for women who gave birth in the five years preceding the survey. The data show that 16 percent of these women did not receive a postnatal checkup. Younger women, women with higher parity, and rural women are less likely than other women to receive postnatal care. The likelihood of receiving postnatal care increases with the woman's education and wealth status. For example, 21 percent of women with basic general education had no postnatal care compared with 10 percent of women with higher than secondary education. Across regions, almost half of women in Ararat ( 47 percent) had no postnatal care, while in Armavir this proportion is only 4 percent.

Almost four in five women (79 percent) have a postnatal care checkup within the recommended two days after delivery. Women in Syunik are the most likely to receive postnatal care within two days after delivery ( 94 percent), while only half of women in Ararat received postnatal care in the recommended time period (50 percent).

Table 10.7 shows the type of health care provider who performed the postnatal care after the most recent birth for women who gave birth in the five years preceding the survey. Overall, 78 percent of women receive postnatal care from a doctor and 6 percent from a nurse or a midwife. Doctors are more likely to provide postnatal care to older women and women in urban areas. The chance that postnatal care is performed by a doctor increases with the woman's education and wealth status. Across regions, 90 percent or more of women in Armavir, Syunik, and Vayots Dzor received a postnatal care checkup by a doctor. On the other hand, doctors perform postnatal checkups for only 53 percent of women in Ararat and 56 percent of women in Gegharkunik.

## Table 10.6 Timing of postnatal checkup

Among women giving birth in the five years preceding the survey, percent distribution by timing of the mother's first postnatal checkup for the last live birth, according to background characteristics, Armenia 2005

| Background characteristic | Timing of first postnatal checkup |  |  |  |  | Did not receive postnatal checkup ${ }^{1}$ | Total | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Less than 4 hours | 4-23 hours | 2 days | 3-41 days | Don't know/ missing |  |  |  |
| Age at birth |  |  |  |  |  |  |  |  |
| <20 | 60.1 | 17.7 | 4.3 | 1.9 | 0.0 | 16.0 | 100.0 | 111 |
| 20-34 | 56.0 | 22.6 | 2.0 | 1.3 | 1.7 | 16.4 | 100.0 | 991 |
| 35-49 | 73.4 | 16.4 | 0.6 | 0.0 | 1.1 | 8.5 | 100.0 | 74 |
| Birth order |  |  |  |  |  |  |  |  |
| 1 | 57.4 | 23.2 | 2.1 | 2.1 | 0.4 | 14.9 | 100.0 | 455 |
| 2-3 | 57.4 | 21.7 | 2.1 | 0.9 | 2.5 | 15.3 | 100.0 | 638 |
| 4+ | 58.0 | 14.5 | 2.4 | 0.0 | 0.0 | 25.2 | 100.0 | 82 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 61.1 | 21.8 | 2.0 | 1.0 | 2.4 | 11.7 | 100.0 | 736 |
| Rural | 51.3 | 21.7 | 2.4 | 1.8 | 0.0 | 22.8 | 100.0 | 440 |
| Region |  |  |  |  |  |  |  |  |
| Yerevan | 61.2 | 22.1 | 2.4 | 0.9 | 2.9 | 10.6 | 100.0 | 456 |
| Aragatsotn | 48.1 | 20.0 | 5.3 | 5.7 | 0.5 | 20.4 | 100.0 | 59 |
| Ararat | 39.8 | 9.8 | 0.0 | 2.7 | 0.6 | 47.0 | 100.0 | 102 |
| Armavir | 38.7 | 51.3 | 3.9 | 1.8 | 0.0 | 4.3 | 100.0 | 95 |
| Gegharkunik | 57.2 | 12.5 | 0.0 | 0.0 | 0.0 | 30.2 | 100.0 | 87 |
| Lori | 81.2 | 8.0 | 2.6 | 0.0 | 1.5 | 6.8 | 100.0 | 76 |
| Kotayk | 66.3 | 20.6 | 1.3 | 2.2 | 1.6 | 7.9 | 100.0 | 104 |
| Shirak | 52.1 | 14.8 | 1.7 | 0.0 | 1.1 | 30.3 | 100.0 | 72 |
| Syunik | 54.4 | 39.3 | 0.0 | 0.0 | 0.0 | 6.3 | 100.0 | 50 |
| Vayots Dzor | 33.0 | 49.3 | 7.0 | 4.1 | 0.0 | 6.7 | 100.0 | 16 |
| Tavush | 68.0 | 14.5 | 2.9 | 0.4 | 0.4 | 13.7 | 100.0 | 61 |
| Education |  |  |  |  |  |  |  |  |
| Basic general | 58.9 | 14.7 | 3.1 | 1.4 | 0.6 | 21.4 | 100.0 | 99 |
| Secondary general | 55.5 | 20.4 | 2.5 | 0.8 | 1.2 | 19.6 | 100.0 | 442 |
| Specialized secondary | 56.0 | 25.6 | 2.3 | 1.0 | 0.5 | 14.6 | 100.0 | 359 |
| Higher | 62.0 | 21.5 | 0.9 | 2.4 | 3.8 | 9.5 | 100.0 | 276 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 45.4 | 22.6 | 4.0 | 0.2 | 0.2 | 27.5 | 100.0 | 212 |
| Second | 59.2 | 19.4 | 3.0 | 2.9 | 0.1 | 15.4 | 100.0 | 229 |
| Middle | 59.1 | 23.2 | 1.5 | 0.3 | 5.3 | 10.5 | 100.0 | 224 |
| Fourth | 56.5 | 21.5 | 1.6 | 2.7 | 1.1 | 16.6 | 100.0 | 265 |
| Highest | 65.7 | 22.2 | 1.0 | 0.0 | 1.0 | 10.1 | 100.0 | 245 |
| Total | 57.5 | 21.8 | 2.1 | 1.3 | 1.5 | 15.8 | 100.0 | 1,176 |
| ${ }^{1}$ Includes women who received the first postnatal checkup after 41 days |  |  |  |  |  |  |  |  |


| Table 10.7 Provider at first postnatal checkup |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Among women who gave birth in the five years preceding the survey, percent distribution by type of provider at first postnatal checkup for the last live birth, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |
| Background characteristic | Provider at first postnatal checkup |  |  | Did not receive postnatal checkup ${ }^{1}$ | Total | Number of women |
|  | Doctor | Nurse/ midwife | Missing |  |  |  |
| Age at birth |  |  |  |  |  |  |
| <20 | 76.5 | 7.5 | 0.0 | 16.0 | 100.0 | 111 |
| 20-34 | 77.1 | 5.9 | 0.6 | 16.4 | 100.0 | 991 |
| 35-49 | 88.1 | 3.4 | 0.0 | 8.5 | 100.0 | 74 |
| Birth order |  |  |  |  |  |  |
| 1 | 79.4 | 5.7 | 0.0 | 14.9 | 100.0 | 455 |
| 2-3 | 77.3 | 6.4 | 1.0 | 15.3 | 100.0 | 638 |
| 4+ | 72.6 | 2.2 | 0.0 | 25.2 | 100.0 | 82 |
| Residence |  |  |  |  |  |  |
| Urban | 83.2 | 4.5 | 0.7 | 11.7 | 100.0 | 736 |
| Rural | 68.8 | 8.2 | 0.3 | 22.8 | 100.0 | 440 |
| Region |  |  |  |  |  |  |
| Yerevan | 85.6 | 2.8 | 1.0 | 10.6 | 100.0 | 456 |
| Aragatsotn | 72.7 | 4.6 | 2.3 | 20.4 | 100.0 | 59 |
| Ararat | 52.6 | 0.0 | 0.4 | 47.0 | 100.0 | 102 |
| Armavir | 90.0 | 5.7 | 0.0 | 4.3 | 100.0 | 95 |
| Gegharkunik | 55.6 | 14.2 | 0.0 | 30.2 | 100.0 | 87 |
| Lori | 79.6 | 13.6 | 0.0 | 6.8 | 100.0 | 76 |
| Kotayk | 83.1 | 9.0 | 0.0 | 7.9 | 100.0 | 104 |
| Shirak | 60.1 | 9.6 | 0.0 | 30.3 | 100.0 | 72 |
| Syunik | 93.7 | 0.0 | 0.0 | 6.3 | 100.0 | 50 |
| Vayots Dzor | 90.0 | 3.2 | 0.0 | 6.7 | 100.0 | 16 |
| Tavush | 71.8 | 14.5 | 0.0 | 13.7 | 100.0 | 61 |
| Education |  |  |  |  |  |  |
| Basic general | 69.7 | 8.5 | 0.4 | 21.4 | 100.0 | 99 |
| Secondary general | 74.1 | 5.9 | 0.5 | 19.6 | 100.0 | 442 |
| Specialized secondary | 79.3 | 5.7 | 0.3 | 14.6 | 100.0 | 359 |
| Higher | 84.5 | 5.0 | 1.0 | 9.5 | 100.0 | 276 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 65.7 | 6.6 | 0.2 | 27.5 | 100.0 | 212 |
| Second | 75.5 | 8.6 | 0.5 | 15.4 | 100.0 | 229 |
| Middle | 81.9 | 6.8 | 0.8 | 10.5 | 100.0 | 224 |
| Fourth | 76.2 | 6.2 | 1.0 | 16.6 | 100.0 | 265 |
| Highest | 88.3 | 1.5 | 0.0 | 10.1 | 100.0 | 245 |
| Total | 77.8 | 5.9 | 0.5 | 15.8 | 100.0 | 1,176 |
| ${ }^{1}$ Includes women who received the first postnatal checkup after 41 days |  |  |  |  |  |  |

### 10.4 Women's Health Care

## Visits to the Gynecologist

Regular gynecological examinations are an important part of a woman's reproductive health. In a routine exam, the doctor checks for abnormalities in the uterus, vagina, ovaries, fallopian tubes, bladder, etc. In Western Europe and the United States, yearly routine gynecological exams are recommended for women in the reproductive ages.

In Armenia, almost one-third of women ( 30 percent) visited a gynecologist in the 12 months preceding the survey (Table 10.8). Women in the middle of their reproductive ages (25-34) are the most likely to have visited a gynecologist in the past 12 months. There are slight variations by other background characteristics.

| Table 10.8 Last visit to gynecologist |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of women by time since last visit to a gynecologist, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |
|  | Time since last visit to a gynecologist |  |  |  |  |  |  | Number of women |
| Background characteristic | N ever visited | 0-11 months | $12-23$ <br> months | $24-35$ <br> months | $36-59$ <br> months | 5+ years | Total |  |
| Age |  |  |  |  |  |  |  |  |
| 15-19 | 90.2 | 8.1 | 0.8 | 0.4 | 0.5 | 0.1 | 100.0 | 1,123 |
| 20-24 | 54.7 | 38.2 | 5.0 | 0.9 | 0.6 | 0.4 | 100.0 | 1,131 |
| 25-29 | 21.6 | 52.5 | 9.6 | 6.3 | 6.0 | 3.7 | 100.0 | 929 |
| 30-34 | 10.7 | 45.8 | 10.5 | 6.2 | 9.0 | 17.7 | 100.0 | 749 |
| 35-39 | 6.9 | 29.4 | 14.5 | 6.6 | 11.2 | 31.4 | 100.0 | 711 |
| 40-44 | 6.4 | 23.6 | 8.0 | 7.6 | 10.7 | 43.8 | 100.0 | 965 |
| 45-49 | 9.3 | 17.9 | 6.3 | 4.7 | 8.2 | 53.7 | 100.0 | 958 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 32.7 | 30.3 | 7.4 | 4.2 | 6.0 | 19.3 | 100.0 | 4,194 |
| Rural | 31.2 | 29.1 | 6.8 | 4.7 | 6.0 | 22.2 | 100.0 | 2,372 |
| Region |  |  |  |  |  |  |  |  |
| Yerevan | 33.3 | 32.7 | 7.2 | 4.2 | 5.4 | 17.3 | 100.0 | 2,468 |
| Aragatsotn | 33.7 | 33.9 | 4.8 | 3.0 | 4.7 | 19.9 | 100.0 | 292 |
| Ararat | 37.2 | 23.1 | 5.4 | 3.8 | 7.7 | 22.7 | 100.0 | 462 |
| Armavir | 28.6 | 29.0 | 6.7 | 6.2 | 5.9 | 23.6 | 100.0 | 567 |
| Gegharkunik | 30.3 | 35.2 | 8.0 | 4.8 | 5.8 | 15.9 | 100.0 | 443 |
| Lori | 31.6 | 26.0 | 7.2 | 4.3 | 3.9 | 26.6 | 100.0 | 537 |
| Kotayk | 29.0 | 32.7 | 9.7 | 3.6 | 7.4 | 17.7 | 100.0 | 563 |
| Shirak | 34.8 | 23.4 | 5.9 | 3.8 | 8.2 | 24.0 | 100.0 | 563 |
| Syunik | 28.5 | 27.7 | 7.3 | 5.9 | 8.3 | 22.1 | 100.0 | 281 |
| Vayots Dzor | 35.4 | 26.1 | 8.1 | 6.0 | 7.5 | 16.9 | 100.0 | 107 |
| Tavush | 27.4 | 24.2 | 10.2 | 4.4 | 5.2 | 28.5 | 100.0 | 285 |
| Education |  |  |  |  |  |  |  |  |
| Basic general | 50.9 | 21.7 | 5.2 | 4.4 | 4.6 | 13.2 | 100.0 | 529 |
| Secondary general | 27.7 | 30.5 | 6.8 | 4.2 | 7.3 | 23.4 | 100.0 | 2,440 |
| Specialized secondary | 25.5 | 32.2 | 7.6 | 4.9 | 5.6 | 24.3 | 100.0 | 1,997 |
| Higher | 41.2 | 28.7 | 8.0 | 3.9 | 5.1 | 13.0 | 100.0 | 1,600 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 30.2 | 26.2 | 6.9 | 4.4 | 6.2 | 26.1 | 100.0 | 1,164 |
| Second | 32.3 | 29.2 | 5.9 | 4.0 | 5.6 | 22.8 | 100.0 | 1,284 |
| M iddle | 31.3 | 27.4 | 7.0 | 4.5 | 6.7 | 23.1 | 100.0 | 1,303 |
| Fourth | 31.8 | 32.6 | 7.3 | 4.8 | 6.3 | 17.2 | 100.0 | 1,375 |
| Highest | 34.8 | 33.1 | 8.8 | 4.0 | 5.5 | 13.8 | 100.0 | 1,440 |
| Total | 32.2 | 29.9 | 7.2 | 4.3 | 6.0 | 20.3 | 100.0 | 6,566 |

Overall, 32 percent of women have never visited a gynecologist and one in five women has not been seen by a gynecologist in the past five years. As expected, the coverage of gynecological visit varies by the woman's age. While nine in ten women age 15-19 have never visited a gynecologist, only 9 percent of women 45-49 have never had a gynecological examination. On the other hand, 54 percent of women 45-49 last saw a gynecologist five or more years ago.

Even among women who have been to a gynecologist recently, only one-third say that having a routine exam was at least one of the reasons for the visit (Figure 10.2). Over one in five women said that they went to a gynecologist for maternal care and almost one in five went for an abortion. Only 6 percent of women said they visited a gynecologist for family planning.

Figure 10.2 Reasons for Gynecological Visit


## Breast Examination

Breast cancer is the most common type of cancer among Armenian women. Although the exact causes of breast cancer have not been identified, it is known that the risk of breast cancer increases as a woman ages. Breast self-examinations (BSEs)—physical examinations of the breasts performed by women themselves-as well as examinations by medical professionals and mammography are methods for the early detection of breast cancer.

BSE is a simple procedure that can be performed monthly by a woman to check for any changes in her breasts. Until recently, there has been little information among the general Armenian public about the importance of BSE. Even gynecologists were not trained in the techniques for BSE (Government of Armenia et al., 1999). In the past few years, however, there have been various public health initiatives targeted at increasing awareness of BSE techniques.

According to Table 10.9, 81 percent of Armenian women do not know about BSE. Among women who reported that they know how to give themselves a breast examination, approximately half (10 percent overall) performed a BSE within the three months preceding the survey. Knowledge of BSE and the likelihood of having recently performed a BSE increases with the woman's age, urban residence, educational attainment, and wealth status. Women in Yerevan and Kotayk are the most likely to have performed a recent BSE, while women in Ararat, Gegarkunik, Shirak, and Vayots Dzor are the least likely.

One in ten women reported that a health care provider had ever given them a breast exam. It should be noted that although 30 percent of women reported that they had visited a gynecologist in the past 12 months (Table 10.8), only 1 percent of women reported that a health care provider had given them a breast exam during the same period.

| Percent distribution of women by time since last breast self-exam (BSE) and time since last breast exam by health provider, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Last time performed BSE |  |  |  |  | Time since last exam by a health provider |  |  |  |  |  |
| Background characteristic | ```Does not know about self-exam``` | Never | Within past 3 months | Three+ months ago | Total | Never | Within past year | More than one year ago | Missing | Total | Nuber of women |
| Age |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 97.2 | 1.7 | 0.8 | 0.3 | 100.0 | 98.6 | 0.2 | 1.1 | 0.1 | 100.0 | 1,123 |
| 20-24 | 87.9 | 5.4 | 5.7 | 0.9 | 100.0 | 93.3 | 1.6 | 5.1 | 0.0 | 100.0 | 1,131 |
| 25-29 | 78.1 | 6.9 | 9.7 | 5.3 | 100.0 | 90.0 | 0.9 | 9.0 | 0.1 | 100.0 | 929 |
| 30-34 | 74.8 | 5.1 | 13.9 | 6.2 | 100.0 | 85.2 | 1.5 | 12.9 | 0.4 | 100.0 | 749 |
| 35-39 | 74.1 | 7.2 | 14.7 | 4.0 | 100.0 | 86.6 | 0.7 | 12.4 | 0.3 | 100.0 | 711 |
| 40-44 | 75.1 | 6.1 | 15.8 | 2.9 | 100.0 | 86.9 | 1.5 | 11.0 | 0.6 | 100.0 | 965 |
| 45-49 | 74.2 | 6.3 | 15.1 | 4.4 | 100.0 | 85.9 | 2.1 | 11.5 | 0.5 | 100.0 | 958 |
| ' Residence |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 78.0 | 6.4 | 11.8 | 3.7 | 100.0 | 88.5 | 1.3 | 9.8 | 0.3 | 100.0 | 4,194 |
| Rural | 87.0 | 3.5 | 7.4 | 2.2 | 100.0 | 92.8 | 1.0 | 6.0 | 0.2 | 100.0 | 2,372 |
| Region |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 72.8 | 8.8 | 14.3 | 4.2 | 100.0 | 86.7 | 1.6 | 11.5 | 0.2 | 100.0 | 2,468 |
| Aragatsotn | 85.3 | 4.0 | 8.8 | 1.9 | 100.0 | 89.8 | 1.4 | 8.1 | 0.7 | 100.0 | 292 |
| Ararat | 93.3 | 1.6 | 4.6 | 0.5 | 100.0 | 98.2 | 0.6 | 1.2 | 0.0 | 100.0 | 462 |
| Armavir | 87.1 | 3.6 | 7.3 | 2.0 | 100.0 | 92.7 | 0.5 | 6.8 | 0.0 | 100.0 | 567 |
| Gegharkunik | 88.5 | 5.4 | 4.4 | 1.7 | 100.0 | 93.6 | 1.5 | 4.8 | 0.1 | 100.0 | 443 |
| Lori | 81.0 | 3.8 | 10.8 | 4.3 | 100.0 | 92.8 | 1.1 | 6.1 | 0.0 | 100.0 | 537 |
| Kotayk | 79.2 | 2.0 | 14.6 | 4.0 | 100.0 | 85.3 | 1.8 | 11.3 | 1.5 | 100.0 | 563 |
| Shirak | 91.9 | 2.9 | 3.0 | 2.2 | 100.0 | 96.7 | 0.0 | 3.3 | 0.0 | 100.0 | 563 |
| Syunik | 83.3 | 5.2 | 7.2 | 4.2 | 100.0 | 86.1 | 1.4 | 12.2 | 0.2 | 100.0 | 281 |
| Vayots Dzor | 94.6 | 1.0 | 3.0 | 1.4 | 100.0 | 97.6 | 0.7 | 1.4 | 0.2 | 100.0 | 107 |
| Tavush | 84.1 | 3.3 | 10.2 | 2.5 | 100.0 | 87.9 | 0.9 | 10.9 | 0.3 | 100.0 | 285 |
| Education |  |  |  |  |  |  |  |  |  |  |  |
| Basic general | 91.7 | 1.6 | 3.9 | 2.8 | 100.0 | 92.7 | 1.2 | 6.1 | 0.0 | 100.0 | 529 |
| Secondary general | 88.1 | 2.8 | 6.6 | 2.4 | 100.0 | 92.0 | 1.0 | 6.6 | 0.3 | 100.0 | 2,440 |
| Specialized secondary | 78.5 | 5.9 | 12.0 | 3.6 | 100.0 | 89.2 | 1.0 | 9.6 | 0.2 | 100.0 | 1,997 |
| Higher | 70.7 | 9.8 | 15.5 | 3.9 | 100.0 | 87.4 | 1.8 | 10.6 | 0.3 | 100.0 | 1,600 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 90.4 | 2.4 | 5.1 | 2.1 | 100.0 | 93.2 | 0.9 | 5.7 | 0.2 | 100.0 | 1,164 |
| Second | 86.9 | 3.8 | 6.3 | 2.8 | 100.0 | 93.5 | 0.8 | 5.3 | 0.4 | 100.0 | 1,284 |
| Middle | 84.5 | 5.4 | 8.3 | 1.8 | 100.0 | 91.2 | 1.4 | 7.2 | 0.2 | 100.0 | 1,303 |
| Fourth | 78.0 | 6.6 | 11.8 | 3.6 | 100.0 | 88.4 | 1.2 | 10.1 | 0.3 | 100.0 | 1,375 |
| Highest | 68.8 | 8.0 | 17.9 | 5.2 | 100.0 | 85.2 | 1.7 | 13.0 | 0.2 | 100.0 | 1,440 |
| Total | 81.2 | 5.4 | 10.2 | 3.2 | 100.0 | 90.1 | 1.2 | 8.5 | 0.3 | 100.0 | 6,566 |

## CHILD HEALTH

This chapter presents the 2005 ADHS findings on child health in Armenia. Topics discussed include birth weight, immunizations, and common childhood illnesses and their treatment. Combined with information on childhood mortality, these data can be used to plan interventions to improve child health. The results presented in the following sections are based on data collected from mothers on all live births that occurred in the five years preceding the survey.

### 11.1 CHARACTERISTICS OF DELIVERY

Infants with a low birth weight have a higher mortality risk. For births in the five years preceding the survey, the birth weight was recorded from child health cards maintained at the local health facility. Information on birth weight was obtained for 98 percent of all births.

Of those babies weighed, 93 percent were reported to have a weight of at least 2.5 kilograms (Table 11.1). Newborns at higher birth orders, those in Aragatsotn, and those with mothers 35 or older are more likely than other newborns to weigh less than 2.5 kilograms.

### 11.2 Vaccination Coverage

Armenia's Ministry of Health (MOH) has adopted World Health Organization (WHO) guidelines for childhood immunizations that call for all children to receive a BCG vaccination against tuberculosis; three doses of DPT to prevent diphtheria, pertussis, and tetanus; three doses of polio vaccine; and a measles vaccine during the first year of life. In Armenia, measles is given in the form of an MMR vaccination at 12 months of age to protect against measles, mumps, and rubella. In addition to these standard recommendations, since late 1999 the MOH recommends that children receive three doses of the hepatitis vaccine.

Information on vaccination coverage was collected in the 2005 ADHS for all children under five years of age. In Armenia, child health cards are maintained in the local health care facilities. Immunization passports (cards kept by the child’s parent/guardian) were made available in 1995 (MOH and UNICEF, 1999). In this survey, data were collected from both sources, when available. If the mother did not have an immunization passport, she was asked to recall her child's immunizations. After all the interviews in a cluster were completed, the supervisor was in charge of going to the local clinic to record information from the health cards of the children in the sample. Health facility cards were found for almost all children age 12-23 months ( 92 percent). Among those children for whom immunization information was not found at a health facility, very few had immunization passports that were seen at home.

The data indicate that availability of immunization passports has decreased during the past five years in both urban and rural areas. In 2005, only 12 percent of children age 12-23 months had an immunization passport available at home, compared with 33 percent in 2000. Similarly, only 13 percent of mothers in rural areas and 11 percent in urban areas were able to show the interviewer an immunization passport in the 2005 survey, compared with 27 and 22 percent, respectively, in 2000 (data not shown).


Thus, while most of the data in this section are based on health facility cards, in the case of children for whom a facility card was not located, the data are based on the mother's recall.

Information on vaccination coverage among children age 12-23 months is shown in Table 11.2 by source of information used to determine coverage (i.e., facility card or mother's report). The third row of the table shows the proportion of children who were immunized at any age up to the time of the survey,
the fourth row shows the proportion who were vaccinated by age 12 months, and the fifth row shows the proportion who were vaccinated by age 18 months.

At the time of the interview, almost all children age 12-23 months (at least 95 percent) had received vaccinations for BCG and the first doses of polio, DPT, and hepatitis. However, the proportion of children receiving the second and third doses of polio, DPT, and hepatitis is lower, as is the proportion receiving MMR. For example, 95 percent of children received the first dose of DPT, compared with 71 percent who received the third dose. Thus, the dropout rate - the percentage of those who receive the first dose who do not receive the third dose-is 24 percent for DPT. The corresponding dropout rates for polio and hepatitis are 21 percent and 23 percent, respectively.

Overall, the data show that just 60 percent of children 12-23 months of age had received all basic WHO-recommended vaccinations by the date of the interview. This represents a significant decline from the 2000 ADHS estimate of 76 percent. A slightly lower proportion of children ( 56 percent) received the entire course of MOH-recommended vaccinations, which includes hepatitis. In terms of timely vaccination coverage, 54 percent of children in the sample received all WHO-recommended vaccinations by 18 months of age.

Table 11.3 shows vaccination rates among all children age 12-23 months according to background characteristics. There is significant variation by residence in the proportion of children who are fully immunized. Surprisingly, children living in rural areas are more likely than children living in urban areas to be fully immunized. The reason for this differential is explained by the larger dropout rates among children with urban mothers. For example, the dropout rate between the first and third doses of DPT is 28 percent among urban children, compared with 20 percent among rural children.

The number of children is too small for many of the other categories to make strong conclusions. For example, data are not available by region except for Yerevan.

Table 11.2 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 (health facility card or mother's report), and percentage vaccinated by 12 and 18 months of age, Armenia 2005

|  |  | DPT |  |  | Polio |  |  |  | Basic |  | Hepatitis |  |  |  | Number of children |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| information | BCG | 1 | 2 | $3+$ | 1 | 2 | $3+$ | MMR | All ${ }^{1}$ | None | 1 | 2 | 3 | All |  |
| Vaccinated at any time before survey |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Health facility card ${ }^{2}$ | 90.4 | 87.4 | 79.3 | 68.2 | 89.9 | 84.5 | 72.5 | 69.2 | 59.4 | 0.4 | 90.3 | 84.5 | 71.9 | 55.3 | 277 |
| M other's report | 7.7 | 7.1 | 3.4 | 3.2 | 7.5 | 4.9 | 4.3 | 3.1 | 0.3 | 0.5 | 7.1 | 4.6 | 3.5 | 0.3 | 25 |
| Either source | 98.1 | 94.5 | 82.7 | 71.4 | 97.5 | 89.5 | 76.9 | 72.3 | 59.7 | 0.9 | 97.5 | 89.1 | 75.4 | 55.7 | 302 |
| Vaccinated by 12 months of age ${ }^{3}$ | 97.9 | 86.7 | 70.6 | 44.8 | 92.8 | 73.9 | 41.6 | 2.9 | 1.8 | 1.0 | 97.3 | 85.3 | 66.5 | 1.8 | 302 |
| Vaccinated by 18 months of age | 98.1 | 93.7 | 82.1 | 69.3 | 96.6 | 87.4 | 73.5 | 69.0 | 54.4 | 0.9 | 97.5 | 88.9 | 74.0 | 49.8 | 302 |
| Valid dates ${ }^{4}$ | 93.7 | 89.6 | 82.7 | 72.7 | 93.3 | 89.1 | 76.2 | 65.0 | 60.0 | 5.2 | 93.8 | 88.9 | 76.8 | 56.4 | 277 |

Note: Information was obtained from the health facility card/immunization passport or, if there was no written record, from the mother.
${ }^{1}$ BCG, MMR (measles, mumps, and rubella), and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)
${ }^{2}$ Includes immunization passports kept by the parent/guardian
${ }^{3}$ 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 vaccinations.
${ }^{4}$ Vaccination date follows date of birth but not by more than two years.

Table 11.3 Vaccinations by background characteristics
Percentage of children age 12-23 months who received specific vaccines at any time before the survey (according to the health facility card or the mother's report), and percentage with a heath facility card or immunization passport, by background characteristics, Armenia 2005

| Background characteristic | BCG | DPT |  |  | Polio |  |  | MMR | Basic |  | Hepatitis |  |  |  | $\begin{aligned} & \mathrm{All}^{2}+ \\ & \mathrm{Hep} \end{aligned}$ | Percentage with a health facility card seen ${ }^{3}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | $3+$ | 1 | 2 | 3+ |  | All ${ }^{1}$ | None | 1 | 2 | 3 | All |  |  |  |
| Sex |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M ale | 98.3 | 92.6 | 80.8 | 69.0 | 96.2 | 89.1 | 74.3 | 71.4 | 58.7 | 1.4 | 96.1 | 85.4 | 69.9 | 54.4 | 54.4 | 93.6 | 177 |
| Female | 97.8 | 97.2 | 85.3 | 74.9 | 99.3 | 90.1 | 80.5 | 73.5 | 61.2 | 0.2 | 99.4 | 94.5 | 83.2 | 57.5 | 57.5 | 89.2 | 125 |
| Birth order |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 98.4 | 94.1 | 88.2 | 76.8 | 98.7 | 90.7 | 81.5 | 75.6 | 64.6 | 0.9 | 97.1 | 87.4 | 75.3 | 58.9 | 54.8 | 94.1 | 146 |
| 2-3 | 97.6 | 94.3 | 76.3 | 67.5 | 95.9 | 88.5 | 74.3 | 70.5 | 54.8 | 1.1 | 97.5 | 91.9 | 76.3 | 52.0 | 57.9 | 88.9 | 138 |
| 4+ | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | 18 |


| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| U rban | 99.2 | 94.1 | 81.3 | 68.1 | 98.4 | 90.7 | 77.6 | 67.0 | 55.7 | 0.2 | 97.8 | 87.9 | 74.5 | 51.3 | 51.3 | 92.3 | 183 |
| Rural | 96.4 | 95.2 | 84.8 | 76.5 | 96.0 | 87.6 | 75.6 | 80.4 | 65.9 | 2.1 | 96.9 | 91.1 | 76.9 | 62.4 | 62.4 | 90.9 | 119 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 100.0 | 94.5 | 79.6 | 62.0 | 98.6 | 91.9 | 74.9 | 59.3 | 47.0 | 0.0 | 97.4 | 84.8 | 71.1 | 42.5 | (42.5) | 92.1 | 112 |
| Other | 97.0 | 94.6 | 84.5 | 77.0 | 96.8 | 88.1 | 78.0 | 80.0 | 67.2 | 1.5 | 97.5 | 91.7 | 78.0 | 63.5 | 63.5 | 91.6 | 189 |
| Mother's education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Basic general | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | 28 |
| Secondary general | 98.5 | 92.9 | 84.7 | 72.5 | 96.0 | 89.3 | 76.2 | 70.8 | 57.7 | 1.1 | 97.8 | 87.6 | 73.7 | 56.2 | 56.2 | 93.4 | 122 |
| Specialized secondary | 100.0 | 94.6 | 77.4 | 68.7 | 99.4 | 88.5 | 73.5 | 73.8 | 64.1 | 0.0 | 98.8 | 85.6 | 71.5 | 59.1 | 59.1 | 91.8 | 96 |
| Higher | 96.6 | 97.3 | 89.7 | 70.2 | 98.5 | 93.2 | 80.1 | 79.4 | 65.6 | 0.5 | 95.3 | 95.1 | 82.7 | 57.9 | 57.9 | 96.3 | 56 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 92.5 | 93.5 | 79.9 | 68.9 | 93.5 | 81.5 | 70.6 | 71.6 | 59.0 | 4.4 | 93.5 | 91.4 | 75.2 | 56.8 | * | 90.6 | 56 |
| Second | 98.8 | 89.8 | 80.1 | 69.6 | 96.6 | 83.3 | 67.3 | 74.2 | 55.6 | 0.4 | 99.2 | 85.0 | 66.0 | 49.3 | * | 91.9 | 70 |
| Middle | 98.3 | 93.9 | 80.3 | 78.9 | 96.5 | 88.7 | 82.1 | 86.5 | 73.1 | 0.0 | 98.9 | 88.7 | 87.0 | 73.1 | * | 96.3 | 44 |
| Fourth | 100.0 | 96.5 | 82.5 | 69.1 | 100.0 | 95.9 | 79.2 | 71.1 | 62.6 | 0.0 | 100.0 | 87.5 | 70.1 | 58.6 | * | 92.8 | 76 |
| Highest | (100.0) | (99.3) | (91.1) | (73.4) | (100.0) | (97.2) | (87.8) | (60.7) | (50.8) | (0.0) | (94.6) | (94.6) | (85.6) | (44.6) | * | (87.7) | 55 |
| Total | 98.1 | 94.5 | 82.7 | 71.4 | 97.5 | 89.5 | 76.9 | 72.3 | 59.7 | 0.9 | 97.5 | 89.1 | 75.4 | 55.7 | 55.7 | 91.8 | 302 |

Note: Information was obtained from the health facility card, immunization passport, or, if there was no written record, from the mother. 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.
${ }^{1}$ BCG, MMR (measles, mumps, and rubella), and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)
${ }^{2}$ BCG, measles, and three doses each of DPT and polio vaccine
${ }^{3}$ Includes immunization passports kept by the parent/guardian

### 11.3 Acute Respiratory Infection

In Armenia, about 11 percent of all infant deaths in 2005 were attributed to acute respiratory infection (NSS, 2006). Early diagnosis and treatment with antibiotics can prevent a large proportion of deaths caused by ARI. In the 2005 ADHS, the prevalence of ARI was estimated by asking mothers whether their children under age five had been ill with a cough accompanied by short, rapid breathing in the two weeks preceding the survey. These symptoms are consistent with ARI. It should be noted that the morbidity data collected are subjective in the sense that they are based on a mother's perception of illness without validation by medical personnel. Furthermore, prevalence of ARI is subject to seasonality; the fieldwork for the ADHS took place in September through December when rates tend to be high.

Table 11.4 shows that in the two weeks preceding the survey, 8 percent of children experienced symptoms of ARI. There is little variation by background characteristics.

Figure 11.1 shows that among those children who experienced symptoms of ARI, treatment was sought from a health facility or health care provider for over one-third (36 percent). Antibiotics were given to approximately one in ten sick children. Surprisingly, male children were more than twice as likely as female children to be taken to a health facility ( 52 percent versus 24 percent). Boys were also more likely than girls to receive antibiotics. There is also a large difference by residence in the likelihood of being taken to a health facility or provider: treatment was sought for 46 percent of sick rural children and 30 percent of urban children. These conclusions should be viewed cautiously, given the small numbers of children reported to have symptoms of ARI.

Table 11.4 Prevalence of acute respiratory infection
Among children under age five, the percentage who had symptoms of acute respiratory infection, (ARI) in the two weeks preceding the survey, by background characteristics, Armenia 2005

|  | Percentage <br> of children <br> with | Number |
| :--- | :---: | :---: |
|  | symptoms <br> of ARI | of |
| Background <br> characteristic | under five |  |


| ---------------------------------------------------------- |  |  |
| :--- | ---: | :--- |
| Age of child in months | 5.9 | 163 |
| $<6$ | 10.0 | 162 |
| $6-11$ | 8.0 | 302 |
| $12-23$ | 6.3 | 311 |
| $24-35$ | 10.3 | 275 |
| $36-47$ | 7.5 | 257 |

S

| Sex | 6.5 | 807 |
| :--- | :--- | :--- |
| Male | 9.8 | 663 |
| Female |  |  |

Cooking fuel
Electricity

| Electricity | 5.8 | 204 |
| :--- | :--- | ---: |
| LPG/natural gas | 8.3 | 1,207 |
| Other/missing | 9.5 | 58 |


| Residence |  |  |
| :--- | ---: | :--- |
| Urban | 7.6 | 908 |
| Rural | 8.5 | 562 |


| Rural | 8.5 | 562 |
| :--- | :--- | :--- |
| Region <br> Yerevan | 8.1 | 566 |
| O |  |  |


| Other | 7.9 | 904 |
| :--- | :--- | :--- |


| Mother's education |  |  |
| :---: | :---: | :---: |
| Basic general | 8.6 | 135 |
| Secondary general | 8.6 | 563 |
| Specialized secondary | 6.7 | 436 |
| Higher | 8.3 | 335 |
| Wealth quintile |  |  |
| Lowest | 10.9 | 271 |
| Second | 5.7 | 288 |
| Middle | 5.7 | 286 |
| Fourth | 6.8 | 319 |
| Highest | 10.9 | 305 |
| Total | 8.0 | 1,470 |

Note: Symptoms of ARI (cough accompanied by short, rapid breathing that is chest-related) are considered a proxy for pneumonia.
LPG: Liquid petroleum gas

Figure 11.1 Treatment of Acute Respiratory Infection among Children Under Five


### 11.4 Fever

Table 11.5 shows the percentage of children less than five years of age who had fever in the two weeks preceding the survey. Sixteen percent were reported to have had a fever. There are no clear patterns in morbidity by background characteristics with the exception of age. Children less than 6 months of age are less likely to have been sick with a fever and children age 6-11 months are the most likely.

Table 11.5 also shows data on treatment of fever among those children who were sick in the two weeks preceding the survey. Treatment was sought from a health facility or health care provider for 22 percent of sick children and antibiotics were given to 11 percent. Differences by background characteristics are not large and are based on small numbers for many categories.

### 11.5 DIARRHEA

Dehydration caused by severe diarrhea is a major cause of morbidity among young children and an important cause of infant and child death. In Armenia, about 7 percent of all infant deaths are attributed to diarrheal diseases (NSS, 2006).

Table 11.6 indicates that 17 percent of children under five had diarrhea in the two weeks preceding the survey. This is approximately twice the prevalence estimated in the 2000 ADHS ( 8 percent). Less than 1 percent of young children had diarrhea with blood, a symptom associated with more serious dysentery.

The age pattern of diarrhea increases substantially at 6-11 months of age (i.e., around the time when a child begins to crawl and experience more exposure to the environment). Morbidity by region ranges from a high of 26 percent in Armavir to a low of 8 percent in Shirak.

| Table 11.5 Prevalence and treatment of fever |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Among children under age five, the percentage who had a fever in the two weeks preceding the survey; and amon children with fever, the percentage of children for whom treatment was sought from a health facility or provider an the percentage who took antibiotic drugs, by background characteristics, Armenia 2005 |  |  |  |  |  |
|  | Children under five |  | Children under five with fever |  |  |
|  |  |  | Percentage for | Percentage | Number |
| Background characteristic | Percentage with fever | $\begin{aligned} & \text { Number } \\ & \text { of } \\ & \text { children } \end{aligned}$ | was sought from a health facility or provider ${ }^{1}$ | took antibiotic drugs | children with fever |
| Age of child in months |  |  |  |  |  |
| <6 | 6.3 | 163 | * | * | 10 |
| 6-11 | 21.0 | 162 | (38.0) | (4.8) | 34 |
| 12-23 | 17.2 | 302 | (18.8) | (9.8) | 52 |
| 24-35 | 13.8 | 311 | (28.3) | (17.6) | 43 |
| 36-47 | 18.8 | 275 | (7.0) | (8.4) | 52 |
| 48-59 | 14.7 | 257 | (24.1) | (15.1) | 38 |
| Sex |  |  |  |  |  |
| Male | 16.8 | 807 | 22.9 | 9.8 | 136 |
| Female | 14.0 | 663 | 21.2 | 13.8 | 93 |
| Residence |  |  |  |  |  |
| Urban | 17.1 | 908 | 22.3 | 10.1 | 155 |
| Rural | 13.1 | 562 | 22.0 | 14.3 | 74 |
| Region |  |  |  |  |  |
| Yerevan | 19.9 | 566 | (20.9) | (4.6) | 113 |
| O ther | 12.8 | 904 | 23.5 | 18.0 | 116 |
| Mother's education |  |  |  |  |  |
| Basic general | 14.2 | 135 | * | * | 19 |
| Secondary general | 17.3 | 563 | 20.5 | 16.3 | 97 |
| Specialized secondary | 13.9 | 436 | 25.7 | 10.1 | 61 |
| Higher | 15.4 | 335 | (29.5) | (7.2) | 52 |
| Wealth quintile |  |  |  |  |  |
| Lowest | 15.7 | 271 | (22.2) | (8.7) | 42 |
| Second | 9.1 | 288 | (7.7) | (11.6) | 26 |
| Middle | 17.6 | 286 | (25.3) | (11.1) | 50 |
| Fourth | 19.9 | 319 | (18.1) | (8.9) | 64 |
| Highest | 15.2 | 305 | (32.7) | (17.5) | 46 |
| Total | 15.6 | 1,470 | 22.2 | 11.4 | 229 |
| 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. <br> ${ }^{1}$ Excludes pharmacy, shop, and traditional practitioner |  |  |  |  |  |

A prompt increase in a child's fluid intake is a simple and effective procedure to prevent diarrhea from developing into a lifethreatening illness. Oral rehydration therapy (ORT) may include the use of a solution prepared from packets of oral rehydration salts (ORS). In addition, it is recommended that food intake should not be decreased for children suffering from diarrhea.

To ascertain how widespread knowledge of ORS is in Armenia, female respondents were asked if they knew about ORS packets. Table 11.7 shows that the majority of women who gave birth in the five years before the survey (70 percent) know about ORS packets. As expected, mothers living in rural areas are less likely to know about ORS than urban mothers ( 64 percent versus 73 percent). Knowledge of ORS packets increases as the educational level of the mother increases.

Table 11.8 provides insight into the use of ORS packets, as well as other kinds of treatment for diarrhea. Among children with diarrhea, 32 percent were taken to a health facility but just 25 percent were given ORS. However, approximately two-thirds of children with diarrhea ( 65 percent) were at least treated with ORT, whether it was solution prepared from ORS packets, a recommended homemade solution, or simply extra fluids. There is little variation in diarrhea treatment by residence; however, urban children are more likely than rural children to be taken to a health facility for treatment. (Interestingly, this is the opposite of the care-seeking pattern observed for ARI/fever.) Also notable, boys seem to be substantially more likely to receive ORT than girls.

Other treatments were given to sick children, with the most common being antibiotics (22 percent) and other pills or syrups (19 percent). It is disturbing to note that 17 percent of all children suffering from diarrhea were not taken to a provider, not treated with oral rehydration therapy, and not given any other kind of treatment.

Table 11.6 Prevalence of diarrhea
Percentage of children under five years who had diarrhea in the two
weeks preceding the survey, by background characteristics, Armenia
2005 2005

|  | Diarrhea in the two weeks preceding the survey |  |  |
| :---: | :---: | :---: | :---: |
| Background characteristic | All diarrhea | Diarrhea with blood | Number of children |


| Age of child in months |  |  |  |
| :--- | ---: | :--- | :--- |
| $<6$ | 8.5 | 0.0 | 163 |
| $6-11$ | 22.6 | 3.9 | 162 |
| $12-23$ | 23.6 | 0.2 | 302 |
| $24-35$ | 17.2 | 1.6 | 311 |
| $36-47$ | 15.5 | 0.8 | 275 |
| $48-59$ | 10.6 | 0.0 | 257 |
|  |  |  |  |
| Sex | 18.9 | 1.2 | 807 |
| Male | 14.0 | 0.6 | 663 |
| Female |  |  |  |

Source of drinking water ${ }^{1}$

| Improved | 16.6 | 0.9 | 1,405 |
| :---: | :---: | :---: | :---: |
| Not improved | (19.5) | (2.0) | 64 |
| Toilet facility ${ }^{2}$ |  |  |  |
| Improved, not shared | 17.1 | 1.0 | 1,366 |
| Not improved | 11.2 | 0.0 | 104 |


| Residence |  |  |  |
| :---: | :---: | :---: | :---: |
| Urban | 15.0 | 0.8 | 908 |
| Rural | 19.5 | 1.1 | 562 |
| Region |  |  |  |
| Yerevan | 15.0 | 1.0 | 566 |
| Aragatsotn | 19.6 | 0.0 | 82 |
| Ararat | 13.1 | 0.0 | 122 |
| Armavir | 25.7 | 3.7 | 124 |
| Gegharkunik | 21.3 | 0.0 | 117 |
| Lori | 10.5 | 1.2 | 93 |
| Kotayk | 24.2 | 1.1 | 123 |
| Shirak | 7.8 | 0.0 | 88 |
| Syunik | 15.3 | 1.9 | 62 |
| Vayots Dzor | 12.4 | 1.3 | 19 |
| Tavush | 18.2 | 0.0 | 73 |
| Mother's education |  |  |  |
| Basic general | 11.2 | 1.4 | 135 |
| Secondary general | 17.1 | 0.8 | 563 |
| Specialized secondary | 19.1 | 0.1 | 436 |
| Higher | 15.2 | 2.0 | 335 |
| Wealth quintile |  |  |  |
| Lowest | 19.5 | 0.7 | 271 |
| Second | 16.9 | 1.4 | 288 |
| Middle | 17.8 | 0.8 | 286 |
| Fourth | 16.8 | 1.7 | 319 |
| Highest | 12.9 | 0.0 | 305 |
| Total | 16.7 | 0.9 | 1,470 |

Note: Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ See Table 2.7 for definition of categories.
${ }^{2}$ See Table 2.8 for definition of categories.

Besides being asked about what was done to treat children with diarrhea, mothers were specifically asked whether they gave the child more or less fluids and foods than usual. Table 11.9 provides information on feeding practices among children under five who had diarrhea in the two weeks before the survey. The data indicate that 43 percent of all sick children were given more liquids than usual. This is a substantially lower proportion than the 52 percent estimated in the 2000 ADHS. There is a significant difference between the prevalence of the practice of offering more liquid by residence: 50 percent of urban mothers offered more liquids, as opposed to 34 percent of rural mothers. More important, almost one-quarter of rural mothers engage in the dangerous practice of curtailing fluid intake when their children have diarrhea. More than half of all children were offered less than the usual amount to eat, which could exacerbate the child's illness.

Table 11.7 Knowledge of ORS packets
Percentage of mothers who gave birth in the five years preceding the survey who know about ORS packets (Rehydron) for treatment of diarrhea in children, by background characteristics, Armenia 2005

| Background characteristic | Percentage of mothers who know about ORS packets | Number of mothers |
| :---: | :---: | :---: |
| Mother's age |  |  |
| 15-19 | * | 27 |
| 20-24 | 68.6 | 392 |
| 25-34 | 70.8 | 624 |
| 35-49 | 70.4 | 107 |
| Residence |  |  |
| Urban | 73.3 | 724 |
| Rural | 63.6 | 427 |
| Region |  |  |
| Yerevan | 71.7 | 447 |
| O ther | 68.4 | 703 |
| Education |  |  |
| Basic general | 51.5 | 97 |
| Secondary general | 62.6 | 430 |
| Specialized secondary | 73.8 | 352 |
| Higher | 82.0 | 272 |
| Wealth quintile |  |  |
| Lowest | 48.3 | 204 |
| Second | 73.1 | 225 |
| Middle | 67.2 | 223 |
| Fourth | 76.2 | 256 |
| Highest | 79.8 | 243 |
| Total | 69.7 | 1,150 |
| Note: An asterisk indicates that a figure is based on few than 25 unweighted cases and has been suppressed. ORS: O ral rehydration salts |  |  |

Table 11.8 Diarrhea treatment
Among children under age five who had diarrhea in the two weeks preceding the survey, the percentage who were taken for treatment to a health 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, by background characteristics, Armenia 2005

| Sex/residence | Percentage taken to a health provider ${ }^{1}$ | Received oral rehydration therapy (ORT) |  |  |  |  | Received other treatments |  |  |  |  |  | No treatment | Number of children with diarrhea |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | ORS packets | RHF | Either ORS or RHF | Increased fluids | ORS, RHF, <br> or in- <br> creased fluids | Antibiotic drugs | $\begin{aligned} & \text { Other } \\ & \text { pill } \\ & \text { or } \\ & \text { syrup } \end{aligned}$ | Injection | Intravenous solution | Home remedy/ other | Don't know/ missing |  |  |
| Sex |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Male | 32.6 | 25.9 | 28.5 | 44.8 | 46.9 | 70.4 | 21.9 | 24.2 | 6.1 | 1.8 | 6.2 | 1.1 | 10.7 | 153 |
| Female | 30.5 | 23.3 | 18.9 | 37.0 | 35.8 | 56.9 | 23.3 | 10.8 | 1.3 | 0.0 | 4.5 | 0.0 | 28.3 | 93 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 35.9 | 22.2 | 23.1 | 37.2 | 49.5 | 66.1 | 22.1 | 22.3 | 3.1 | 2.0 | 3.8 | 1.2 | 17.6 | 136 |
| Rural | 26.8 | 28.2 | 27.0 | 47.7 | 34.2 | 64.3 | 22.8 | 15.3 | 5.7 | 0.0 | 7.7 | 0.0 | 17.0 | 110 |
| Total | 31.8 | 24.9 | 24.8 | 41.9 | 42.7 | 65.3 | 22.4 | 19.1 | 4.3 | 1.1 | 5.5 | 0.7 | 17.3 | 245 |

Note: Oral rehydration therapy (ORT) includes solution prepared from oral rehydration salts (ORS) packets, recommended home fluids (RHF), or increased fluids.
${ }^{1}$ Excludes pharmacy, shop, and traditional practitioner

| Percent distribution of children under age five who had diarrhea in the two weeks preceding the survey by amount of liquids and food offered compared with normal practice, by background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Amount of liquid given |  |  |  |  |  |  | Amount of food given |  |  |  |  |  |  | Number of children with diarrhea |
| Sex/residence | M ore | Same as usual | Some what less | Much less | None | Don't know/ missing | Total | M ore | Same as usual | Somewhat less | Much less | None | Never gave food | Total |  |
| Sex |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M ale | 46.9 | 41.7 | 7.5 | 1.6 | 0.9 | 1.4 | 100.0 | 2.2 | 39.7 | 46.2 | 9.5 | 1.2 | 1.1 | 100.0 | 153 |
| Female | 35.8 | 34.4 | 15.6 | 4.9 | 8.8 | 0.5 | 100.0 | 2.4 | 53.8 | 36.2 | 4.9 | 0.0 | 2.3 | 100.0 | 93 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 49.5 | 36.9 | 3.3 | 2.4 | 6.0 | 1.8 | 100.0 | 3.7 | 46.3 | 42.9 | 5.0 | 0.4 | 1.3 | 100.0 | 136 |
| Rural | 34.2 | 41.5 | 19.7 | 3.3 | 1.3 | 0.0 | 100.0 | 0.5 | 43.5 | 41.8 | 11.2 | 1.2 | 1.8 | 100.0 | 110 |
| Total | 42.7 | 39.0 | 10.6 | 2.8 | 3.9 | 1.0 | 100.0 | 2.3 | 45.0 | 42.4 | 7.8 | 0.7 | 1.6 | 100.0 | 245 |

Note: Total includes a small number of cases with don't know/missing for amount of food offered that are not shown separately.

### 11.6 Disposal of Children's Stools

Poor hygiene, which includes improper disposal of fecal matte, contributes to the spread of disease, especially diarrhea. In the 2005 ADHS, mothers of children under three years were asked what was done to dispose of the child's stools the last time they passed stools. Table 11.10 shows that the most commonly used method of disposal of young children's stools is throwing them into a toilet or latrine (58 percent). Almost one-quarter of mothers said the child used the toilet, while 11 percent said they used disposable diapers.

The largest differences occur by age of the child. As expected, younger children are more likely than older ones to be using disposable diapers, while children age 35-59 months are more likely to use the toilet themselves. Use of disposable diapers is higher among urban mothers, those in Yerevan, those with more education, and those in higher wealth quintiles.

| Table 11.10 Disposal of children's stools |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of mothers whose youngest child under age five is living with her, by the manner of disposing of the child's last fecal matter, and according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |  |
| Background characteristic | Child used toilet/ latrine | Thrown into toilet/ latrine | $\begin{gathered} \text { Put/ } \\ \text { rinsed } \\ \text { into } \\ \text { drain/ditch } \end{gathered}$ | Thrown into garbage | Disposable diapers | Other | Don't know/ missing | Total | Number of mothers |
| Age of child in months |  |  |  |  |  |  |  |  |  |
| <6 | 3.9 | 41.2 | 2.8 | 9.8 | 39.8 | 2.6 | 0.0 | 100.0 | 157 |
| 6-11 | 4.2 | 66.3 | 0.4 | 8.1 | 16.7 | 2.4 | 1.9 | 100.0 | 162 |
| 12-17 | 10.7 | 68.3 | 4.8 | 1.4 | 14.9 | 0.0 | 0.0 | 100.0 | 128 |
| 18-23 | 16.5 | 73.9 | 2.8 | 3.4 | 2.5 | 0.0 | 1.0 | 100.0 | 147 |
| 24-35 | 29.7 | 64.3 | 1.4 | 0.6 | 3.4 | 0.0 | 0.6 | 100.0 | 240 |
| 36-59 | 50.0 | 45.0 | 1.7 | 0.9 | 1.8 | 0.0 | 0.5 | 100.0 | 319 |
| Toilet facility |  |  |  |  |  |  |  |  |  |
| Improved, not shared ${ }^{1}$ | 24.3 | 58.0 | 2.1 | 2.8 | 11.4 | 0.7 | 0.7 | 100.0 | 1,071 |
| Non-improved | 26.2 | 55.0 | 1.6 | 11.9 | 5.3 | 0.0 | 0.0 | 100.0 | 83 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 25.7 | 54.3 | 0.0 | 4.2 | 15.0 | 0.6 | 0.1 | 100.0 | 723 |
| Rural | 22.2 | 63.6 | 5.5 | 2.1 | 4.0 | 0.9 | 1.7 | 100.0 | 430 |
| Region |  |  |  |  |  |  |  |  |  |
| Yerevan | 27.2 | 47.0 | 0.0 | 5.6 | 19.6 | 0.6 | 0.0 | 100.0 | 445 |
| Other | 22.7 | 64.6 | 3.4 | 2.1 | 5.5 | 0.8 | 1.1 | 100.0 | 708 |
| Mother's education |  |  |  |  |  |  |  |  |  |
| Basic general | 27.9 | 55.8 | 3.7 | 2.1 | 9.0 | 1.0 | 0.5 | 100.0 | 98 |
| Secondary general | 24.8 | 59.6 | 2.9 | 2.9 | 7.6 | 1.0 | 1.1 | 100.0 | 431 |
| Specialized secondary | 22.2 | 57.2 | 1.6 | 5.0 | 12.6 | 0.7 | 0.7 | 100.0 | 352 |
| Higher | 25.2 | 56.4 | 0.8 | 2.8 | 14.7 | 0.0 | 0.0 | 100.0 | 273 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |
| Lowest | 24.1 | 58.5 | 7.6 | 2.7 | 4.3 | 0.5 | 2.3 | 100.0 | 205 |
| Second | 20.4 | 65.4 | 3.0 | 4.5 | 5.3 | 0.6 | 0.8 | 100.0 | 225 |
| Middle | 19.6 | 64.9 | 0.7 | 2.4 | 9.7 | 2.1 | 0.5 | 100.0 | 223 |
| Fourth | 24.4 | 49.8 | 0.0 | 3.6 | 22.2 | 0.0 | 0.0 | 100.0 | 256 |
| Highest | 32.8 | 51.9 | 0.0 | 3.9 | 11.1 | 0.4 | 0.0 | 100.0 | 244 |
| Total | 24.4 | 57.8 | 2.1 | 3.5 | 10.9 | 0.7 | 0.7 | 100.0 | 1,153 |

This chapter covers two topics: nutritional status of women and children under five and infant feeding practices. Nutritional status is reported in terms of the height and weight of women and children and the prevalence of anemia. Infant feeding is described in terms of breastfeeding practices, supplementary feeding practices, and the use of bottles for supplementary feeding.

### 12.1 Nutritional Status of Childden

Anthropometry provides one of the most important indicators of children's nutritional status. Height and weight measurements were obtained for children under five in the household. ${ }^{1}$ The data on height and weight were used to compute three summary indices of nutritional status: height-for-age, weight-for-height, and weight-for-age. These three indices indicate children's susceptibility to diseases and their chances of survival.

The nutritional indices are expressed as percentages that fall between standard deviation units from the median for the international reference population recommended by the World Health Organization (WHO). Children who fall more than two standard deviations below the reference median are regarded as undernourished, while those who fall more than three standard deviations below the reference median are considered severely undernourished.

In the survey, children under five years of age in the household were eligible for height and weight measurements. Of the 1,419 children eligible for measurement (i.e., age $0-59$ months at the time of the survey), 92 percent were measured, and almost all of these children had valid measurements recorded (i.e., not implausibly high or low). Table 12.1 shows the nutritional status for all children with valid measurements by demographic and other background characteristics.

Children whose height-for-age is below minus two standard deviations from the median of the reference population are considered stunted or short for their age. Stunting is the outcome of failure to receive adequate nutrition over an extended period and is affected by recurrent or chronic illness. Overall, there has not been any change in stunting since 2000: 13 percent of children under age five are stunted, including 3 percent severely stunted. Analysis of the indicator by various age groups shows that during the first year, stunting increases from 7 percent for children under six months to 12 percent for those 9-11 months. Stunting peaks in the age groups 12-17 and 18-23 months-one in five children is stunted-and then stabilizes at around 12 percent among older children.

In general, children born to mothers with less education are more likely to be stunted. Urban children are just slightly more likely to be stunted than their rural counterparts (14 and 12 percent, respectively). There is substantial regional variation in the prevalence of stunted children, ranging from a low of 5 percent in Armavir to a high of 19 percent in Aragatsotn.

[^10]| Table 12.1 Nutritional status of children |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |  |  |
|  | Height-for-age (stunted) |  |  | Weight-for-height (wasted) |  |  | Weight-for-age (underweight) |  |  | Number of children |
| Background characteristic | Percentage below -3 SD | Percentage below -2 SD $^{1}$ | Mean <br> Z-score (SD) | Percentage below -3 SD | Percentage below -2 SD $^{1}$ | Mean Z-score (SD) | Percentage below -3 SD | $\begin{aligned} & \text { Percent- } \\ & \text { age } \\ & \text { below } \\ & -2 \mathrm{SD}^{1} \end{aligned}$ | Mean <br> Z-score (SD) |  |
| Age of child in months |  |  |  |  |  |  |  |  |  |  |
| <6 | 1.9 | 6.6 | -0.1 | 0.0 | 2.8 | 0.5 | 0.0 | 0.3 | 0.4 | 120 |
| 6-8 | 1.8 | 7.8 | -0.3 | 0.0 | 1.4 | 0.4 | 0.0 | 4.8 | 0.0 | 69 |
| 9-11 | 1.5 | 11.6 | -0.5 | 0.0 | 3.7 | 0.7 | 0.0 | 3.2 | 0.1 | 76 |
| 12-17 | 2.1 | 19.8 | -0.5 | 2.5 | 7.2 | 0.1 | 0.2 | 2.2 | -0.3 | 131 |
| 18-23 | 3.0 | 20.2 | -0.7 | 0.7 | 11.0 | -0.1 | 0.4 | 7.0 | -0.4 | 139 |
| 24-35 | 3.2 | 12.2 | -0.4 | 0.4 | 4.4 | 0.2 | 0.3 | 6.2 | -0.1 | 285 |
| 36-47 | 4.0 | 11.3 | -0.5 | 0.7 | 7.0 | 0.1 | 0.0 | 5.0 | -0.3 | 255 |
| 48-59 | 2.0 | 12.9 | -0.4 | 0.0 | 1.6 | 0.4 | 0.0 | 1.5 | 0.0 | 217 |
| Sex |  |  |  |  |  |  |  |  |  |  |
| Male | 2.3 | 12.9 | -0.4 | 0.9 | 4.9 | 0.3 | 0.0 | 2.4 | -0.0 | 706 |
| Female | 3.3 | 13.1 | -0.5 | 0.2 | 5.2 | 0.2 | 0.3 | 6.0 | -0.2 | 587 |
| Birth interval in months ${ }^{2}$ |  |  |  |  |  |  |  |  |  |  |
| First birth ${ }^{3}$ | 2.9 | 12.2 | -0.4 | 0.7 | 5.0 | 0.3 | 0.1 | 3.9 | -0.1 | 1,005 |
| $<24$ | 2.5 | 12.3 | -0.1 | 0.7 | 7.5 | 0.1 | 0.0 | 4.8 | -0.0 | 58 |
| 24-47 | 3.5 | 23.9 | -1.0 | 0.0 | 1.2 | 0.6 | 0.0 | 6.3 | -0.2 | 69 |
| 48+ | 0.8 | 12.8 | -0.5 | 0.0 | 6.7 | 0.1 | 0.6 | 4.2 | -0.2 | 149 |
| Size at birth ${ }^{2}$ |  |  |  |  |  |  |  |  |  |  |
| Very small | (8.9) | (15.5) | (-0.5) | (0.0) | (2.7) | (0.1) | (0.0) | (1.9) | (-0.4) | 32 |
| Small | 1.4 | 18.3 | -0.7 | 1.8 | 2.2 | 0.3 | 0.0 | 4.9 | -0.3 | 121 |
| Average or larger | 2.6 | 12.3 | -0.4 | 0.5 | 5.5 | 0.3 | 0.2 | 4.1 | -0.1 | 1,120 |
| Mother's nutritional status ${ }^{4}$ |  |  |  |  |  |  |  |  |  |  |
| Underweight ( $\mathrm{BMI}<18.5$ ) | 2.3 | 5.2 | -0.5 | 0.0 | 1.3 | 0.0 | 0.0 | 2.6 | -0.3 | 68 |
| Normal (BMI 18.5-24.9) | 3.1 | 15.5 | -0.5 | 0.4 | 5.5 | 0.2 | 0.1 | 4.9 | -0.2 | 807 |
| Overweight (BMI > = 25) | 0.9 | 8.4 | -0.2 | 1.0 | 5.2 | 0.4 | 0.2 | 2.8 | 0.2 | 390 |
| Residence |  |  |  |  |  |  |  |  |  |  |
| Urban | 2.6 | 14.0 | -0.3 | 0.8 | 6.0 | 0.2 | 0.2 | 3.8 | -0.0 | 752 |
| Rural | 2.9 | 11.5 | -0.6 | 0.2 | 3.7 | 0.3 | 0.1 | 4.3 | -0.2 | 541 |
| Region |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 3.2 | 17.7 | -0.3 | 0.8 | 4.8 | 0.3 | 0.0 | 3.0 | 0.0 | 432 |
| Aragatsotn | 6.4 | 18.9 | -0.9 | 0.1 | 0.1 | 0.5 | 0.0 | 1.7 | -0.2 | 70 |
| Ararat | 2.3 | 13.6 | -0.8 | 0.0 | 3.8 | 0.3 | 0.0 | 7.4 | -0.3 | 128 |
| Armavir | 0.8 | 4.5 | -0.3 | 0.0 | 1.6 | 0.1 | 0.0 | 0.4 | -0.1 | 122 |
| Gegharkunik | 4.9 | 16.0 | -1.0 | 0.4 | 1.4 | 0.5 | 0.0 | 5.1 | -0.2 | 111 |
| Lori | 0.0 | 8.6 | -0.5 | 0.0 | 4.7 | 0.2 | 0.0 | 2.0 | -0.1 | 94 |
| Kotayk | 1.8 | 7.6 | -0.6 | 0.0 | 2.1 | 0.5 | 0.0 | 0.7 | -0.0 | 106 |
| Shirak | 3.8 | 11.1 | 0.5 | 4.5 | 32.6 | -0.9 | 1.1 | 17.6 | -0.5 | 78 |
| Syunik | 2.8 | 7.2 | -0.6 | 0.0 | 0.7 | 0.5 | 0.0 | 1.9 | -0.0 | 63 |
| Vayots Dzor | 4.8 | 6.9 | 0.6 | 0.0 | 24.2 | -0.5 | 3.5 | 11.3 | -0.1 | 16 |
| Tavush | 0.4 | 9.2 | -0.4 | 0.0 | 0.3 | 0.5 | 0.3 | 4.1 | 0.1 | 74 |
| Mother's education ${ }^{5}$ |  |  |  |  |  |  |  |  |  |  |
| Basic general | 3.1 | 19.9 | -0.8 | 0.0 | 4.5 | 0.0 | 0.2 | 7.4 | -0.5 | 122 |
| Secondary general | 3.3 | 14.2 | -0.5 | 0.5 | 6.3 | 0.2 | 0.1 | 4.1 | -0.2 | 514 |
| Specialized secondary | 2.3 | 12.7 | -0.4 | 0.8 | 4.7 | 0.4 | 0.2 | 4.7 | -0.0 | 377 |
| Higher | 1.7 | 7.3 | -0.0 | 0.6 | 3.6 | 0.4 | 0.0 | 1.6 | 0.2 | 273 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |
| Lowest | 3.8 | 14.9 | -0.6 | 0.5 | 4.5 | 0.2 | 0.0 | 4.6 | -0.3 | 263 |
| Second | 1.1 | 6.7 | -0.4 | 1.0 | 3.9 | 0.2 | 0.2 | 3.6 | -0.1 | 259 |
| Middle | 3.4 | 13.1 | -0.6 | 0.6 | 8.1 | 0.3 | 0.4 | 4.0 | -0.2 | 264 |
| Fourth | 4.8 | 21.3 | -0.7 | 0.0 | 2.6 | 0.5 | 0.0 | 6.5 | -0.1 | 269 |
| Highest | 0.2 | 8.1 | 0.3 | 0.8 | 6.3 | 0.1 | 0.0 | 1.1 | 0.2 | 238 |
| Total | 2.7 | 13.0 | -0.4 | 0.6 | 5.1 | 0.3 | 0.1 | 4.0 | -0.1 | 1,293 |
| Note: Table is based on children who stayed in the household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the NCHS/CDC/WHO International Reference Population. <br> Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight. Figures in parentheses are based on 25-49 unweighted cases. <br> ${ }^{1}$ Includes children who are below -3 standard deviations (SD) from the International Reference Population median <br> ${ }^{2}$ Excludes children whose mothers were not interviewed <br> ${ }^{3}$ First born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval. <br> ${ }^{4}$ Mother's nutritional status in terms of BMI (body mass index) is presented in Table 12.11. <br> ${ }^{5}$ For women who were not interviewed, information was taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire. |  |  |  |  |  |  |  |  |  |  |

Children whose weight-for-height is below minus two standard deviations from the median of the reference population are considered wasted (or thin). Wasting represents the failure to receive adequate nutrition in the period immediately before the survey and often is a result of recent illness, especially diarrhea, or of a rapid deterioration in food supplies. In Armenia, 5 percent of children were wasted at the time of the survey, up from 2 percent in 2000. Less than 1 percent were severely wasted. Although the overall prevalence of wasting is low, there is considerable variation by background characteristics. Prevalence is particularly high in Shirak and Vayots Dzor regions (33 percent and 24 percent of children, respectively).

Children whose weight-for-age is below minus two standard deviations from the median of the reference population are considered underweight. This measure reflects the effects of both acute and chronic undernutrition. The weight-for-age index does not distinguish between chronic malnutrition (stunting) and acute malnutrition (wasting). A child can be underweight for age because of stunting, because of wasting, or because of both stunting and wasting. Weight-for-age is a good overall indicator of a population's general health.

Overall, 4 percent of children are underweight, signifying that Armenian children are slightly more likely to be underweight than the international reference population.

The nutritional status of children varies with age, as shown in Figure 12.1. The proportion of children more than two standard deviations below the mean for the reference population is highest between 18 and 23 months on all anthropometric measures. Nutritional status then improves generally during 24-35 months of age.

Figure 12.1 Nutrition Status of Children Under Age Five


Figure 12.2 Trends in Nutritional Status of Children Under Five


Figure 12.2 compares data on anthropometric measures in the 2000 and 2005 ADHS surveys. There has been no improvement in stunting of children under age five, whereas the children with low weight-for-height and weight-for-age have gotten slightly worse.

Analysis of trends in nutritional status of children by region show odd patterns. For example, the proportion of children who are stunted has doubled in some regions like Yerevan and Aragatsotn, while it has been cut in half in other regions, most notably Gegharkunik where the proportion stunted has declined from 32 percent in 2000 to 16 percent in 2005. Trends by region in the proportion of children who are wasted are also erratic. For example, the proportion of children in Shirak who are wasted has increased from 2 percent to 33 percent between 2000 and 2005. Small numbers of children in some regions may cause large fluctuations; however, the possibility of some errors in recording heights and weights cannot be ruled out.

### 12.2 BREASTFEEDING AND SUPPLEMENTATION

The pattern of infant feeding has an important influence on the health of children. Feeding practices are the principal determinant of a young child's nutritional status, and poor nutritional status has been shown to increase the risk of illness and death among children. Breastfeeding practices also have an effect on the mother's fertility. Frequent breastfeeding for long durations is associated with longer periods of postpartum amenorrhea and thus longer birth intervals and lower fertility.

Optimal infant feeding is defined by WHO and UNICEF as follows:

- Initiation of breastfeeding within about 30 to 60 minutes of birth and frequent, ondemand feeding (including night feeds);
- Exclusive breastfeeding (defined as breast milk only and no other foods or liquids) until the infant is six months of age;
- Timely, adequate, safe, and appropriate complementary food and feeding starting after six months;
- Increased breastfeeding during illness and recovery; and
- Continued breastfeeding well into the second year of life and beyond.

The importance and necessity of breastfeeding is well recognized in Armenia, and in 1993 the MOH adopted the State Program on Breastfeeding. This program is supported by UNICEF, WHO, and other international organizations. In conjunction with the state program, reforms also occurred in maternity hospitals as part of the Baby Friendly Hospital Initiative (BFHI). Examples of these reforms include the immediate contact between mother and newborn after delivery, early initiation of breastfeeding (in the first 30 to 60 minutes after birth), allowing the mother and newborn to stay in the same hospital room, breastfeeding the baby on demand, and other baby-friendly practices. The BFHI Program has expanded since 2000 and currently 15 maternity hospitals - which 30 percent of children are delivered annuallycurrently have Baby Friendly status.

In July 2005, UNICEF and the Ministry of Health of Armenia in partnership with governmental and non-governmental organizations organized an international seminar on "Protecting Breastfeeding through Implementation of the International Code of Marketing of Breast milk Substitutes" where they called for increased commitment in promoting and protecting early and exclusive breastfeeding.

In the 2005 ADHS, for each child born in the five years preceding the survey, mothers were asked whether they had breastfed the child and, if so, how long after delivery breastfeeding was initiated. Women were also asked whether their children were still breastfeeding and the age at which supplemental feeding began. Finally, for children not currently breastfeeding, the age at which they stopped breastfeeding was obtained.

## Initiation of Breastfeeding

The early initiation of breastfeeding is important for a number of reasons. First, it takes advantage of the newborn's suckling reflex and alertness immediately postpartum. Early suckling also benefits mothers because it stimulates breast milk production and releases a hormone that helps the uterus to contract and reduce 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 12.2 shows that 97 percent of all children born in the five years before the survey were breastfed. This is a substantial increase over the 2000 ADHS in which only 88 percent of children were reported as ever breastfed. There is little variation by background characteristics, with the sole exception of region. All children were breastfed in Aragatsotn, Shirak, and Syunik regions, and the lowest percentage of 94 percent was in Kotayk and Vayots Dzor. Overall, 28 percent of children were breastfed within one hour of birth and 62 percent were breastfed within 24 hours of birth. There are substantial variations by region. Fifty-six percent of children in Shirak region began breastfeeding within one hour of birth, compared with just 11 percent in Aragatsotn. Armavir region has the lowest percentage of children who started breastfeeding within one day of birth.

Prelacteal feeding is the practice of giving other liquids to a child during the period after birth before the mother's milk is flowing freely. Overall, 8 percent of children were given a prelacteal meal. Regional variations in giving prelacteal feeding are notable, ranging from a high of 19 percent in Armavir to no prelacteal feeding in Ararat.

| Table 12.2 Initial breastfeeding |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of children born in the five years preceding the survey who were ever breastfed, and among the last-born children ever breastfed, the percentage who started breastfeeding within one hour and within one day of birth, and percentage who received a prelacteal feed, by background characteristics, Armenia 2005 |  |  |  |  |  |  |
|  |  |  | Last-born children ever breastfed |  |  |  |
|  | Children under five |  | Percentage who started breastfeeding within 1 hour of birth | Percentage who started breastfeeding within 1 day of birth ${ }^{1}$ | Percentage who received a prelacteal feed ${ }^{2}$ | Number of children ever breastfed |
| Background characteristic | Percentage ever breastfed | Number of children |  |  |  |  |
| Sex |  |  |  |  |  |  |
| Male | 96.4 | 835 | 28.0 | 63.3 | 8.1 | 805 |
| Female | 97.1 | 676 | 26.8 | 60.8 | 7.8 | 657 |
| Residence |  |  |  |  |  |  |
| Urban | 97.0 | 930 | 27.6 | 62.0 | 8.0 | 902 |
| Rural | 96.2 | 582 | 27.4 | 62.3 | 8.0 | 560 |
| Region |  |  |  |  |  |  |
| Yerevan | 96.0 | 584 | 25.6 | 58.1 | 8.5 | 560 |
| Aragatsotn | 100.0 | 83 | 10.8 | 60.4 | 9.8 | 83 |
| Ararat | 95.6 | 127 | 19.2 | 74.5 | 0.0 | 121 |
| Armavir | 95.6 | 125 | 15.0 | 46.1 | 19.0 | 120 |
| Gegharkunik | 96.6 | 120 | 41.9 | 71.7 | 5.1 | 116 |
| Lori | 97.1 | 96 | 26.1 | 66.7 | 3.4 | 93 |
| Kotayk | 94.4 | 129 | 33.8 | 61.8 | 5.1 | 122 |
| Shirak | 100.0 | 90 | 56.0 | 74.8 | 10.3 | 90 |
| Syunik | 100.0 | 63 | 27.6 | 69.0 | 2.1 | 63 |
| Vayots Dzor | 93.6 | 19 | 19.2 | 60.5 | 7.3 | 18 |
| Tavush | 99.7 | 75 | 29.8 | 59.6 | 14.4 | 75 |
| Mother's education |  |  |  |  |  |  |
| Basic general | 90.9 | 138 | 25.9 | 60.2 | 5.4 | 125 |
| Secondary general | 97.5 | 579 | 23.2 | 59.3 | 6.0 | 564 |
| Specialized secondary | 97.3 | 448 | 31.8 | 66.4 | 10.8 | 436 |
| Higher | 96.8 | 347 | 29.7 | 62.1 | 8.6 | 336 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 94.1 | 286 | 23.5 | 60.3 | 9.3 | 269 |
| Second | 98.2 | 294 | 27.1 | 63.0 | 7.7 | 289 |
| Middle | 99.0 | 289 | 32.1 | 60.4 | 7.7 | 286 |
| Fourth | 95.4 | 335 | 28.2 | 66.5 | 7.8 | 320 |
| Highest | 96.9 | 308 | 26.2 | 60.1 | 7.4 | 299 |
| Total | 96.7 | 1,512 | 27.5 | 62.2 | 8.0 | 1,462 |
| Note: Table is based on all births in the past five years whether the children were living or dead at the time of interview. ${ }^{1}$ Includes children who started breastfeeding within one hour of birth <br> ${ }^{2}$ Children given something other than breast milk during the first three days of life before the mother started breastfeeding regularly |  |  |  |  |  |  |

Figure 12.3 shows that most children who receive prelacteal feeding receive sugar water (63 percent), while 13 percent receive milk other than breast milk, 10 percent receive infant formula, and 9 percent receive tea.

Figure 12.3 Among Last-Born Children in the Five Years Prior to the Survey Who Ever Received a Prelacteal Liquid, Percentage Given Specific Liquids


## Breastfeeding Patterns by Age

Breast milk is the optimal source of nutrients for infants. Children who are exclusively breastfed receive only breast milk. Exclusive breastfeeding is recommended during the first six months of a child's life because it limits exposure to disease agents and provides all of the nutrients that are required for a baby. As the infant grows, breast milk alone no longer provides sufficient nourishment and other liquids and foods need to be added to a child's diet.

Table 12.3 and Figure 12.4 present the infant feeding practices of Armenian mothers. Among children under six months of age, a large majority are breastfed ( 84 percent). However, just one-third are exclusively breastfed, as recommended. In addition to breast milk, 11 percent are given other milk, 21 percent are given water or other liquids, and 20 percent are given solid or mushy food. Although almost half of Armenian children continue to breastfeed through age 9-11 months, almost all receive supplements in addition to breast milk.

Table 12.3 Breastfeeding status by age
Percent distribution of youngest children under three years living with the mother by breastfeeding status and percentage of children under three years using a bottle with a nipple, according to age in months, Armenia 2005

| Age in months | Percent distribution of youngest children under three living with the mother by breastfeeding status |  |  |  |  |  |  | Number of children | All children under three |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Not breastfeeding | Exclusively breastfed | Breastfeeding and consuming: |  |  |  | Total |  | Percentage using a bottle with a nipple | Number of living children |
|  |  |  | Plain <br> water only | Non-milk liquids/ juice | Other milk | Complementary foods |  |  |  |  |
| $<2$ | (2.8) | (55.4) | (3.7) | (16.1) | (9.9) | (12.0) | (100.0) | 42 | (12.5) | 46 |
| 2-3 | 16.1 | 24.2 | 16.5 | 13.2 | 11.4 | 18.7 | 100.0 | 64 | 49.9 | 66 |
| 4-5 | (25.9) | (24.0) | (4.3) | (6.0) | (10.3) | (29.5) | (100.0) | 51 | (53.3) | 51 |
| 6-8 | 28.2 | 3.4 | 2.0 | 1.7 | 1.8 | 62.9 | 100.0 | 73 | 47.7 | 73 |
| 9-11 | 53.2 | 1.3 | 0.0 | 0.0 | 0.3 | 45.1 | 100.0 | 87 | 62.0 | 89 |
| 12-17 | 66.1 | 0.0 | 0.0 | 0.0 | 0.0 | 33.9 | 100.0 | 128 | 57.4 | 134 |
| 18-23 | 80.6 | 0.6 | 0.0 | 0.0 | 0.4 | 18.4 | 100.0 | 147 | 33.9 | 168 |
| 24-35 | 94.4 | 0.0 | 0.0 | 0.0 | 0.0 | 5.6 | 100.0 | 241 | 20.4 | 311 |
| <4 | 10.9 | 36.5 | 11.4 | 14.3 | 10.8 | 16.1 | 100.0 | 106 | 34.6 | 112 |
| $<6$ | 15.7 | 32.5 | 9.1 | 11.6 | 10.6 | 20.4 | 100.0 | 157 | 40.4 | 163 |
| 6-9 | 37.2 | 2.3 | 1.3 | 1.1 | 1.5 | 56.5 | 100.0 | 108 | 51.5 | 108 |
| 12-23 | 73.9 | 0.3 | 0.0 | 0.0 | 0.2 | 25.6 | 100.0 | 275 | 44.4 | 302 |

Note: Breastfeeding status refers to a 24 -hour period (yesterday and the past 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; and breastfeeding and consuming plain water, non-milk liquids/juice, other milk, and complementary foods (solids and semi-solids) are hierarchical and mutually exclusive, and their percentages add to 100 percent. Thus, children who receive breast milk and non-milk liquids 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. Figures in parentheses are based on 25-49 unweighted cases.

When comparing the results of the 2005 ADHS to the 2000 ADHS in Figure 12.4, it should be noted that the recommended duration of exclusive breastfeeding has changed. In 2005, the MOH officially recommended that mothers breastfeed exclusively for six months, instead of the four months that had been previously recommended. Also, to make the data comparable across both surveys, the data refer to the youngest child living with the mother.

Figure 12.4 Trends in Infant Feeding Practices of Children Under 4 months, Under 6 Months, and 6-8 Months


Since 2000, among children under six months of age, breastfeeding at the time of the survey practically has not changed (86 and 84 percent, respectively, in 2000 and 2005). Exclusive breastfeeding, as recommended by the MOH , shows a slight positive trend towards increasing in this age group ( 30 percent in 2000 compared with 33 percent in 2005). On the other hand, the proportion of children under six months receiving breast milk and complementary foods increased from 17 percent in 2000 to 20 percent in this survey, an undesirable trend.

Among children 6-8 months, weaning at an early age has hardly changed; 26 percent of these children are not breastfed, compared to 28 percent in 2000. Sixty-three percent of children age 6-8 months received breast milk and complementary foods in 2005, indicating an increase of seven percentage points since 2000 ( 56 percent).

There is an apparent decline in exclusive breastfeeding among youngest children less than four months of age from 45 percent in the 2000 ADHS to 37 percent in the 2005 survey. Although this difference could be due to a real decline, it should also be noted that the questionnaire methodology changed slightly between the two surveys. Specifically, the 2005 survey asked mothers about more kinds of complementary foods that could have been given to the child than were asked in the previous survey.

Use of bottles with nipples is rather high: among children under six months of age, 40 percent use a bottle, and among children age 6-9 months, the proportion increases to 52 percent. These data show that improvements must be made before Armenian children are breastfed according to international standards.

Table 12.4 shows that the median duration of any breastfeeding is 10.5 months; the duration of exclusive and predominant breastfeeding (breastfeeding plus plain water, waterbased liquids, or juice), however, is short (less than one month and three months, respectively). These figures indicate that levels of complete breastfeeding in Armenia are lower than optimal. Nevertheless, median duration of any breastfeeding has increased from 9 months in the 2000 ADHS.

There is substantial variation by background characteristics. Median duration of breastfeeding is 10 months among children residing in urban areas and 12 months among those in rural areas. Breastfeeding duration also varies by region, from a low of 5 months in Aragatsotn to three times as high in Gegharkunik. The relationship between breastfeeding and education is mixed. Women with basic general, specialized secondary, and higher education tend to breastfeed their children 9 to 10 months on average, whereas women who have attained up to secondary general breastfeed their children for a median of 13 months.

More than nine in ten breastfeeding children under 6 months of age were breastfed at least six times in the 24 hours preceding the survey (Table 12.5). According to the ADHS, the mean number of daytime feeds is six and the mean number of nighttime feeds is three; the resulting nine feeds are considered sufficient for a 24-hour period.

Table 12.4 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, Armenia 2005

| Background characteristic | Median duration (months) of breastfeeding among last-born children in the past three years ${ }^{1}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Any breastfeeding | Exclusive breastfeeding | Predominant breastfeeding ${ }^{2}$ | Number of children |
| Sex |  |  |  |  |
| Male | 12.8 | 0.8 | 2.7 | 533 |
| Female | 9.0 | 0.7 | 2.6 | 426 |
| Residence |  |  |  |  |
| Urban | 9.7 | 1.2 | 2.5 | 598 |
| Rural | 11.9 | 0.6 | 2.9 | 361 |
| Region |  |  |  |  |
| Yerevan | 9.0 | 1.3 | 2.2 | 378 |
| Aragatsotn | 5.3 | 0.4 | 0.4 | 57 |
| Ararat | 11.7 | 1.5 | 2.8 | 89 |
| Armavir | 8.9 | 0.4 | 3.3 | 76 |
| Gegharkunik | 15.0 | 0.8 | 4.2 | 73 |
| Lori | 8.1 | 1.4 | 1.5 | 60 |
| Kotayk | 14.3 | 0.7 | 0.7 | 84 |
| Shirak | 5.9 | 1.3 | 2.0 | 53 |
| Syunik | 11.0 | 4.8 | 5.5 | 40 |
| Vayots Dzor | 7.1 | 0.4 | 0.6 | 9 |
| Tavush | 13.4 | 1.1 | 5.7 | 39 |
| Mother's education |  |  |  |  |
| Basic general | 8.7 | 1.5 | 3.0 | 75 |
| Secondary general | 12.7 | 0.6 | 2.4 | 355 |
| Specialized secondary | 8.4 | 0.6 | 0.7 | 307 |
| Higher | 9.9 | 1.8 | 3.0 | 222 |
| Wealth quintile |  |  |  |  |
| Lowest | 8.5 | 0.7 | 3.4 | 174 |
| Second | 12.7 | 0.7 | 0.7 | 200 |
| Middle | 10.3 | 0.5 | 3.3 | 184 |
| Fourth | 8.9 | 2.1 | 2.3 | 215 |
| Highest | 10.2 | 0.7 | 1.5 | 187 |
| Total | 10.5 | 0.8 | 2.6 | 959 |
| Mean for all children | 12.2 | 2.8 | 3.9 | na |

Note: Medians are based on current status. Includes children living and deceased at the time of the survey.
na $=$ Not applicable
${ }^{1}$ 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, waterbased liquids, and/or juice only (excludes other milk)

| Percentage of breastfeeding children under six months of age living with the mother who were breastfed six or more times in the 24 hours preceding the survey, and mean number of feeds (day/night), by child's sex and residence, Armenia 2005 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Background characteristic | Percentage breastfed 6+ times in past 24 hours | Mean number of day feeds | Mean number of night feeds | Number of children |
| Sex |  |  |  |  |
| Male | 95.2 | 5.7 | 3.4 | 63 |
| Female | 92.4 | 5.7 | 3.0 | 67 |
| Residence |  |  |  |  |
| Urban | 92.0 | 5.6 | 3.1 | 84 |
| Rural | (96.9) | (5.9) | (3.3) | 46 |
| Total | 93.7 | 5.7 | 3.2 | 130 |

Note: Excludes children who do not have a valid answer on the number of times breastfed. Figures in parentheses are based on 25-49 unweighted cases.

## Supplemental Foods

The nutritional requirements of young children are more likely to be met if they are fed a variety of foods from six months of age. The 2005 ADHS asked women with a child under age three living with them what that child ate in the 24 hours before the interview. Interviewers read a list of specific foods and asked the mother to report whether or not the child received each food. The foods given to a child are not mutually exclusive; therefore, a child could be reported as receiving several types of food.

Table 12.6 shows that during the 24 hours preceding the interview, 4 percent of breastfeeding children under six months received infant formula, 21 percent received other milk, and 68 percent-or two in three children-received cheese, yogurt or another milk product. Sixteen percent ate some solid or semisolid food. These data indicate that breastfeeding practices in Armenia should be improved because giving supplemental foods to children under six months of age can be detrimental to the child's health. Among breastfeeding children age six months and older, the percentage receiving complementary foods steadily increases. Among breastfeeding children age 6-11 months, 90 percent consumed solid or semisolid food.

The most common foods among breastfeeding children age 6-23 months are foods made from grains, followed by foods made from roots or tubers. Four in ten ate fruits and vegetables rich in vitamin A and more than half ate meat, fish, shellfish, poultry, or eggs.

Among nonbreastfeeding children age 6-23 months, proportions consuming various foods are higher than among breastfeeding children. More than nine in ten received foods made from grains, more than eight in ten ate foods made from roots or tubers, and three-fourths ate meat, fish, shellfish, poultry, or eggs. More than half ( 55 percent) of nonbreastfeeding children consumed fruits and vegetables rich in vitamin A.

Table 12.6 Foods consumed by children in the day or night preceding the interview
Percentage of youngest children under three years of age living with the mother who consumed specific foods in the day or night preceding the interview, by breastfeeding status and age, Armenia 2005

| Age in months | Liquids |  |  | Solid or semi-solid foods |  |  |  |  |  |  |  |  | Food made with oil/fat/ butter | Number of children |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Fortified baby foods | Food made from grains ${ }^{3}$ | Fruits and vegetables rich in vitamin $\mathrm{A}^{4}$ | Other fruits/ vegetables | Food made from roots/ tubers | Foodmadefromlegumesand nuts | Meat/ fish/ shellfish/ poultry/ eggs | Cheese, yogurt, other milk product | Any solid or semisolid food |  |  |
|  | Infant formula | Other milk ${ }^{1}$ | Other liquids ${ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  |
| BREASTFEEDING CHILDREN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <6 | 4.3 | 21.4 | 35.0 | 9.0 | 11.3 | 13.3 | 8.5 | 1.0 | 0.0 | 0.7 | 67.9 | 15.5 | 2.4 | 132 |
| 6-11 | 22.3 | 39.5 | 78.4 | 19.5 | 74.7 | 38.1 | 44.6 | 59.8 | 8.0 | 40.2 | 62.8 | 0.2 | 57.6 | 93 |
| 12-23 | 6.7 | 33.7 | 88.0 | 9.6 | 93.3 | 46.4 | 85.2 | 90.5 | 18.2 | 74.9 | 58.5 | 96.0 | 75.5 | 72 |
| 24-35 | * | * | * | * | * | * | * | * | * | * | * | * | * | 14 |
| 6-23 | 15.5 | 37.0 | 82.6 | 15.2 | 82.8 | 41.7 | 62.2 | 73.2 | 12.4 | 55.4 | 60.9 | 92.7 | 65.4 | 165 |
| Total | 10.8 | 30.2 | 62.4 | 11.9 | 53.1 | 30.7 | 40.9 | 42.9 | 7.6 | 33.2 | 63.8 | 60.0 | 39.2 | 311 |
| NONBREASTFEEDING CHILDREN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <6 | * | * | * | * | * | * | * | * | * | * | * | * | * | 25 |
| 6-11 | 55.9 | 65.7 | 80.4 | 47.1 | 90.4 | 64.5 | 66.1 | 80.8 | 9.3 | 52.8 | 59.1 | 98.0 | 67.5 | 67 |
| 12-23 | 10.9 | 52.9 | 85.4 | 7.0 | 95.0 | 51.9 | 84.0 | 85.4 | 25.3 | 81.6 | 59.7 | 95.6 | 86.7 | 203 |
| 24-35 | 4.5 | 47.6 | 87.4 | 6.9 | 94.6 | 67.8 | 89.1 | 88.6 | 43.8 | 89.8 | 68.5 | 95.8 | 82.2 | 228 |
| 6-23 | 22.0 | 56.1 | 84.2 | 16.9 | 93.9 | 55.0 | 79.5 | 84.2 | 21.3 | 74.5 | 59.5 | 96.2 | 81.9 | 270 |
| Total | 16.6 | 52.0 | 85.1 | 14.9 | 92.9 | 59.2 | 80.7 | 82.8 | 30.1 | 78.0 | 62.9 | 94.8 | 78.8 | 522 |

Note: Breastfeeding status and food consumed refer to a 24 -hour period (yesterday and the past night). 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, red or yellow yams or squash, carrots, red sweet potatoes, green leafy vegetables, mango, papaya, and other locally grown fruits and vegetables that are rich in vitamin A

### 12.3 Infant and Young Child Feeding (IYCF) Practices

Appropriate Infant and Young Child Feeding (IYCF) practices include breastfeeding through the age of two years, the introduction of solid and semisolid foods at age 6 months, and a gradual increase in the amount of food given and the frequency of feeding as the child gets older. The average, healthy breastfed child should receive solid and semisolid foods 2-3 times per day at age 6-8 months, and 3-4 times per day at age $9-23$ months, with an additional snack 1-2 times per day. The minimum frequencies for feeding children in developing countries are based on the energy output of complementary foods. The energy needs of children are based on age-specific total daily energy requirements, plus 2 SD (to cover almost all children), minus the average energy intake from breast milk. Infants with low breast milk intake need to be fed more frequently than those with high breast milk intake. However, care should be taken that feeding frequencies do not exceed recommended input from complementary foods because excessive feeding can result in displacement of breast milk (PAHO/WHO, 2003).

Although the World Health Organization recommends that infants be breastfed up to the age of two years, some infants are not breastfed at all, or stopped breastfeeding before their second birthday. Guidelines have been developed for these children, who may not have been breastfed because their mother was HIV positive, or because their mother had died, or for other reasons (WHO, 2005). It is
recommended that the nonbreastfed child be given solid and semisolid foods $4-5$ times per day at age 623 months, with an additional snack 1-2 times per day.

Appropriate nutrition includes feeding children a variety of foods to ensure that nutrient requirements are met. Studies have shown that plant-based complementary foods by themselves are not sufficient to meet the needs of some children for certain micronutrients (WHO/UNICEF, 1998). Therefore, it is advised that children eat meat, poultry, fish, or eggs daily, or as often as possible. Vegetarian diets may not meet children's nutrient requirements unless supplements or fortified foods are also provided. Vitamin A-rich fruits and vegetables should be consumed daily, and the diets of children should include an adequate amount of fat. Fat is important in the diets of infants and young children because it provides essential fatty acids, facilitates absorption of fat-soluble vitamins (such as vitamin A), and enhances dietary energy density and palatability. Tea and coffee are not recommended for children because they contain compounds that inhibit iron absorption. Sugary drinks and excessive juice consumption should be avoided because other than energy they contribute little to the diet and decrease the child's appetite for more nutritious foods (PAHO/WHO, 2003).

In summary,

- Breastfed children age 6-23 months should receive animal-source foods and vitamin A-rich fruits and vegetables daily (PAHO/WHO, 2003). Because first foods almost always include a grain- or tuber-based staple, it is unlikely that young children who eat less than three food groups will receive both an animal-source food and a vitamin A-rich fruit or vegetable. Therefore, three food groups are considered the minimum number appropriate for breastfed children (Arimond and Ruel, 2004).
- Breastfed infants age 6-8 months should receive complementary foods 2-3 times per day, with 12 snacks; breastfed children age 9-23 months should be receive meals 3-4 times per day, with 1-2 snacks (PAHO/WHO, 2003). Table 12.7 shows the percentage of breastfed children who were fed at least the minimum number of times per day for their age (i.e., twice for infants age 6-8 months and three times for children age 9-23 months).
- Nonbreastfed children age 6-23 months should receive milk or milk products to ensure that their calcium needs are met. In addition, they need animal-source foods and vitamin A-rich fruits and vegetables. Four food groups are considered the minimum number appropriate for nonbreastfed young children.
- Nonbreastfed children age 12-23 months should be fed meals 4-5 times per day, with 1-2 snacks (WHO, 2005). Table 12.7 shows the percentage of nonbreastfed children age 6-23 who were fed at least the minimum number of times per day (i.e., four times).

According to the results presented in Table 12.7, 96 percent of (youngest) Armenian children age 6-23 months living with the mother received breast milk or breast milk substitutes during the 24 -hour period before the survey, 84 percent had an adequately diverse diet-i.e., they had been fed foods from the appropriate number of food groups, depending on their age and breastfeeding status-and 62 percent had been fed the minimum number of times appropriate for their age. Feeding practices for more than half of Armenian children age 6-23 months met the minimum standards with respect to all three of the IYCF feeding practices (Figure 12.5).

| Table 12.7 Infant and young child feeding (IYCF) practices in Armenia |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of youngest children age 6-23 months living with the mother who are fed according to three IYCF feeding practices based on the number of food groups received and the number of during the past 24 hours (the day and night preceding the survey), by breastfeeding status and background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 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 | $\begin{gathered} 3+\text { food }^{\text {groups }}{ }^{1} \\ \hline \end{gathered}$ | Minimum times or more ${ }^{2}$ | Both 3+ food groups and minimum times or more | Number of children (weighted) | Milk or milk products ${ }^{3}$ | $\begin{gathered} 4+\text { food } \\ \text { groups } \end{gathered}$ | $\begin{aligned} & 4+\text { times } \\ & \text { or more } \end{aligned}$ | With 3 IYCF practices ${ }^{4}$ | Number of children (weighted) | Breast milk or milk products | $\begin{gathered} 3+\text { or } 4+ \\ \text { food } \\ \text { groups }^{5} \\ \hline \end{gathered}$ | Minimum times or more ${ }^{6}$ | With all 3 IYCF practices | Number of children (weighted) |
| Age |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6-8 | (47.9) | (66.6) | (43.7) | 52 | 100.0 | 72.7 | 50.6 | 42.5 | 21 | 100.0 | 54.9 | 62.1 | 43.4 | 73 |
| 9-11 | (90.0) | (76.1) | (76.1) | 41 | (97.3) | (81.4) | (66.4) | (51.2) | 46 | 98.6 | 85.4 | 70.9 | 62.9 | 87 |
| 12-17 | (85.5) | (62.6) | (59.5) | 43 | 93.6 | 89.1 | 50.1 | 48.4 | 85 | 95.8 | 87.8 | 54.4 | 52.1 | 128 |
| 18-23 | (95.0) | (68.3) | (68.3) | 28 | 90.1 | 93.1 | 60.2 | 55.3 | 118 | 92.0 | 93.5 | 61.8 | 57.8 | 147 |
| Sex |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Male | 74.0 | 62.9 | 54.6 | 100 | 93.7 | 87.5 | 55.9 | 52.2 | 146 | 96.3 | 82.0 | 58.7 | 53.2 | 246 |
| Female | 79.9 | 76.4 | 68.6 | 65 | 92.6 | 89.2 | 59.1 | 50.6 | 124 | 95.1 | 86.0 | 65.1 | 56.7 | 188 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 77.1 | 70.8 | 65.6 | 92 | 94.8 | 89.3 | 61.1 | 55.3 | 165 | 96.7 | 84.9 | 64.5 | 59.0 | 258 |
| Rural | 75.2 | 64.9 | 53.1 | 72 | 90.6 | 86.7 | 51.5 | 45.4 | 104 | 94.4 | 82.0 | 57.0 | 48.6 | 177 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | (81.0) | (76.6) | (71.9) | 57 | (98.6) | (93.3) | (65.5) | (60.4) | 111 | 99.1 | 89.1 | 69.3 | 64.3 | 168 |
| Aragatsotn | * | * | * | 8 | * | * | * | * | 20 | (95.6) | (94.6) | (54.5) | 50.8 | 28 |
| Ararat | * | * | * | 22 | (87.6) | (68.1) | (45.4) | 33.6 | 21 | (94.0) | (60.3) | (50.1) | 33.4 | 43 |
| Armavir | * | * | * | 11 | * | * | * | * | 27 | (98.8) | (93.7) | (56.1) | 51.6 | 39 |
| Gegharkunik | * | * | * | 18 | * | * | * | * | 16 | (95.1) | (79.7) | (59.7) | 51.7 | 33 |
| Lori | * | * | * | 9 | * | * | * | * | 15 | * | * | * | * | 24 |
| Kotayk | * | * | * | 15 | * | * | * | * | 22 | (95.3) | (83.4) | (40.9) | 35.1 | 36 |
| Shirak | * | * | * | 6 | * | * | * | * | 21 | (75.1) | (49.4) | (53.1) | 41.6 | 27 |
| Syunik | * | * | * | 7 | * | * | * | * | 9 | (100.0) | (84.2) | (71.8) | 64.8 | 17 |
| Vayots Dzor | * | * | * | 2 | * | * | * | * | 3 | * | * | * | * | 5 |
| Tavush | * | * | * | 10 | * | * | * | * | 5 | (91.2) | (96.1) | (70.7) | 65.9 | 15 |
| Mother's education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Primary | * | * | * | 0 | * | * | * | * | 0 | * | * | * | * | 6 |
| Secondary | 80.1 | 67.4 | 58.8 | 124 | 91.5 | 85.5 | 55.9 | 48.8 | 206 | 94.7 | 83.5 | 60.2 | 52.5 | 330 |
| More than secondary | (64.8) | (70.7) | (64.0) | (41) | (98.6) | (97.0) | (68.3) | (66.1) | 58 | 99.2 | 83.7 | 69.3 | 65.2 | 99 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | (75.4) | (63.0) | (48.7) | 28 | (92.9) | (92.6) | (59.0) | (51.8) | 52 | 95.4 | 86.5 | 60.4 | 50.8 | 80 |
| Second | (87.4) | (81.8) | (76.0) | 38 | 87.7 | 77.0 | 44.2 | 41.2 | 59 | 92.5 | 81.1 | 58.9 | 54.8 | 97 |
| Middle | (60.3) | (56.0) | (45.3) | 37 | (87.9) | (76.0) | (57.3) | (43.2) | 40 | 93.7 | 68.5 | 56.7 | 44.3 | 76 |
| Fourth | (78.6) | (63.6) | (55.7) | 42 | 96.7 | 97.6 | 68.1 | 65.2 | 66 | 98.0 | 90.2 | 66.4 | 61.5 | 107 |
| Highest | * | * | * | 21 | (99.1) | (94.4) | (57.4) | (51.8) | 53 | 99.4 | 90.6 | 63.9 | 59.9 | 74 |
| Total | 76.3 | 68.2 | 60.1 | 165 | 93.2 | 88.3 | 57.4 | 51.5 | 270 | 95.8 | 83.7 | 61.5 | 54.7 | 435 |
| 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. <br> ${ }^{1}$ 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 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; h) foods made with oil, fat, butter <br> ${ }^{2}$ At least twice a day for breastfed infants age 6-8 months and at least three times a day for breastfed children age 9-23 months <br> ${ }^{3}$ Includes commercial infant formula, fresh, tinned and powdered animal milk, and cheese, yogurt and other milk products <br> ${ }^{4}$ Nonbreastfed children age 6-23 months are considered to be fed with three IYCF practices if they receive other milk or milk products and are fed at least the minimum number of food grou number of times per day. <br> ${ }^{5} 3+$ food groups for breastfed children and 4+ food groups for nonbreastfed children <br> ${ }^{6}$ Fed solid or semisolid food at least twice a day for infants age 6-8 months, $3+$ times a day for other breastfed children, and $4+$ times a day for nonbreastfed children |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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Figure 12.5 Infant and Young Child Feeding (IYCF) Practices, Armenia 2005


Breastfed children are more likely than nonbreastfed children to be fed the minimum number of times per day but less likely to receive foods from the minimum number of food groups (for their age). Children age 9-11 months are more likely to meet the minimum standards than younger children. Children in urban areas ( 59 percent) are more likely to be fed according to the recommended guidelines, compared with the children in rural areas (49 percent). It is difficult to draw conclusions about regional differences in feeding practices of Armenian children because of the small sample size. Differences in feeding practices by mother's education and household wealth are also minimal.

### 12.4 ANEMIA IN Children

Anemia is a condition characterized by a decrease in the concentration of hemoglobin in the blood. Hemoglobin is necessary for transporting oxygen to tissues and organs in the body. The reduction in oxygen available to organs and tissues when hemoglobin levels are low is responsible for many of the symptoms experienced by anemic persons. The consequences of anemia include general body weakness, frequent tiredness, and lowered resistance to disease. It is of concern in children because anemia is associated with impaired mental and physical development. Overall, morbidity and mortality risks increase for individuals suffering from anemia.

Determining anemia levels among women and their children under five years of age was one component of the ADHS. Anemia levels were determined by measuring the level of hemoglobin in the blood, a decreased concentration of which characterizes anemia. For hemoglobin measurement, capillary blood was taken from the finger using HemoCue safety lancets (i.e., sterile, disposable instruments that allow a relatively painless skin puncture). Hemoglobin was measured in the blood using the HemoCue system. As described in Chapter 1, medically trained personnel assigned to each of the ADHS teams conducted the testing. Out of 1,333 eligible children, hemoglobin measurements were obtained from 83 percent.

Levels of anemia were classified as severe, moderate, and mild based on the hemoglobin concentration in the blood and according to criteria developed by the WHO (DeMaeyer et al., 1989). Because hemoglobin levels vary by altitude, the measurements presented here have been adjusted based on altitude measurements taken in each cluster. Levels of anemia were classified as follows:

- Mild: hemoglobin concentration $10.0-10.9 \mathrm{~g} / \mathrm{dl}$
- Moderate: hemoglobin concentration 7.0-9.9 g/dl
- Severe: hemoglobin concentration less than $7.0 \mathrm{~g} / \mathrm{dl}$

Table 12.8 presents the anemia rates for children 6-59 months of age. Thirty-seven percent of children suffer from anemia; one-half of these have moderate anemia and 1 percent have severe anemia. Prevalence of anemia tends to decline among older children. Although children in urban areas are only slightly more likely to have anemia than children in rural areas, an urban child is twice as likely to have moderate anemia as a rural child. There are substantial differences in anemia rates among children by region. The prevalence of anemia among children ranges from a low of 7 percent in Vayots Dzor to a high of 63 percent in Gegharkunik. Contrary to expectations, anemia seems to increase with education of the mother and with wealth quintile of mothers. The reversed relationship of the higher rates of anemia among more educated and wealthy women is somewhat puzzling. It appears that these relationships are influenced by the high rates of anemia noticed in Yerevan and Gegharkunik (see below).

A comparison of the data from the 2000 and 2005 ADHS surveys would suggest that anemia rates among children have increased by 50 percent over the last five years (mainly due to the increase in a moderate level of anemia). According to the 2000 ADHS survey, 24 percent of Armenian children age 6-59 months had any anemia, compared to 37 percent in 2005. This apparent increase is even more surprising given that fieldwork for the 2005 survey took place during September through December, following the harvest season, when anemia is expected to be lower than at other times during the year. Yerevan and Gegharkunik show the largest increases between 2000 and 2005. For example, the proportion of children with any anemia has tripled in Yerevan, from 13 percent in 2000 to 45 percent in 2005. Similarly, in Gegharkunik, the proportion of children with any anemia doubled from 32 percent to 63 percent in 2005. Such large increases are unlikely. Although migration of poorer families to the city might help to explain

| Table 12.8 Prevalence of anemia in children |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of children age 6-59 months classified as having anemia, by background characteristics, Armenia 2005 |  |  |  |  |  |
|  | Anemia status by hemoglobin level |  |  |  | Number of children |
| Background characteristic | Any anemia (<11 g/dl) | $\begin{gathered} \text { Mild } \\ (10.0- \\ 10.9 \mathrm{~g} / \mathrm{dl}) \end{gathered}$ | Moderate (7.0$9.9 \mathrm{~g} / \mathrm{dl})$ | Severe (below $7.0 \mathrm{~g} / \mathrm{dl})$ |  |
| Age in months |  |  |  |  |  |
| 6-8 | (77.3) | (45.6) | (27.5) | (4.2) | 49 |
| 9-11 | 67.9 | 20.9 | 39.5 | 7.5 | 71 |
| 12-17 | 52.6 | 20.6 | 30.5 | 1.5 | 123 |
| 18-23 | 37.7 | 18.4 | 18.4 | 1.0 | 127 |
| 24-35 | 32.4 | 14.4 | 17.6 | 0.3 | 267 |
| 36-47 | 22.5 | 10.6 | 11.0 | 0.9 | 243 |
| 48-59 | 28.2 | 14.5 | 13.7 | 0.0 | 225 |
| Sex |  |  |  |  |  |
| Male | 35.6 | 14.3 | 19.8 | 1.6 | 616 |
| Female | 37.6 | 19.4 | 17.4 | 0.7 | 490 |
| Children of interviewed mothers | 36.7 | 16.7 | 18.7 | 1.2 | 1,094 |
| Residence |  |  |  |  |  |
| Urban | 37.8 | 14.0 | 22.6 | 1.2 | 666 |
| Rural | 34.6 | 20.4 | 12.9 | 1.2 | 440 |
| Region |  |  |  |  |  |
| Yerevan | 44.7 | 11.7 | 31.5 | 1.4 | 403 |
| Aragatsotn | 26.5 | 16.3 | 3.1 | 7.1 | 43 |
| Ararat | 30.6 | 27.9 | 2.7 | 0.0 | 107 |
| Armavir | 43.6 | 23.1 | 20.5 | 0.0 | 95 |
| Gegharkunik | 62.5 | 26.2 | 32.3 | 4.0 | 93 |
| Lori | 17.9 | 8.6 | 9.3 | 0.0 | 77 |
| Kotayk | 31.2 | 21.1 | 10.1 | 0.0 | 81 |
| Shirak | 17.9 | 12.8 | 4.2 | 0.9 | 74 |
| Syunik | 24.8 | 16.7 | 8.1 | 0.0 | 53 |
| Vayots Dzor | (6.9) | (4.9) | (0.0) | (2.0) | 10 |
| Tavush | 19.6 | 14.4 | 5.3 | 0.0 | 70 |
| Mother's education ${ }^{1}$ |  |  |  |  |  |
| Basic general | 30.0 | 17.6 | 11.4 | 1.1 | 115 |
| Secondary general | 37.9 | 15.8 | 20.9 | 1.2 | 423 |
| Specialized secondary | 32.3 | 18.5 | 13.5 | 0.3 | 325 |
| Higher | 43.6 | 15.0 | 25.9 | 2.7 | 239 |
| Wealth quintile |  |  |  |  |  |
| Lowest | 32.0 | 17.6 | 11.8 | 2.6 | 218 |
| Second | 33.2 | 19.5 | 13.4 | 0.3 | 208 |
| Middle | 29.3 | 15.9 | 13.2 | 0.1 | 234 |
| Fourth | 40.6 | 18.6 | 21.6 | 0.4 | 233 |
| Highest | 47.7 | 11.1 | 34.0 | 2.7 | 214 |
| Total | 36.5 | 16.5 | 18.7 | 1.2 | 1,106 |

Note: Table is based on children who stayed in the household the night before the interview. Prevalence is adjusted for altitude using formulas published by the Centers for Disease Control and Prevention (CDC, 1998). Hemoglobin in grams per deciliter (g/dl).
Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ For women who were not interviewed, information was taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.
the seemingly anomalous anemia results for Yerevan and Gegharkunik, it is also possible that data collection errors occurred, such as poor techniques with reading the test results or problems with the reagents or supplies used for the anemia testing. When tables on anemia are produced without Yerevan and Gegharkunik, there is no increase in anemia prevalence over time and the relationship between anemia prevalence and education of the mother reverses, so that anemia is higher among children of mothers with less education.

### 12.5 Micronutrient Intake in Children

Micronutrient deficiencies are major contributors to childhood morbidity and mortality. Table 12.9 shows information on several important micronutrients including vitamin A, iron, and iodine. Consuming fruits and vegetables rich in vitamin A prevents vitamin A deficiency, which increases the risk of severe illness and can cause visual impairment.

Fewer than six in ten ( 56 percent) children $6-35$ months consumed vitamin A-rich fruits and vegetables in the 24 hours preceding the interview. Consumption of fruits and vegetables high in vitamin A and $C$ along with foods rich in iron reduces the risk of anemia. Three in four children 6-35 months consumed iron-rich foods in the day or night before the interview. Nonbreastfeeding children are more likely to receive vitamin A-rich and iron-rich foods than breastfeeding children. Mother's education and wealth index are positively associated with children consuming these foods providing important micronutrients. The survey results indicate that among regions, Ararat and Shirak had the lowest proportions of children consuming vitamin A- and iron-rich foods, while Aragatsotn and Vayots Dzor had the highest, though interpretation is hampered by small numbers of children in some regions.

Intestinal worms can contribute to both anemia and vitamin A deficiency. Therefore, mothers of children 6-59 months were asked whether their children were taking iron supplements and whether they were given deworming medication in the last six months. The results show that only 2 percent of children were taking iron supplements and 18 percent of children were given deworming medication in the six months preceding the survey (Table 12.9).

Insufficient iodine in the diet can also lead to serious health deficiencies. In the ADHS, cooking salt in households was tested for the presence of iodine. Salt testing kits supplied by UNICEF were used to measure the level of iodine. Salt that contains at least 15 parts per million (ppm) of iodine is considered adequately iodized. According to the data in Table 12.9, nearly all children in Armenia (98 percent) live in households with adequately iodized salt. One regional exception to this finding is Lori, where only 84 percent of children live in households with adequately iodized salt.

Salt testing was conducted in almost every household in the survey. Table 12.10 shows that most Armenian households have adequately iodized salt ( 97 percent). This finding represents a notable improvement over the 2000 ADHS, in which only 84 percent of households had adequately iodized salt. In most regions, 99 to 100 percent of households have adequately iodized salt according to the 2005 ADHS. Lori region had the lowest percentage of households with adequately iodized salt-82 percent.

## Table 12.9 Micronutrient intake among children

Percentage of youngest children age 6-35 months living with their mother who consumed fruits and vegetables rich in vitamin A and fruits and vegetables rich in iron in the 24 hours preceding the survey, and percentage of children 6-59 months currently taking iron supplements and percentage given deworming medication in the past six months, and among children age 6-35 months in households with salt tested for iodine, percentage living in households using adequately iodized salt, by background characteristics, Armenia 2005

| Background characteristic | Last-born children age 6-35 months |  |  | Children age 6-59 months |  |  | Children age 6-59 months in household with salt tested |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage who consumed fruits and vegetables rich in vitamin $A$ in past 24 hours $^{1}$ | Percentage who consumed fruits and vegetables rich in iron in past 24 hours $^{2}$ | Number of children | Percentage currently taking iron supplements | Percentage given deworming medication in past 6 months ${ }^{3}$ | Number of children | Percentage living in households using adequately iodized salt ${ }^{4}$ | Number of children |
| Age in the months |  |  |  |  |  |  |  |  |
| 6-8 | 34.4 | 25.1 | 73 | 1.9 | 22.1 | 73 | 100.0 | 71 |
| 9-11 | 61.5 | 62.6 | 87 | 5.5 | 21.3 | 89 | 100.0 | 89 |
| 12-17 | 44.1 | 75.5 | 128 | 0.7 | 27.1 | 134 | 96.9 | 134 |
| 18-23 | 56.0 | 83.7 | 147 | 1.2 | 18.6 | 168 | 100.0 | 167 |
| 24-35 | 67.7 | 89.3 | 241 | 1.7 | 20.4 | 311 | 97.5 | 309 |
| 36-47 | na | na | na | 2.4 | 13.7 | 275 | 97.7 | 275 |
| 48-59 | na | na | na | 2.0 | 13.7 | 257 | 98.9 | 256 |
| Sex |  |  |  |  |  |  |  |  |
| Male | 58.2 | 72.7 | 392 | 1.3 | 19.0 | 729 | 98.4 | 727 |
| Female | 53.7 | 78.4 | 284 | 2.9 | 17.4 | 578 | 98.4 | 573 |
| Breastfeeding status |  |  |  |  |  |  |  |  |
| Breastfeeding | 43.6 | 57.2 | 178 | 2.9 | 19.5 | 186 | 99.4 | 185 |
| Not breastfeeding | 60.7 | 81.4 | 495 | 1.9 | 18.3 | 1,106 | 98.2 | 1,101 |
| Mother's age at birth |  |  |  |  |  |  |  |  |
| $<20$ | 46.2 | 78.7 | 70 | 2.9 | 13.4 | 179 | 97.6 | 177 |
| 20-24 | 58.6 | 76.7 | 315 | 2.1 | 17.2 | 630 | 97.9 | 628 |
| 25-29 | 54.1 | 70.5 | 187 | 1.8 | 20.3 | 317 | 98.8 | 316 |
| 30-34 | 54.3 | 75.4 | 63 | 1.5 | 20.0 | 107 | 100.0 | 107 |
| 35-49 | (69.2) | (77.2) | 42 | 0.7 | 28.5 | 73 | 100.0 | 73 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 60.1 | 78.5 | 422 | 2.4 | 19.2 | 798 | 97.9 | 796 |
| Rural | 50.0 | 69.5 | 254 | 1.3 | 16.9 | 509 | 99.2 | 504 |
| Region |  |  |  |  |  |  |  |  |
| Yerevan | 64.8 | 83.3 | 269 | 2.1 | 21.1 | 500 | 98.4 | 500 |
| Aragatsotn | 73.4 | 84.5 | 42 | 2.0 | 13.3 | 76 | 99.9 | 75 |
| Ararat | 23.1 | 60.5 | 55 | 1.0 | 14.8 | 101 | 100.0 | 101 |
| Armavir | 48.4 | 67.3 | 56 | 0.0 | 20.5 | 113 | 100.0 | 113 |
| Gegharkunik | 46.2 | 70.4 | 49 | 3.8 | 15.3 | 109 | 100.0 | 106 |
| Lori | (64.6) | (71.3) | 40 | 5.2 | 25.2 | 78 | 83.9 | 76 |
| Kotayk | 62.4 | 71.8 | 56 | 0.9 | 21.6 | 104 | 99.3 | 104 |
| Shirak | (31.4) | (48.5) | 40 | 2.0 | 9.5 | 82 | 100.0 | 81 |
| Syunik | 45.7 | 74.5 | 29 | 2.4 | 13.0 | 57 | 100.0 | 57 |
| Vayots Dzor | (68.7) | (89.2) | 7 | 5.6 | 8.7 | 18 | 100.0 | 18 |
| Tavush | 66.7 | 81.2 | 31 | 0.4 | 14.3 | 70 | 100.0 | 70 |
| Mother's education |  |  |  |  |  |  |  |  |
| Basic general | (36.6) | (75.9) | 52 | 0.0 | 10.9 | 122 | 100.0 | 118 |
| Secondary general | 50.7 | 73.2 | 246 | 2.1 | 18.6 | 501 | 97.4 | 500 |
| Specialized secondary | 59.7 | 73.3 | 214 | 1.8 | 19.6 | 384 | 99.7 | 383 |
| Higher | 66.6 | 79.9 | 164 | 2.9 | 19.2 | 299 | 97.6 | 299 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 48.5 | 68.0 | 121 | 1.8 | 18.2 | 251 | 99.1 | 245 |
| Second | 48.2 | 75.0 | 138 | 3.5 | 15.0 | 252 | 98.2 | 252 |
| Middle | 55.9 | 63.7 | 131 | 1.7 | 17.2 | 252 | 98.4 | 252 |
| Fourth | 54.9 | 81.3 | 155 | 1.5 | 12.3 | 283 | 100.0 | 283 |
| Highest | 74.3 | 85.9 | 130 | 1.6 | 28.7 | 269 | 96.2 | 269 |
| Total | 56.3 | 75.1 | 676 | 2.0 | 18.3 | 1,307 | 98.4 | 1,301 |

Note: Information on vitamin A and iron supplements and deworming medication is based on mother's recall. Total includes 14 cases with missing information on breastfeeding status. Figures in parentheses are based on 25-49 unweighted cases.
na $=$ Not applicable
${ }^{1}$ Includes pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, green leafy vegetables, mango, papaya, and other locally grown fruits and vegetables that are rich in vitamin A
${ }^{2}$ Includes meat (including organ meat), fish, poultry, and eggs
${ }^{3}$ Deworming for intestinal parasites is commonly done for helminthes and for schistosomiasis.
${ }^{4}$ Salt containing 15 parts per million (ppm) of iodine or more. Excludes children in households in which salt was not tested.

Table 12.10 Presence of iodized salt in household
Percent distribution of households with salt tested for iodine content, by level of iodine in salt (parts per million), according to background characteristics, Armenia 2005

| Background characteristic | Level of iodine in household salt |  |  | Total | Number of households with salt tested |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | None (0 ppm) | Inadequate (<15 ppm) | Adequate <br> (15 + ppm) |  |  |
| Residence |  |  |  |  |  |
| Urban | 0.2 | 2.8 | 97.0 | 100.0 | 4,399 |
| Rural | 0.6 | 1.9 | 97.5 | 100.0 | 2,257 |
| Region |  |  |  |  |  |
| Yerevan | 0.2 | 1.8 | 98.1 | 100.0 | 2,530 |
| Aragatsotn | 1.4 | 1.9 | 96.7 | 100.0 | 248 |
| Ararat | 0.0 | 0.0 | 100.0 | 100.0 | 491 |
| Armavir | 0.5 | 0.0 | 99.5 | 100.0 | 533 |
| Gegharkunik | 0.4 | 0.3 | 99.3 | 100.0 | 391 |
| Lori | 1.4 | 16.5 | 82.0 | 100.0 | 595 |
| Kotayk | 0.8 | 1.8 | 97.4 | 100.0 | 501 |
| Shirak | 0.0 | 0.4 | 99.6 | 100.0 | 608 |
| Syunik | 0.0 | 0.0 | 100.0 | 100.0 | 319 |
| Vayots Dzor | 0.0 | 0.0 | 100.0 | 100.0 | 115 |
| Tavush | 0.1 | 1.3 | 98.6 | 100.0 | 325 |
| Wealth quintile |  |  |  |  |  |
| Lowest | 0.7 | 2.6 | 96.7 | 100.0 | 1,300 |
| Second | 0.3 | 3.1 | 96.7 | 100.0 | 1,375 |
| Middle | 0.6 | 3.1 | 96.3 | 100.0 | 1,442 |
| Fourth | 0.2 | 1.6 | 98.2 | 100.0 | 1,324 |
| Highest | 0.1 | 1.9 | 98.0 | 100.0 | 1,216 |
| Total | 0.4 | 2.5 | 97.1 | 100.0 | 6,656 |

Note: Total excludes 51 households with no salt.
ppm $=$ parts per million

### 12.6 NUTRITIONAL STATUS OF WOMEN

The ADHS also collected anthropometric data from all women age 15-49. Women's nutritional status is important both as an indicator of overall health and as a predictor of pregnancy outcome for both mother and child. Two indices of women's nutritional status are presented in Table 12.11-height and body mass index (BMI).

Maternal height is a measure of past nutritional status and reflects in part the cumulative effect of social and economic outcomes on access to nutritional foods during childhood and adolescence. It can be used to predict the risks associated with difficult deliveries because small stature is often associated with small pelvis size and a greater likelihood of obstructed labor. Short stature is also correlated with low birth weight in infants, high risk of stillbirths, and high rates of miscarriage. The height below which a woman is considered to be at nutritional risk is in the range of 140 to 150 centimeters. In the 2005 ADHS, 93 percent of eligible women were measured. Only 1 percent of women are below 145 centimeters in height. This percentage varies little by background characteristics.

Table 12.11 Nutritional status of women by background characteristics
Among women age 15-49, the percentage with height under 145 cm , mean body mass index (BMI), and percentage with specific BMI levels, by background characteristics, Armenia 2005

| Background characteristic |  |  | $\mathrm{BMI}^{1}\left(\mathrm{~kg} / \mathrm{m}^{2}\right)$ |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Height |  |  | Normal18.5-24.9 <br> (Total <br> normal) | Thin |  |  | Overweight/obese |  |  | Number of women |
|  | Percentage below 145 cm | Number of women | Mean BMI |  | $<18.5$ <br> (Total thin) | 17.0-18.4 <br> (Mildly thin) | $<17.0$ <br> (Moderately or severely thin) | $\geq 25.0$ <br> (Overweight/ obese) | 25.0-29.9 <br> (Overweight) | 30.0 <br> or higher (Obese) |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 0.9 | 1,068 | 21.6 | 77.8 | 10.2 | 7.4 | 1.3 | 12.0 | 10.4 | 1.6 | 1,040 |
| 20-29 | 0.9 | 1,956 | 22.9 | 68.1 | 8.8 | 6.7 | 0.4 | 23.1 | 17.2 | 5.9 | 1,775 |
| 30-39 | 0.8 | 1,409 | 25.8 | 47.0 | 2.0 | 1.4 | 0.1 | 51.0 | 35.4 | 15.6 | 1,380 |
| 40-49 | 1.1 | 1,833 | 28.4 | 26.6 | 1.2 | 1.0 | 0.0 | 72.2 | 39.5 | 32.6 | 1,821 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 0.7 | 3,969 | 24.9 | 53.7 | 5.5 | 4.4 | 0.3 | 40.8 | 25.2 | 15.6 | 3,801 |
| Rural | 1.3 | 2,295 | 25.2 | 50.3 | 4.6 | 3.0 | 0.4 | 45.2 | 29.9 | 15.3 | 2,215 |
| Region |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 0.3 | 2,281 | 24.4 | 56.0 | 6.7 | 5.6 | 0.4 | 37.3 | 24.2 | 13.1 | 2,181 |
| Aragatsotn | 1.0 | 284 | 25.4 | 48.9 | 4.1 | 2.7 | 0.0 | 47.1 | 28.1 | 18.9 | 276 |
| Ararat | 1.0 | 448 | 25.5 | 51.5 | 6.2 | 3.5 | 0.6 | 42.3 | 24.6 | 17.7 | 429 |
| Armavir | 0.4 | 557 | 25.6 | 51.9 | 3.2 | 2.0 | 0.4 | 44.9 | 25.0 | 19.9 | 537 |
| Gegharkunik | 1.8 | 416 | 24.3 | 57.4 | 4.3 | 2.4 | 0.6 | 38.3 | 30.3 | 8.0 | 405 |
| Lori | 2.2 | 526 | 25.8 | 47.6 | 4.0 | 3.6 | 0.2 | 48.4 | 26.1 | 22.3 | 501 |
| Kotayk | 2.5 | 532 | 25.8 | 47.5 | 4.5 | 3.5 | 0.4 | 48.0 | 25.7 | 22.3 | 508 |
| Shirak | 0.0 | 561 | 24.5 | 50.9 | 3.4 | 1.8 | 0.5 | 45.8 | 41.1 | 4.7 | 535 |
| Syunik | 1.1 | 278 | 25.7 | 46.0 | 5.7 | 4.7 | 0.2 | 48.3 | 27.5 | 20.9 | 269 |
| Vayots Dzor | 0.9 | 100 | 24.1 | 63.1 | 3.4 | 2.1 | 1.1 | 33.5 | 24.0 | 9.5 | 96 |
| Tavush | 1.9 | 283 | 26.3 | 46.1 | 4.7 | 3.2 | 0.0 | 49.2 | 26.5 | 22.8 | 278 |
| Education |  |  |  |  |  |  |  |  |  |  |  |
| Basic general | 1.9 | 512 | 24.3 | 53.6 | 9.0 | 5.3 | 1.3 | 37.3 | 23.9 | 13.4 | 491 |
| Secondary general | 0.9 | 2,351 | 25.2 | 50.9 | 4.1 | 3.0 | 0.5 | 45.0 | 28.1 | 16.9 | 2,249 |
| Specialized secondary | 1.2 | 1,906 | 25.8 | 46.7 | 4.3 | 3.2 | 0.2 | 49.0 | 30.0 | 19.1 | 1,838 |
| Higher | 0.3 | 1,495 | 23.9 | 61.8 | 6.6 | 5.8 | 0.2 | 31.6 | 22.2 | 9.4 | 1,439 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 1.6 | 1,136 | 24.7 | 53.3 | 4.5 | 2.9 | 0.6 | 42.2 | 30.3 | 11.9 | 1,095 |
| Second | 1.1 | 1,251 | 25.4 | 50.8 | 4.0 | 2.8 | 0.2 | 45.1 | 27.2 | 17.9 | 1,203 |
| Middle | 1.3 | 1,247 | 25.6 | 52.7 | 3.6 | 3.0 | 0.1 | 43.8 | 25.7 | 18.1 | 1,190 |
| Fourth | 0.7 | 1,279 | 25.1 | 51.0 | 5.6 | 3.9 | 0.8 | 43.5 | 25.3 | 18.1 | 1,223 |
| Highest | 0.2 | 1,352 | 24.2 | 54.3 | 7.9 | 6.6 | 0.2 | 37.8 | 26.5 | 11.3 | 1,305 |
| Total | 0.9 | 6,265 | 25.0 | 52.4 | 5.2 | 3.9 | 0.4 | 42.4 | 26.9 | 15.5 | 6,016 |

[^11]The BMI, which utilizes both height and weight and provides a better measure of thinness and obesity than weight alone, is defined as weight in kilograms divided by the square of the height in meters $\left(\mathrm{kg} / \mathrm{m}^{2}\right)$. For the BMI, a cutoff of 18.5 has been recommended for indicating chronic energy deficiency among nonpregnant women. To avoid bias in the measurement of women's nutritional status, pregnant women and women who had given birth in the two months preceding the survey were excluded from the calculation of weight and body mass measures. Table 12.11 shows that 5 percent of Armenian women are undernourished or have a BMI less than 18.5, indicating a slight increase over the 4 percent reported in
the 2000 ADHS. The most notable increase is among teenagers with a BMI below 18.5, from 6 percent in 2002 to 10 percent in 2005.

The BMI can also be used to evaluate the percentage of women who are overweight and obese. A cutoff point of 25.0 has been recommended for defining "overweight," while 30.0 is used as the cutoff point for defining "obese." According to the findings of the ADHS, approximately four in ten Armenian women have a BMI of 25.0 or higher: 27 percent are overweight and 16 percent are obese. Obesity among women has increased slightly, from 14 percent in 2000 to 16 percent in 2005; however, the proportion overweight has remained the same. There is a strong relationship between age and overweight and obesity. For example, only 2 percent of women age 15-19 are obese, compared to one-third ( 33 percent) of women age 40-49. Although women in urban and rural areas are equally likely to be obese, those in rural areas are slightly more likely to be overweight.

### 12.7 ANEMIA IN WOMEN

In addition to causing weakness, frequent tiredness, and lowered resistance to disease, anemia can be a particularly serious problem for pregnant women, leading to premature delivery and low birth weight. All women age 15 to 49 in households interviewed in the 2005 ADHS were offered an anemia test. Prior to participating in the study, each respondent was read a consent statement that informed of her right not to participate in the anemia testing and was asked if she would give permission for the collection of a blood droplet from her and her children. Ninety-one percent of eligible women participated in the hemoglobin measurement.

Table 12.12 presents the anemia rates for women. Twenty-five percent of Armenian women suffer from some degree of anemia; most ( 21 percent of women) have mild anemia, while 3 percent have moderate anemia and less than 1 percent have severe anemia. Anemia rates increase with age; the prevalence of anemia is higher among older women than among younger women. By parity, the women who had no births are less likely to be anemic than those who had six or more births. Women in urban areas are more likely to have anemia than those who live in rural areas. The prevalence by region ranges from a low of 14 percent in Tavush to a high of 33 percent in Gegharkunik.

During the last five years, the prevalence of anemia among women has doubled from 12 percent in 2000 to 25 percent in 2005, mainly due to an increase in the mild forms of anemia. Although almost all regions show an increase in anemia among women, the increase is largest for women in Yerevan and Gegharkunik, the same two regions that showed the largest increase in anemia among children. When Yerevan and Gegharkunik are removed from the analysis, the difference in anemia rates between 2000 and 2005 surveys narrows to 5 percentage points (16 percent with anemia in 2000 to 21 percent in 2005). It is possible that errors in anemia testing, especially in Yerevan and Gegharkunik, account for some of the apparent increase in anemia among women.

Table 12.12 Prevalence of anemia in women
Percentage of women age 15-49 with anemia, by background characteristics, Armenia 2005

| Background characteristic | Anemia status by hemoglobin level |  |  |  | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Any anemia $(<12 \mathrm{~g} / \mathrm{dl})^{1}$ | $\begin{gathered} \text { Mild } \\ (10.0- \\ 11.9 \mathrm{~g} / \mathrm{dl})^{2} \end{gathered}$ | Moderate (7.0$9.9 \mathrm{~g} / \mathrm{dl})$ | Severe (below $7.0 \mathrm{~g} / \mathrm{dl})$ |  |
| Age |  |  |  |  |  |
| 15-19 | 21.4 | 17.3 | 3.3 | 0.7 | 1,025 |
| 20-29 | 22.6 | 19.9 | 2.3 | 0.4 | 1,884 |
| 30-39 | 25.2 | 21.3 | 3.4 | 0.5 | 1,371 |
| 40-49 | 28.0 | 23.2 | 4.2 | 0.6 | 1,800 |
| Number of children ever born ${ }^{3}$ |  |  |  |  |  |
| 0 | 21.2 | 18.2 | 2.6 | 0.4 | 2,091 |
| 1 | 28.0 | 23.1 | 3.7 | 1.2 | 682 |
| 2-3 | 25.6 | 21.9 | 3.3 | 0.5 | 2,887 |
| 4-5 | 27.9 | 21.4 | 6.4 | 0.2 | 385 |
| 6+ | 34.6 | 29.5 | 1.6 | 3.5 | 34 |
| Maternity status ${ }^{3}$ |  |  |  |  |  |
| Pregnant | 38.6 | 26.5 | 11.6 | 0.6 | 176 |
| Breastfeeding | 23.9 | 20.7 | 3.0 | 0.2 | 294 |
| Neither | 24.2 | 20.6 | 3.0 | 0.6 | 5,609 |
| Using IUD ${ }^{3}$ |  |  |  |  |  |
| Yes | 29.8 | 25.5 | 3.8 | 0.5 | 367 |
| No | 24.2 | 20.5 | 3.2 | 0.5 | 5,713 |
| Residence |  |  |  |  |  |
| Urban | 26.9 | 23.1 | 3.3 | 0.6 | 3,851 |
| Rural | 20.5 | 16.7 | 3.2 | 0.5 | 2,229 |
| Region |  |  |  |  |  |
| Yerevan | 28.8 | 25.0 | 3.3 | 0.5 | 2,192 |
| Aragatsotn | 17.3 | 11.9 | 4.4 | 1.1 | 253 |
| Ararat | 21.7 | 18.8 | 2.4 | 0.4 | 434 |
| Armavir | 22.2 | 16.8 | 4.9 | 0.5 | 554 |
| Gegharkunik | 33.1 | 28.4 | 4.4 | 0.3 | 413 |
| Lori | 19.0 | 15.2 | 3.6 | 0.2 | 527 |
| Kotayk | 21.0 | 17.5 | 3.1 | 0.3 | 518 |
| Shirak | 26.5 | 24.6 | 1.0 | 0.9 | 547 |
| Syunik | 20.6 | 15.5 | 4.2 | 0.9 | 277 |
| Vayots Dzor | 17.8 | 14.7 | 1.2 | 2.0 | 81 |
| Tavush | 14.1 | 11.4 | 2.6 | 0.1 | 283 |
| Education ${ }^{4}$ |  |  |  |  |  |
| Basic general | 20.4 | 16.6 | 3.1 | 0.7 | 498 |
| Secondary general | 25.2 | 21.3 | 3.2 | 0.7 | 2,291 |
| Specialized secondary | 24.9 | 21.1 | 3.2 | 0.5 | 1,858 |
| Higher | 24.7 | 20.8 | 3.6 | 0.2 | 1,433 |
| Wealth quintile |  |  |  |  |  |
| Lowest | 21.9 | 17.3 | 4.2 | 0.4 | 1,101 |
| Second | 23.0 | 19.1 | 3.1 | 0.7 | 1,220 |
| Middle | 24.6 | 20.8 | 2.8 | 0.9 | 1,223 |
| Fourth | 25.8 | 23.4 | 2.0 | 0.4 | 1,249 |
| Highest | 27.2 | 22.6 | 4.3 | 0.3 | 1,287 |
| Total | 24.6 | 20.8 | 3.3 | 0.5 | 6,080 |

Note: Table is based on women who stayed in the household the night before the interview. Prevalence is adjusted for altitude and for smoking status using formulas published by the CDC (1998). Hemoglobin level in g/dl (grams per deciliter).
${ }^{1}$ For pregnant women, hemoglobin level is $<11.0 \mathrm{~g} / \mathrm{dl}$
${ }^{2}$ For pregnant women, hemoglobin level is $10-10.9 \mathrm{~g} / \mathrm{dl}$
${ }^{3}$ Excludes women who were not interviewed
${ }^{4}$ For women who were not interviewed, information is taken from the Household Questionnaire.

### 12.8 Micronutrient Intake in Women

A mother's nutritional status during pregnancy is important both for the child's intrauterine development and for protection against maternal morbidity and mortality. Nightblindness is an indicator of severe vitamin A deficiency, and pregnant women are especially prone to suffer from it. Table 12.13 shows that 3 percent of women reported having nightblindness during the pregnancy of their last child born in the five years preceding the survey. After adjusting for women who also reported vision problems during the day, an estimated 1 percent of women suffered from nightblindness, the same level found in the 2000 ADHS. The small percentages make it impossible to examine variation among subgroups of Armenia's population.

| Table 12.13 Micronutrient intake among mothers |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of women age 15-49 who, during pregnancy for the last child born in the five years preceding the survey, suffered from nightblindness, and percentage who took iron tablets or syrup for specific numbers of days, by background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |
| For the last child born in the past five years |  |  |  |  |  |  |  |  |
| Percentage of women who suffered nightblindness during pregnancy |  |  | Number of days women took iron tablets or syrup during pregnancy |  |  |  |  | Number of women |
| Background characteristic | Reported | Adjusted ${ }^{1}$ | None | $<60$ | 60-89 | 90+ | Don't know/ missing |  |
| Age |  |  |  |  |  |  |  |  |
| 15-19 | * | * | * | * | * | * | * | 27 |
| 20-29 | 2.3 | 0.6 | 79.9 | 13.9 | 0.2 | 1.0 | 4.9 | 846 |
| 30-39 | 4.1 | 0.4 | 76.2 | 12.6 | 1.7 | 2.7 | 6.8 | 257 |
| 40-49 | (15.0) | (11.5) | (89.3) | (0.8) | (3.6) | (0.0) | (6.3) | 46 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 3.6 | 1.3 | 76.8 | 14.8 | 1.1 | 1.9 | 5.3 | 736 |
| Rural | 2.6 | 0.5 | 84.4 | 10.2 | 0.0 | 0.3 | 5.2 | 440 |
| Region |  |  |  |  |  |  |  |  |
| Yerevan | 3.7 | 1.2 | 74.3 | 14.8 | 1.6 | 2.7 | 6.6 | 456 |
| Aragatsotn | 9.5 | 2.2 | 78.3 | 16.5 | 0.0 | 0.2 | 4.9 | 59 |
| Ararat | 0.7 | 0.4 | 83.2 | 6.2 | 0.0 | 0.0 | 10.7 | 102 |
| Armavir | 1.0 | 0.0 | 88.1 | 8.4 | 0.0 | 0.0 | 3.4 | 95 |
| Gegharkunik | 4.3 | 0.0 | 86.4 | 7.6 | 0.0 | 0.0 | 6.0 | 87 |
| Lori | 3.6 | 2.4 | 67.9 | 29.6 | 0.9 | 1.6 | 0.0 | 76 |
| Kotayk | 2.9 | 0.0 | 80.1 | 11.8 | 0.0 | 1.2 | 7.0 | 104 |
| Shirak | 0.0 | 0.0 | 90.0 | 8.1 | 0.0 | 0.0 | 1.8 | 72 |
| Syunik | 3.9 | 3.0 | 91.4 | 7.7 | 0.0 | 0.0 | 0.9 | 50 |
| Vayots Dzor | 2.1 | 0.0 | 82.7 | 17.3 | 0.0 | 0.0 | 0.0 | 16 |
| Tavush | 3.0 | 2.1 | 84.1 | 14.3 | 0.0 | 0.6 | 1.0 | 61 |
| Education |  |  |  |  |  |  |  |  |
| Basic general | 0.8 | 0.3 | 84.8 | 4.0 | 0.0 | 0.0 | 11.2 | 99 |
| Secondary general | 4.2 | 2.0 | 84.6 | 10.4 | 0.4 | 0.0 | 4.6 | 442 |
| Specialized secondary | 1.0 | 0.5 | 82.2 | 13.0 | 0.0 | 1.9 | 2.9 | 359 |
| Higher | 5.4 | 0.2 | 66.6 | 20.7 | 2.2 | 3.1 | 7.4 | 276 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 4.9 | 1.6 | 82.6 | 8.9 | 0.0 | 0.0 | 8.5 | 212 |
| Second | 0.3 | 0.0 | 85.7 | 12.9 | 0.0 | 0.7 | 0.8 | 229 |
| Middle | 5.0 | 1.0 | 80.7 | 14.7 | 0.0 | 0.6 | 4.0 | 224 |
| Fourth | 3.9 | 2.2 | 80.6 | 11.3 | 1.0 | 1.0 | 6.1 | 265 |
| Highest | 2.1 | 0.0 | 69.6 | 17.4 | 2.2 | 3.9 | 6.9 | 245 |
| Total | 3.2 | 1.0 | 79.7 | 13.1 | 0.7 | 1.3 | 5.3 | 1,176 |

[^12]Iron-deficiency anemia is a major threat to maternal health; it contributes to low birth weight infants, lowered resistance to infection in both mother and child, poor cognitive development in children, and decreased work capacity in adulthood. Further, anemia increases the risk associated with morbidity from infections because it adversely affects the body's immune response. In the ADHS, women who had a birth in the five years preceding the survey were asked whether they received or purchased any iron tablets during the pregnancy for their last birth. If she did, the woman was asked to report the number of days that the tablets were actually taken during that pregnancy.

Table 12.13 shows that eight in ten women did not take any iron tablets or syrups during the pregnancy for their last birth in the five years preceding the survey. One percent of women reported taking iron supplements for the recommended minimum of 90 days during the pregnancy, the same level as reported in the 2000 ADHS.

Acquired immune deficiency syndrome (AIDS) is caused by a human immunodeficiency virus (HIV) that weakens the immune system, making the body susceptible to and unable to recover from other diseases. HIV/AIDS is an international pandemic, with cases reported from every country. The United Nations Program on AIDS (UNAIDS) estimates that in 2005, 38.6 million people worldwide were living with HIV, 4.1 million became newly infected with HIV, and 2.8 million lost their lives to AIDS (UNAIDS, 2006).

From 1988 to 31 August 2006, 436 HIV cases had been registered in the Republic of Armenia, of which 415 represent Armenian citizens. A majority of the reported HIV cases ( 77 percent) are among men, while women account for only 23 percent. Eight of the reported cases of HIV infection (2 percent) are children. The overwhelming majority of the registered HIV-infected individuals ( 75 percent) belong to the 20-39 age group. Half of the registered HIV cases are from the capital city of Yerevan. The second highest number is from Shirak region, constituting 9 percent of all registered cases (National Center for AIDS Prevention [NCAP], 2006).

A large proportion of the registered HIV cases were recently registered. For example, in 2005, 78 new cases of HIV infection were registered, while 54 new cases were registered during 2006. In the Republic of Armenia the main modes of HIV transmission are injecting drug use ( 53 percent) and heterosexual relations ( 39 percent).

A total of 145 people have been diagnosed with AIDS in Armenia, of which 25 are women and 4 are children. Of those registered AIDS cases, 41 were diagnosed in 2005 and 40 in 2006. From the beginning of the epidemic, 92 deaths have been registered among HIV/AIDS patients, including 18 women and 3 children (NCAP, 2006).

The 2005 ADHS collected information from women and men on HIV/AIDS and other sexually transmitted infections (STIs), such as syphilis, gonorrhea, and chlamydia, which are known to be important predisposing factors for HIV epidemics. This chapter summarizes information on knowledge, perceptions, and behaviors at the national level and within geographic and socioeconomic subgroups of the population.

### 13.1 Knowledge of HIV/AIDS and Methods of HIV Prevention

Table 13.1 shows the percentage of women and men age 15-49 who have heard of AIDS, by background characteristics. Knowledge of AIDS in Armenia-although not universal-is extremely high; in 2005, 95 percent of women and 92 percent of men reported that they have heard of HIV/AIDS, compared with 94 and 97 percent, respectively, in 2000. At least 85 percent of women and men of all background characteristics have heard of HIV/AIDS, with the exception of women and men with basic education ( 80 percent), men age 15-19 ( 82 percent), and men living in Shirak ( 79 percent) and Syunik (70 percent) regions.

| Table 13.1 Knowledge of AIDS |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Percentage of women and men age 15-49 who have heard of AIDS, by background characteristics, Armenia 2005 |  |  |  |  |
|  | W omen |  | Men |  |
| Background characteristic | Has heard of AIDS | Number of women | Has heard of AIDS | Number of men |
| Age |  |  |  |  |
| 15-19 | 90.8 | 1,123 | 81.6 | 292 |
| 20-24 | 95.9 | 1,131 | 94.4 | 237 |
| 25-29 | 97.5 | 929 | 96.3 | 202 |
| 30-39 | 97.5 | 1,460 | 94.8 | 306 |
| 40-49 | 95.3 | 1,922 | 94.9 | 410 |
| 15-24 | 93.4 | 2,254 | 87.3 | 529 |
| Marital status |  |  |  |  |
| Never married | 92.9 | 2,043 | 88.2 | 615 |
| Ever had sex | * | 25 | 95.4 | 280 |
| Never had sex | 92.8 | 2,017 | 82.1 | 336 |
| Currently married | 96.6 | 4,044 | 95.7 | 815 |
| Formerly married | 96.3 | 479 | * | 17 |
| Residence |  |  |  |  |
| Urban | 97.6 | 4,194 | 92.8 | 913 |
| Rural | 91.6 | 2,372 | 91.5 | 534 |
| Region |  |  |  |  |
| Yerevan | 99.1 | 2,468 | 92.6 | 547 |
| Aragatsotn | 87.2 | 292 | 99.8 | 71 |
| Ararat | 93.0 | 462 | 99.6 | 110 |
| Armavir | 92.4 | 567 | 97.4 | 139 |
| Gegharkunik | 94.2 | 443 | 90.2 | 81 |
| Lori | 96.6 | 537 | 92.4 | 87 |
| Kotayk | 92.9 | 563 | 97.9 | 151 |
| Shirak | 90.3 | 563 | 79.4 | 98 |
| Syunik | 96.7 | 281 | 69.8 | 67 |
| Vayots Dzor | 98.8 | 107 | 89.6 | 31 |
| Tavush | 94.6 | 285 | 91.9 | 64 |
| Education |  |  |  |  |
| Basic general | 80.0 | 529 | 80.0 | 205 |
| Secondary general | 94.1 | 2,440 | 92.5 | 586 |
| Specialized secondary | 98.0 | 1,997 | 94.1 | 310 |
| Higher | 99.4 | 1,600 | 97.5 | 346 |
| Wealth quintile |  |  |  |  |
| Lowest | 87.5 | 1,164 | 88.6 | 261 |
| Second | 93.8 | 1,284 | 89.5 | 264 |
| Middle | 97.1 | 1,303 | 93.8 | 326 |
| Fourth | 97.9 | 1,375 | 93.5 | 316 |
| Highest | 99.5 | 1,440 | 95.3 | 280 |
| Total | 95.4 | 6,566 | 92.3 | 1,447 |
| Note: Currently married includes respondents in consensual union (living together). Formerly married includes divorced/separated/widowed. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. |  |  |  |  |

AIDS prevention programs focus their messages and efforts on three important aspects of behavior: condom use, limiting the number of sexual partners or staying faithful to one partner, and delaying the first sexual intercourse in young persons (i.e., abstinence). Table 13.2 and Figure 13.1 show the percentage of women and men who in response to prompted questions give positive responses to specific ways to avoid AIDS. Overall, the most often mentioned way of avoiding AIDS is by limiting sex to one partner who has not been infected with AIDS ( 80 percent of women and 86 percent of men). Abstaining from sex is cited by almost the same proportion of women and men (almost eight in ten respondents) and the use of condoms is cited by 72 percent of women and 81 percent of men. Two-thirds of women and more than three-fourths of men ( 78 percent) mentioned using condoms and limiting sex to one uninfected partner. Knowledge of HIV prevention methods when prompted, but not when mentioned spontaneously, has improved significantly during the last five years among both women and men compared with the 2000 ADHS.

Younger and never-married respondents (especially men who never had sex) are less likely than older respondents and ever-married respondents to know ways to avoid getting the AIDS virus. Urban women are more likely to be aware of safe sexual practices than rural women. There is a strong positive relationship between the respondent's education and wealth status and his/her knowledge of ways to prevent HIV. For example, 54 percent of women with basic education say that the risk of getting the AIDS virus can be reduced by abstaining from sex, compared with 90 percent of women with higher than secondary education. Among men with basic education, almost two-thirds say that the risk of getting AIDS can be reduced by using condoms, compared with more than 90 percent of men with higher than secondary education.

Figure 13.1 Knowledge of Specific Ways to Avoid AIDS among Women and Men Age 15-49



Note: Currently married includes respondents in consensual union (living together). Formerly married includes divorced, separated, and widowed. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
${ }^{1}$ Every time they have sexual intercourse
${ }^{2}$ Who has no other partners

### 13.2 Rejection of Misconceptions About AIDS Transmission and Comprehensive Knowledge of AIDS

In addition to knowing about effective ways to avoid contacting HIV/AIDS, it is also useful to identify incorrect beliefs about AIDS in order to eliminate misconceptions. Common misconceptions about AIDS transmission include the belief that HIV-infected people appear ill and the belief that the virus can be transmitted through mosquito bites, from coughing, by sharing food with someone who is infected, or by witchcraft or other supernatural means. Respondents who have heard of HIV/AIDS were asked about four misconceptions. ${ }^{1}$ The information is presented in Tables 13.3.1 and 13.3.2.

Sixty-three percent of women and 64 percent of men know that it is possible for a healthylooking person to have the AIDS virus, slightly more than in 2000 ( 56 and 58 percent, respectively). Among women, the same proportion rejects the misconception that the AIDS virus can be transmitted by coughing and sharing food with a person who has AIDS. Men are less likely than women to say that AIDS cannot be transmitted by coughing or sharing food with someone with AIDS. Almost half of women and one-third of men know that AIDS cannot be transmitted by mosquito bites. In general, younger respondents, those residing in rural areas, and those who never had sex are less likely than other respondents to refute these misconceptions. The variations are more pronounced by region. For example, while 74 percent of women in Syunik region say that a healthy-looking person can have HIV, only 23 percent of women in Ararat region give the same answer. Eighty percent of men in Tavush region say that a healthy-looking person can have HIV, compared with 16 percent of men in Shirak region.

The summary indicator in Tables 13.3 .1 and 13.3.2 is the percentage of women and men who have a comprehensive knowledge of AIDS. These are respondents who say that using a condom during every sexual intercourse and having just one uninfected and faithful partner can reduce the chance of getting the AIDS virus, who say that a healthy-looking person can have the AIDS virus, and who reject the two most common local misconceptions. In Armenia, the two most common misconceptions are transmission of HIV/AIDS by mosquito bites and sharing food with a person who is infected with AIDS. Only about one in four respondents ( 26 percent of women and 24 percent of men) has a comprehensive knowledge of AIDS. This proportion varies by the respondent's background characteristics. As in the case of individual aspects of AIDS transmission, young women, women who have never married, women with lower levels of education, and women in the lower wealth quintiles are less likely than other women to have a comprehensive knowledge of AIDS. Comprehensive knowledge of HIV also varies widely by region, ranging from 43 percent among women in Syunik to 12 percent in Ararat. Table 13.3.2 shows much wider variations by region among men. Comprehensive knowledge of AIDS ranges from 48 percent of men in Vayots Dzor to 4 percent in Shirak.

[^13]
## Table 13.3.1 M isconceptions and 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, and the percentage with a comprehensive knowledge about AIDS, by background characteristics, Armenia 2005

| Background characteristic | Percentage of women who say that: |  |  |  | Percentage who say that a healthy-looking person can have the AIDS virus and who reject the two most common misconceptions ${ }^{1}$ | Percentage with a comprehensive knowledge about AIDS ${ }^{2}$ | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | A healthy-looking person can have the AIDS virus | AIDS cannot be transmitted by mosquito bites | AIDS cannot be transmitted by coughing | A person cannot become infected by sharing food with someone with AIDS |  |  |  |
| Age |  |  |  |  |  |  |  |
| 15-19 | 56.0 | 40.3 | 52.9 | 50.9 | 23.8 | 19.3 | 1,123 |
| 20-24 | 62.4 | 50.0 | 61.4 | 62.4 | 30.4 | 26.0 | 1,131 |
| 25-29 | 68.6 | 52.2 | 65.5 | 63.5 | 29.5 | 26.9 | 929 |
| 30-39 | 67.7 | 49.2 | 66.1 | 66.6 | 33.1 | 29.4 | 1,460 |
| 40-49 | 62.6 | 47.5 | 62.6 | 63.1 | 28.8 | 25.9 | 1,922 |
| 15-24 | 59.2 | 45.2 | 57.2 | 56.7 | 27.1 | 22.6 | 2,254 |
| Marital status |  |  |  |  |  |  |  |
| Never married | 61.7 | 45.2 | 59.5 | 59.3 | 28.4 | 23.6 | 2,043 |
| Ever had sex | * | * | * |  | * | , | 25 |
| N ever had sex | 61.4 | 45.1 | 59.3 | 59.0 | 28.4 | 23.5 | 2,017 |
| Currently married | 63.8 | 49.7 | 63.7 | 63.2 | 30.0 | 27.0 | 4,044 |
| Formerly married | 67.4 | 41.8 | 57.1 | 59.6 | 27.0 | 23.1 | 479 |
| Residence |  |  |  |  |  |  |  |
| Urban | 69.2 | 48.5 | 66.4 | 65.9 | 32.7 | 28.9 | 4,194 |
| Rural | 53.3 | 46.4 | 54.0 | 54.4 | 23.3 | 20.0 | 2,372 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 70.8 | 49.1 | 67.3 | 66.3 | 33.4 | 29.8 | 2,468 |
| Aragatsotn | 55.7 | 49.9 | 55.7 | 48.1 | 23.9 | 17.6 | 292 |
| Ararat | 23.1 | 74.3 | 67.6 | 70.7 | 14.3 | 11.8 | 462 |
| Armavir | 64.9 | 47.2 | 55.0 | 63.2 | 32.4 | 30.2 | 567 |
| Gegharkunik | 61.5 | 52.2 | 56.5 | 58.4 | 32.9 | 30.2 | 443 |
| Lori | 69.4 | 38.3 | 57.3 | 52.9 | 22.6 | 16.0 | 537 |
| Kotayk | 61.0 | 31.3 | 46.4 | 43.8 | 18.1 | 13.4 | 563 |
| Shirak | 66.1 | 46.2 | 70.7 | 72.7 | 38.7 | 36.4 | 563 |
| Syunik | 74.4 | 58.8 | 74.9 | 71.3 | 44.3 | 42.8 | 281 |
| Vayots Dzor | 48.0 | 29.5 | 56.2 | 58.4 | 16.2 | 15.4 | 107 |
| Tavush | 56.7 | 33.8 | 46.0 | 45.5 | 18.1 | 13.7 | 285 |
| Education |  |  |  |  |  |  |  |
| Basic general | 36.1 | 30.0 | 37.6 | 38.7 | 13.8 | 10.5 | 529 |
| Secondary general | 54.6 | 40.8 | 54.5 | 52.5 | 20.1 | 17.0 | 2,440 |
| Specialized secondary | 66.6 | 52.4 | 64.8 | 65.1 | 32.1 | 29.0 | 1,997 |
| Higher | 82.0 | 58.3 | 77.7 | 79.2 | 45.0 | 39.9 | 1,600 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 47.6 | 38.2 | 44.7 | 46.8 | 19.0 | 15.8 | 1,164 |
| Second | 58.0 | 47.2 | 58.5 | 59.2 | 26.4 | 22.9 | 1,284 |
| Middle | 63.4 | 49.3 | 67.0 | 62.8 | 29.0 | 25.2 | 1,303 |
| Fourth | 70.6 | 47.7 | 65.4 | 65.8 | 30.6 | 27.4 | 1,375 |
| Highest | 74.3 | 54.4 | 71.0 | 71.1 | 39.2 | 35.1 | 1,440 |
| Total | 63.4 | 47.7 | 61.9 | 61.7 | 29.3 | 25.7 | 6,566 |

Note: Currently married includes women in consensual union (living together). Formerly married includes divorced, separated, and widowed. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
${ }^{1}$ The two most common local misconceptions involve transmission by mosquito bites and by sharing food with someone with AIDS.
${ }^{2}$ Comprehensive knowledge means knowing that use of a condom during every sexual intercourse and having just one uninfected and 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 (transmission by mosquito bites and by sharing food with someone with AIDS).

Table 13.3.2 Misconceptions and 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, and the percentage with a comprehensive knowledge about AIDS, by background characteristics, Armenia 2005

| Background characteristic | Percentage of men who say that: |  |  |  | Percentage who say that a healthy-looking person can have the AIDS virus and who reject the two most common misconceptions ${ }^{1}$ | Percentage with a comprehensive knowledge about AIDS ${ }^{2}$ | Number of men |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | A healthy-looking person can have the AIDS virus | AIDS cannot be transmitted by mosquito bites | AIDS cannot be transmitted by coughing | A person cannot become infected by sharing food with someone with AIDS |  |  |  |
| Age |  |  |  |  |  |  |  |
| 15-19 | 44.1 | 18.5 | 39.3 | 30.2 | 7.1 | 6.7 | 292 |
| 20-24 | 69.9 | 32.8 | 52.6 | 53.4 | 25.6 | 25.4 | 237 |
| 25-29 | 72.5 | 41.3 | 64.8 | 59.4 | 31.3 | 31.1 | 202 |
| 30-39 | 70.0 | 43.3 | 60.5 | 53.8 | 29.9 | 29.1 | 306 |
| 40-49 | 66.5 | 37.8 | 57.5 | 55.1 | 30.1 | 29.3 | 410 |
| 15-24 | 55.6 | 24.9 | 45.3 | 40.6 | 15.4 | 15.1 | 529 |
| Marital status |  |  |  |  |  |  |  |
| Never married | 57.0 | 28.1 | 47.0 | 42.5 | 17.5 | 17.2 | 615 |
| Ever had sex | 74.6 | 38.1 | 56.3 | 50.4 | 27.0 | 26.9 | 280 |
| Never had sex | 42.3 | 19.7 | 39.2 | 36.0 | 9.6 | 9.1 | 336 |
| Currently married | 69.5 | 39.8 | 60.4 | 55.7 | 30.3 | 29.5 | 815 |
| Formerly married | * | * | * | * | * | * | 17 |
| Residence |  |  |  |  |  |  |  |
| Urban | 66.4 | 35.7 | 58.0 | 52.5 | 25.6 | 25.0 | 913 |
| Rural | 60.2 | 33.2 | 48.9 | 46.0 | 23.7 | 23.2 | 534 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 70.1 | 38.0 | 60.1 | 53.1 | 29.4 | 28.8 | 547 |
| Aragatsotn | 73.8 | 65.5 | 83.2 | 79.4 | 49.7 | 47.3 | 71 |
| Ararat | 51.4 | 28.4 | 32.4 | 30.2 | 19.1 | 18.7 | 110 |
| Armavir | 79.1 | 39.7 | 53.1 | 44.9 | 30.7 | 29.8 | 139 |
| Gegharkunik | 50.7 | 39.6 | 45.7 | 44.0 | 21.2 | 21.2 | 81 |
| Lori | 61.3 | 26.4 | 46.6 | 48.5 | 11.0 | 11.0 | 87 |
| Kotayk | 68.6 | 32.5 | 40.1 | 42.6 | 17.3 | 16.6 | 151 |
| Shirak | 16.0 | 5.6 | 60.8 | 51.3 | 3.9 | 3.9 | 98 |
| Syunik | 58.0 | 21.0 | 33.7 | 35.0 | 16.7 | 16.7 | 67 |
| Vayots Dzor | 69.8 | 55.8 | 57.7 | 66.8 | 49.8 | 48.3 | 31 |
| Tavush | 79.5 | 32.3 | 86.8 | 71.6 | 25.9 | 25.9 | 64 |
| Education |  |  |  |  |  |  |  |
| Basic general | 51.3 | 23.7 | 42.4 | 38.3 | 14.9 | 13.3 | 205 |
| Secondary general | 60.4 | 27.9 | 46.4 | 39.9 | 18.4 | 18.2 | 586 |
| Specialized secondary | y 65.2 | 38.1 | 55.3 | 55.5 | 29.0 | 27.8 | 310 |
| Higher | 77.0 | 49.8 | 75.3 | 69.4 | 38.0 | 37.9 | 346 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 52.9 | 28.2 | 47.7 | 45.1 | 19.6 | 18.9 | 261 |
| Second | 56.5 | 27.8 | 52.8 | 45.8 | 19.2 | 18.5 | 264 |
| Middle | 62.1 | 32.8 | 48.2 | 48.9 | 21.2 | 20.9 | 326 |
| Fourth | 68.8 | 39.1 | 58.4 | 51.4 | 29.1 | 28.5 | 316 |
| Highest | 78.9 | 44.8 | 66.2 | 58.8 | 34.6 | 34.1 | 280 |
| Total | 64.1 | 34.7 | 54.7 | 50.1 | 24.9 | 24.3 | 1,447 |

Note: Currently married includes men in consensual union (living together). Formerly married includes divorced, separated, and widowed. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
${ }^{1}$ The two most common local misconceptions involve transmission by mosquito bites and by sharing food with someone with AIDS.
${ }^{2}$ Comprehensive knowledge means knowing that use of a condom during every sexual intercourse and having just one uninfected and 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 (transmission by mosquito bites and by sharing food with someone with AIDS).

### 13.3 Social Aspects of HIV/AIDS

Social aspects of HIV/AIDS include, among others, negative repercussions for those who contract the illness. The stigma is related to the public's perception of HIV/AIDS as associated with marginalized groups such as injecting drug users, sex workers, and homosexuals. The stigma is sometimes expressed by open discrimination, which is of concern because it affects HIV/AIDS prevention efforts. More importantly, stigma may lead to secrecy and denial that hinders people from seeking counseling and testing for HIV.

In the 2005 ADHS, to gauge the level of stigma associated with AIDS, respondents who had heard of HIV/AIDS were asked questions about their attitudes towards people with HIV. These questions included whether respondents would be willing to care for a family member with HIV/AIDS at home, whether they would buy fresh vegetables from shopkeepers who have the AIDS virus, and whether they believe an HIV-positive female teacher should be allowed to continue teaching.

Table 13.4.1 shows that 15 percent of women say that they are willing to care at home for a relative who is sick with HIV/AIDS and 7 percent of women would buy fresh vegetables from a shopkeeper or vendor who has the AIDS virus. Nine percent of women say that an HIV-positive female teacher should be allowed to continue teaching, the same as in 2000. Overall, 35 percent of women would not want a family member's HIV-positive status to remain a secret, a significant decline compared with 75 percent of women in 2000. When taking into account all four stigmas toward persons with AIDS, only 1 percent of women express accepting attitudes on all indicators.

The attitudes of women toward persons infected with HIV vary across subgroups. In general, better-educated women, women in higher wealth quintiles, and urban women are more likely to have accepting attitudes on all four indicators toward persons with HIV/AIDS than other women. Across regions, women in Lori are the most likely to be willing to take care of a relative with HIV/AIDS at home and, after women in Yerevan, are most likely to not want a family member's HIV positive status to remain secret. Women in Ararat, on the other hand, are the least likely to accept persons with HIV/AIDS.

Table 13.4.2 shows similar patterns among men. Fifteen percent of men, the same percentage as among women, say that they are willing to care at home for a relative who is sick with the AIDS virus, and 6 percent would buy fresh vegetables from a person who has HIV/AIDS, about the same proportion as women. On the other two attitudinal questions, men show lower acceptance than women. Only 6 percent say that an HIV-positive female teacher should be allowed to continue teaching, and 30 percent say that they would not want to keep a family member's HIV-positive status a secret, indicating a decline in both perceptions during the past five years (13 and 65 percent, respectively in 2000). As in the case of women, better-educated men and men in higher wealth quintiles are slightly more likely than other men to accept persons with HIV/AIDS. Men in Ararat region also are less likely to accept persons with HIV/AIDS than men in other regions. However, men are much more likely than women to not want to keep secret a family member's HIV status in some regions; 80 percent of men in Lori and 65 percent in Armavir would not want to keep a family member's HIV-positive status a secret-twice the corresponding percentages for women.

| Table 13.4.1 Accepting attitudes toward those living with HIV: W omen |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Among women age 15-49 who have heard of AIDS, percentage expressing specific accepting attitudes toward people with HIV, by background characteristics, Armenia 2005 |  |  |  |  |  |  |
| Percentage of women who: |  |  |  |  |  |  |
| Background characteristic | Are willing to care for a relative sick with the AIDS virus in the respondent's home | W ould buy fresh vegetables from a shopkeeper with the AIDS virus | Say that a female teacher with the AIDS virus and who is not sick should be allowed to keep teaching | W ould not want to keep secret that a family member got infected with the AIDS virus | Percentage expressing accepting attitudes on all four indicators | Number of women who have heard of AIDS |
| Age |  |  |  |  |  |  |
| 15-19 | 15.2 | 6.7 | 12.0 | 34.8 | 1.0 | 1,020 |
| 20-24 | 15.0 | 7.1 | 9.8 | 36.3 | 1.8 | 1,084 |
| 25-29 | 15.1 | 6.8 | 9.8 | 37.2 | 1.7 | 906 |
| 30-39 | 15.9 | 7.8 | 9.4 | 34.9 | 1.2 | 1,423 |
| 40-49 | 12.6 | 5.2 | 7.5 | 32.9 | 1.4 | 1,833 |
| 15-24 | 15.1 | 6.9 | 10.9 | 35.6 | 1.4 | 2,105 |
| Marital status |  |  |  |  |  |  |
| Never married | 17.6 | 7.9 | 13.1 | 38.0 | 1.6 | 1,898 |
| Ever had sex | * | * | * | * | * | 25 |
| Never had sex | 17.4 | 7.8 | 12.9 | 37.9 | 1.7 | 1,872 |
| Currently married | 13.0 | 5.9 | 7.5 | 33.4 | 1.2 | 3,907 |
| Formerly married | 15.5 | 6.7 | 10.1 | 34.1 | 1.7 | 462 |
| Residence |  |  |  |  |  |  |
| Urban | 16.7 | 7.5 | 10.8 | 38.1 | 1.6 | 4,093 |
| Rural | 10.6 | 4.9 | 6.7 | 28.8 | 1.0 | 2,174 |
| Region |  |  |  |  |  |  |
| Yerevan | 19.3 | 7.6 | 12.2 | 44.3 | 2.1 | 2,446 |
| Aragatsotn | 9.7 | 1.3 | 5.3 | 25.3 | 0.1 | 255 |
| Ararat | 1.6 | 1.5 | 1.6 | 32.8 | 0.0 | 430 |
| Armavir | 14.8 | 5.4 | 8.5 | 23.3 | 0.3 | 524 |
| Gegharkunik | 11.3 | 13.0 | 16.0 | 33.8 | 2.8 | 417 |
| Lori | 24.9 | 10.5 | 9.7 | 39.2 | 1.4 | 518 |
| Kotayk | 12.3 | 8.5 | 9.5 | 32.3 | 1.9 | 523 |
| Shirak | 6.3 | 1.9 | 2.9 | 30.7 | 0.0 | 509 |
| Syunik | 3.9 | 3.8 | 5.8 | 3.0 | 0.0 | 271 |
| Vayots Dzor | 16.2 | 0.8 | 1.5 | 7.3 | 0.0 | 105 |
| Tavush | 12.2 | 6.2 | 10.5 | 33.7 | 1.6 | 269 |
| Education |  |  |  |  |  |  |
| Basic general | 10.8 | 3.9 | 6.4 | 26.3 | 0.0 | 424 |
| Secondary general | 11.2 | 4.1 | 6.2 | 31.8 | 1.0 | 2,295 |
| Specialized secondary | 13.4 | 6.1 | 8.4 | 33.4 | 1.0 | 1,957 |
| Higher | 21.9 | 11.6 | 16.1 | 43.5 | 2.8 | 1,591 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 10.4 | 5.1 | 5.3 | 27.8 | 0.6 | 1,019 |
| Second | 11.0 | 3.7 | 6.5 | 29.8 | 0.5 | 1,204 |
| Middle | 15.8 | 7.1 | 10.8 | 39.7 | 1.8 | 1,266 |
| Fourth | 14.8 | 7.1 | 8.9 | 35.4 | 1.7 | 1,346 |
| Highest | 19.3 | 9.2 | 14.0 | 39.5 | 2.0 | 1,432 |
| Total | 14.6 | 6.6 | 9.4 | 34.9 | 1.4 | 6,267 |
| Note: Currently married includes women in consensual union (living together). Formerly married includes divorced, separated, or widowed. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. |  |  |  |  |  |  |


| Table 13.4.2 Accepting attitudes toward those living with HIV: M en |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Among men age 15-49 who have heard of HIV/AIDS, percentage expressing specific accepting attitudes toward people with HIV, by background characteristics, Armenia 2005 |  |  |  |  |  |  |
| Percentage of men who: |  |  |  |  |  |  |
| Background characteristic | Are willing to care for a relative sick with the AIDS virus in the respondent's home | W ould buy fresh vegetables from a shopkeeper with the AIDS virus | Say that a female teacher with the AIDS virus and who is not sick should be allowed to keep teaching | W ould not want to keep secret that a family member got infected with the AIDS virus | Percentage expressing accepting attitudes on all four indicators | Number of men who have heard of AIDS |
| Age |  |  |  |  |  |  |
| 15-19 | 14.0 | 4.0 | 5.2 | 37.1 | 0.9 | 238 |
| 20-24 | 16.9 | 6.3 | 7.0 | 28.3 | 0.3 | 223 |
| 25-29 | 14.5 | 4.1 | 2.9 | 25.4 | 0.2 | 195 |
| 30-39 | 17.5 | 4.2 | 3.7 | 24.7 | 0.0 | 290 |
| 40-49 | 13.6 | 9.7 | 8.9 | 31.3 | 1.3 | 389 |
| 15-24 | 15.4 | 5.1 | 6.1 | 32.8 | 0.6 | 462 |
| Marital status |  |  |  |  |  |  |
| Never married | 17.3 | 5.1 | 5.1 | 30.4 | 0.5 | 543 |
| Ever had sex | 22.4 | 5.2 | 4.5 | 28.7 | 0.1 | 267 |
| Never had sex | 12.4 | 5.0 | 5.8 | 32.0 | 0.8 | 276 |
| Currently married | 13.6 | 6.6 | 6.3 | 28.8 | 0.7 | 780 |
| Formerly married | * | * | * | * | * | 13 |
| Residence |  |  |  |  |  |  |
| Urban | 17.3 | 7.1 | 5.9 | 29.0 | 0.5 | 847 |
| Rural | 11.6 | 4.4 | 6.0 | 30.4 | 0.8 | 489 |
| Region |  |  |  |  |  |  |
| Yerevan | 22.1 | 7.5 | 5.9 | 26.2 | 0.4 | 506 |
| Aragatsotn | 21.8 | 4.5 | 10.8 | 16.4 | 0.3 | 71 |
| Ararat | 1.0 | 0.0 | 2.4 | 1.0 | 0.0 | 110 |
| Armavir | 2.5 | 1.9 | 0.9 | 65.4 | 0.9 | 136 |
| Gegharkunik | 9.3 | 10.3 | 12.1 | 30.4 | 0.7 | 73 |
| Lori | 13.5 | 8.7 | 2.1 | 80.0 | 2.1 | 81 |
| Kotayk | 19.6 | 4.5 | 7.8 | 28.2 | 0.0 | 148 |
| Shirak | 0.0 | 8.8 | 1.1 | 13.9 | 0.0 | 78 |
| Syunik | 6.1 | 6.4 | 1.0 | 7.5 | 0.0 | 47 |
| Vayots Dzor | 4.9 | 3.2 | 2.6 | 6.0 | 0.8 | 28 |
| Tavush | 35.0 | 10.3 | 22.9 | 26.8 | 4.3 | 59 |
| Education |  |  |  |  |  |  |
| Basic general | 13.9 | 4.5 | 4.4 | 30.1 | 0.0 | 164 |
| Secondary general | 12.8 | 4.6 | 5.0 | 30.0 | 0.8 | 542 |
| Specialized secondary | 14.6 | 6.5 | 9.2 | 29.0 | 0.7 | 292 |
| Higher | 20.2 | 8.9 | 5.2 | 28.9 | 0.6 | 338 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 11.5 | 3.4 | 3.3 | 30.8 | 0.1 | 231 |
| Second | 12.2 | 7.3 | 9.8 | 27.2 | 1.4 | 236 |
| Middle | 13.6 | 4.9 | 8.0 | 31.0 | 0.8 | 306 |
| Fourth | 14.3 | 7.4 | 4.6 | 30.2 | 0.1 | 295 |
| Highest | 24.0 | 7.2 | 3.7 | 28.0 | 0.8 | 267 |
| Total | 15.2 | 6.1 | 5.9 | 29.5 | 0.6 | 1,336 |
| Note: Currently married includes men in consensual union (living together). Formerly married includes divorced, separated, or widowed. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. |  |  |  |  |  |  |

### 13.4 Multiple Sexual Partnerships

In the context of prevention of HIV/AIDS and other sexually transmitted infections (STIs), limiting the number of sexual partners and having protected sex are crucial to the fight against the epidemic. Condom use is an important tool in the fight to curtail the spread of HIV/AIDS. Although truly effective protection would require condom use at every sexual encounter, the most important encounters in which to use condoms are considered "higher-risk." In the ADHS, women and men who ever had sexual intercourse were asked questions about the number of partners with whom they had sexual intercourse in the 12 months preceding the survey, type of partner with whom they had sexual intercourse, and the number of sexual partners in their whole life. In this survey, higher-risk intercourse is defined as sexual intercourse with a non-marital, non-cohabitating partner in the 12 months preceding the survey.

Tables 13.5.1 and 13.5.2 show among women and men who had sexual intercourse in the past 12 months the percentage who had more than one sexual partner in the 12 months preceding the survey. Almost no women who had sexual intercourse in the 12 months before the survey reported having two or more sexual partners in the reference period and very few had engaged in higher-risk sex. While less than 1 percent of women had two or more sexual partners in the past year, the corresponding proportion for men is 12 percent. Only 1 percent of women report having had higher-risk sex in the 12 months before the survey, compared with almost three in ten men ( 28 percent).

Among men who have had sex in the last 12 months, those under age 25 are the most likely to be engaged in higher-risk sex (Table 13.5.2). For example, four in ten men age $20-24$ have had two or more sexual partners in the last 12 months and 73 percent of these men had high-risk sexual intercourse. The percentage of men who had multiple partners in the last 12 months increases with the wealth quintile to peak at the middle category of the index. Having higher-risk sex is associated with the man's marital status; among men who have had sex in the last 12 months, never-married men are the most likely to have multiple partners ( 34 percent) and almost all of them engage in higher-risk sex ( 98 percent). The latter finding is hardly surprising, because never-married men who have had sex in the last year by definition have had sex with a non-marital partner; the only reason it is not 100 percent is that a few men who reported never having married reported a sexual partner who was a wife or live-in partner.

Seventy-six percent of men who had higher-risk sexual encounters in the 12 months preceding the survey reported using a condom at the last higher-risk sexual intercourse, a significant increase from 43 percent in 2000. Protected higher-risk sex in the last 12 months was least likely among men age 25-29 and those with specialized secondary education, less than two-thirds of whom used a condom at the last high-risk sex.

Among those who ever had sexual intercourse, the mean number of lifetime sexual partners is 1.0 for women and 5.6 for men. Even teenage men report that they had 5.5 sexual partners in their life. The mean number of lifetime sexual partners increases with education, from 4.6 partners for men with basic general education to 6.4 partners for those with higher than specialized education. Although men in the highest wealth quintile have the highest mean number of sexual partners in their lifetime, the association between wealth index and number of lifetime sexual partners is not linear. Across regions, men in Armavir report having the highest number of lifetime sexual partners (8.8), while men in Shirak report having the lowest (1.0).

## Table 13.5.1 Multiple sexual partners and higher-risk sexual intercourse: Women

Among women age 15-49 who had sexual intercourse in the past 12 months, the percentage who had intercourse with more than one partner and the percentage who had higher-risk sexual intercourse in the past 12 months, and the mean number of sexual partners during their lifetime for women who ever had sexual intercourse, by background characteristics, Armenia 2005

| Background characteristic | Multiple sexual partners and higher-risk intercourse in the past 12 months |  |  | M ean number of sexual partners in lifetime |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage who had 2+ partners in the past 12 months | Percentage who had higher-risk intercourse in the past 12 months ${ }^{1}$ | Number of women who had sexual intercourse | Mean number | Number of women who ever had intercourse |
| Age |  |  |  |  |  |
| 15-19 | 0.0 | 0.0 | 78 | 1.0 | 79 |
| 20-24 | 0.0 | 0.4 | 505 | 1.0 | 518 |
| 25-29 | 0.0 | 1.3 | 694 | 1.0 | 737 |
| 30-39 | 0.2 | 1.9 | 1,180 | 1.1 | 1,366 |
| 40-49 | 0.0 | 1.4 | 1,473 | 1.0 | 1,834 |
| 15-24 | 0.0 | 0.4 | 583 | 1.0 | 597 |
| Marital status |  |  |  |  |  |
| Never married | * | * | 19 | * | 25 |
| Currently married | 0.0 | 0.1 | 3,848 | 1.0 | 4,033 |
| Formerly married | 3.3 | 50.7 | 64 | 1.3 | 476 |
| Residence |  |  |  |  |  |
| Urban | 0.1 | 2.2 | 2,375 | 1.1 | 2,818 |
| Rural | 0.0 | 0.2 | 1,555 | 1.0 | 1,717 |
| Region |  |  |  |  |  |
| Yerevan | 0.2 | 2.8 | 1,341 | 1.1 | 1,623 |
| Aragatsotn | 0.0 | 0.0 | 190 | 1.0 | 207 |
| Ararat | 0.0 | 0.4 | 288 | 1.0 | 337 |
| Armavir | 0.0 | 0.7 | 361 | 1.0 | 414 |
| Gegharkunik | 0.0 | 0.1 | 297 | 1.0 | 324 |
| Lori | 0.0 | 0.0 | 328 | 1.0 | 369 |
| Kotayk | 0.0 | 2.2 | 357 | 1.0 | 395 |
| Shirak | 0.0 | 0.8 | 341 | 1.0 | 384 |
| Syunik | 0.0 | 0.0 | 184 | 1.0 | 203 |
| Vayots Dzor | 0.0 | 0.8 | 62 | 1.0 | 71 |
| Tavush | 0.0 | 0.7 | 181 | 1.1 | 208 |
| Education |  |  |  |  |  |
| Basic general | 0.0 | 0.9 | 234 | 1.1 | 277 |
| Secondary general | 0.0 | 1.5 | 1,575 | 1.1 | 1,794 |
| Specialized secondary | 0.2 | 1.2 | 1,315 | 1.0 | 1,522 |
| Higher | 0.0 | 1.6 | 807 | 1.1 | 941 |
| Wealth quintile |  |  |  |  |  |
| Lowest | 0.0 | 1.1 | 747 | 1.0 | 857 |
| Second | 0.0 | 1.5 | 781 | 1.0 | 897 |
| Middle | 0.0 | 1.6 | 775 | 1.1 | 917 |
| Fourth | 0.0 | 1.4 | 806 | 1.0 | 950 |
| Highest | 0.3 | 1.2 | 822 | 1.0 | 913 |
| Total | 0.1 | 1.4 | 3,931 | 1.0 | 4,534 |

Note: Currently married includes women in consensual union (living together). Formerly married includes divorced, separated, or widowed. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
${ }^{1}$ Sexual intercourse with a partner who was neither a spouse nor who lived with the respondent.

## Table 13.5.2 Multiple sexual partners and higher-risk sexual intercourse: Men

Among men age 15-49 who had sexual intercourse in the past 12 months, the percentage who had intercourse with more than one partner and the percentage who had higher-risk sexual intercourse in the past 12 months; and among those having higher-risk intercourse in the last 12 months, the percentage reporting that a condom was used at last higher-risk intercourse, and the mean number of sexual partners during their lifetime for men who ever had sexual intercourse, by background characteristics, Armenia 2005

| Background characteristic | Multiple sexual partners and higher-risk intercourse in the past 12 months |  |  | Condom use at last higher-risk intercourse in the past12 months |  | Mean number of sexual partners in lifetime |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage who had $2+$ partners in the past 12 months | Percentage who had higher-risk intercourse in the past 12 months ${ }^{1}$ | Number of men who had sexual intercourse | Percentage who reported condom use at last higher-risk intercourse | Number of men who had higher-risk intercourse | Mean number | Number of men who ever had intercourse |
| Age |  |  |  |  |  |  |  |
| 15-19 | (17.3) | (100.0) | 36 | (84.2) | 36 | (5.5) | 39 |
| 20-24 | 38.8 | 73.0 | 155 | 87.1 | 113 | 5.8 | 168 |
| 25-29 | 16.0 | 35.2 | 179 | 64.6 | 63 | 5.0 | 182 |
| 30-39 | 7.7 | 17.7 | 300 | (80.4) | 53 | 4.8 | 283 |
| 40-49 | 3.5 | 6.9 | 389 | * | 27 | 6.4 | 368 |
| 15-24 | 34.8 | 78.1 | 191 | 86.4 | 149 | 5.8 | 208 |
| Marital status |  |  |  |  |  |  |  |
| Never married | 33.5 | 98.2 | 242 | 77.8 | 238 | 6.7 | 267 |
| Currently married | 6.3 | 6.0 | 804 | (72.0) | 48 | 5.2 | 758 |
| Formerly married | * | * | 12 | * | 6 | * | 16 |
| Residence |  |  |  |  |  |  |  |
| Urban | 13.2 | 31.1 | 690 | 78.1 | 215 | 6.0 | 668 |
| Rural | 11.1 | 20.9 | 368 | 71.8 | 77 | 4.9 | 374 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 13.4 | 35.3 | 433 | 80.8 | 153 | 6.6 | 424 |
| Aragatsotn | 1.4 | 12.5 | 53 | * | 7 | 4.0 | 53 |
| Ararat | 5.9 | 26.4 | 79 | * | 21 | 5.7 | 78 |
| Armavir | 18.9 | 31.7 | 108 | (68.6) | 34 | 8.8 | 94 |
| Gegharkunik | 15.6 | 23.4 | 58 | * | 14 | 4.4 | 60 |
| Lori | (5.4) | (9.1) | 57 | ${ }^{*}$ | 5 | (7.0) | 57 |
| Kotayk | 31.1 | 44.8 | 106 | 70.0 | 48 | 4.8 | 106 |
| Shirak | 0.0 | 0.0 | 55 | na | 0 | 1.0 | 57 |
| Syunik | 0.0 | 10.0 | 44 | * | 4 | 2.7 | 45 |
| Vayots Dzor | 2.1 | 10.9 | 21 | * | 2 | 4.9 | 21 |
| Tavush | 4.5 | 9.5 | 45 | * | 4 | 2.3 | 46 |
| Education |  |  |  |  |  |  |  |
| Basic general | 10.5 | 38.0 | 115 | 67.9 | 44 | 4.6 | 117 |
| Secondary general | 13.0 | 30.1 | 390 | 82.0 | 117 | 5.2 | 390 |
| Specialized secondary | 8.3 | 18.5 | 280 | (62.5) | 52 | 5.8 | 261 |
| Higher | 16.7 | 28.9 | 273 | 82.0 | 79 | 6.4 | 274 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 4.9 | 11.3 | 183 | * | 21 | 5.0 | 187 |
| Second | 8.9 | 18.6 | 183 | (79.9) | 34 | 5.4 | 183 |
| Middle | 20.1 | 40.2 | 230 | 72.7 | 92 | 5.9 | 223 |
| Fourth | 12.7 | 33.4 | 226 | 81.5 | 75 | 5.2 | 216 |
| Highest | 13.2 | 29.3 | 236 | 82.1 | 69 | 6.4 | 232 |
| Total | 12.4 | 27.6 | 1,058 | 76.4 | 292 | 5.6 | 1,042 |

Note: Currently married includes men in consensual union (living together). 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
${ }^{1}$ Sexual intercourse with a partner who was neither a spouse nor who lived with the respondent

### 13.5 Paid Sex

Male respondents in the 2005 ADHS were asked whether they had paid money in exchange for sex in the 12 months preceding the survey. The findings are reported in Table 13.6. Among men age 15-49, 2 percent reported paying for sex in the last 12 months. There is no clear pattern of this practice by age and education. However, men age 20-24 and those with basic general education are most likely to have sex with prostitutes (4 percent). Differentials by region indicate that at least 4 percent of men had paid sex in the last 12 months in Ararat, Gegharkunik, and Kotayk regions. In contrast, none of the men interviewed in Lori, Shirak, Vayots Dzor, and Tavush regions reported having paid for sex in the last 12 months. The association between payment for sexual relations and wealth index is not clear.

### 13.6 Prevalence of Sexually Transmitted Infections

Both female and male respondents were asked whether they had a sexually transmitted infection (STI) or had experienced symptoms of an STI in the 12 months preceding the survey. It is important to note that these data are likely to underestimate the true prevalence of STIs for a number of reasons. First, if symptoms are not obvious or prolonged, they may not be recognized as an STI. Furthermore, health care may not be sought for STIs because of the embarrassment or the presumed stigma associated with such infections, and they may go undiagnosed. Even if an individual knows she/he has an STI, there may be a reluctance to report the infection during an interview.

Table 13.7 shows that, as in 2000, less than 1 percent of women and men reported having an STI in the past 12 months. These results suggest underreporting of STIs. However, when asked whether they had experienced an abnormal genital discharge in the last 12 months, 7 percent of women reported that they had. To the extent that women may report normal genital discharge as abnormal, this may be an overestimate of any serious STI. One percent of women reported a genital sore or ulcer, which is of concern in the context of evidence that sores or ulcers (whether an actual STI or not) may facilitate transmission of HIV, especially if left untreated. Overall, 8 percent of women reported having an STI, genital discharge, or genital sore or ulcer, substantially less than in 2000, when onequarter of women who ever had sex reported having these symptoms or an STI. Prevalence of STIs or
their symptoms is twice as common as the national average among women with the lowest education; it is also higher among rural women and poor women than other women. The survey results indicate significant regional variation in the prevalence of STIs or symptoms of STIs among women, from a low of less than 1 percent in Shirak to a high of 20 percent in Gegharkunik.

Table 13.7 Self-reported prevalence of sexually transmitted infections (STIs) and STI symptoms
Among women and men age 15-49 who ever had sexual intercourse, the percentage self-reporting having an STI and/or symptoms of an STI in the past 12 months, by background characteristics, Armenia 2005

| Background characteristic | W omen |  |  |  |  | Men |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage with an STI | Percentage with abnormal genital discharge | Percentage with genital sore/ulcer | Percentage with STI/ discharge/ genital sore/ ulcer | Number of women who ever had sexual intercourse | Percentage with an ST | Percentage with abnormal genital discharge | Percentage <br> with genital sore/ulcer | Percentage with STI/ discharge/ genital sore/ ulcer | Number of men who ever had sexual intercourse |
| Age |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 0.0 | 12.8 | 0.0 | 12.8 | 79 | (0.0) | (2.9) | (0.0) | (2.9) | 39 |
| 20-24 | 0.6 | 9.0 | 1.6 | 9.4 | 518 | 0.0 | 0.0 | 0.0 | 0.0 | 174 |
| 25-29 | 2.0 | 10.9 | 1.0 | 11.5 | 740 | 0.6 | 0.6 | 0.1 | 0.6 | 186 |
| 30-39 | 1.4 | 7.7 | 1.4 | 8.1 | 1,367 | 0.0 | 0.0 | 0.0 | 0.0 | 303 |
| 40-49 | 0.2 | 4.7 | 1.3 | 5.7 | 1,844 | 0.0 | 0.0 | 1.4 | 1.4 | 409 |
| 15-24 | 0.6 | 9.5 | 1.3 | 9.8 | 598 | 0.0 | 0.5 | 0.0 | 0.5 | 213 |
| Marital status |  |  |  |  |  |  |  |  |  |  |
| Never married | * | * | * | * | 25 | 0.0 | 0.4 | 0.0 | 0.4 | 280 |
| Currently married | 0.8 | 7.5 | 1.4 | 8.2 | 4,044 | 0.1 | 0.1 | 0.7 | 0.8 | 815 |
| Formerly married | 0.9 | 4.9 | 0.4 | 5.1 | 479 | * | * | * |  | 17 |
| Residence |  |  |  |  |  |  |  |  |  |  |
| Urban | 1.2 | 6.5 | 1.3 | 7.2 | 2,830 | 0.1 | 0.3 | 0.6 | 0.9 | 723 |
| Rural | 0.5 | 8.5 | 1.3 | 9.1 | 1,719 | 0.0 | 0.0 | 0.4 | 0.4 | 388 |
| Region |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 1.8 | 7.1 | 1.0 | 7.7 | 1,630 | 0.0 | 0.0 | 0.0 | 0.0 | 452 |
| Aragatsotn | 0.1 | 6.3 | 2.2 | 7.5 | 207 | 0.0 | 0.0 | 0.3 | 0.3 | 58 |
| Ararat | 0.0 | 0.4 | 0.7 | 1.1 | 337 | 0.0 | 0.0 | 0.0 | 0.0 | 80 |
| Armavir | 0.7 | 7.6 | 1.8 | 7.9 | 414 | 0.0 | 0.0 | 0.0 | 0.0 | 111 |
| Gegharkunik | 1.2 | 18.6 | 1.7 | 19.8 | 324 | 0.0 | 0.0 | 0.0 | 0.0 | 63 |
| Lori | 0.0 | 8.9 | 1.5 | 8.9 | 371 | (0.0) | (0.0) | (8.9) | (8.9) | 62 |
| Kotayk | 1.0 | 9.3 | 3.9 | 11.9 | 397 | 0.9 | 1.9 | 0.0 | 1.9 | 113 |
| Shirak | 0.0 | 0.3 | 0.0 | 0.3 | 386 | (0.0) | (0.0) | (0.0) | (0.0) | 57 |
| Syunik | 0.0 | 3.3 | 0.0 | 3.3 | 204 | 0.0 | 0.0 | 0.0 | 0.0 | 46 |
| Vayots Dzor | 0.7 | 1.0 | 0.1 | 1.9 | 71 | 0.0 | 0.0 | 0.0 | 0.0 | 21 |
| Tavush | 0.0 | 14.0 | 0.1 | 14.0 | 208 | 0.0 | 0.0 | 0.0 | 0.0 | 46 |
| Education |  |  |  |  |  |  |  |  |  |  |
| Basic general | 1.9 | 15.2 | 0.0 | 15.2 | 278 | 0.0 | 0.0 | 0.0 | 0.0 | 126 |
| Secondary general | 0.9 | 8.4 | 1.1 | 8.8 | 1,800 | 0.3 | 0.3 | 0.3 | 0.5 | 412 |
| Specialized secondary | 0.9 | 5.9 | 1.6 | 6.7 | 1,527 | 0.0 | 0.0 | 1.2 | 1.2 | 287 |
| Higher | 0.4 | 5.1 | 1.4 | 6.0 | 944 | 0.0 | 0.4 | 0.4 | 0.8 | 287 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |
| Lowest | 0.7 | 9.9 | 2.0 | 10.2 | 860 | 0.0 | 0.0 | 0.1 | 0.1 | 194 |
| Second | 0.9 | 8.8 | 1.0 | 9.5 | 898 | 0.0 | 0.0 | 0.9 | 0.9 | 192 |
| Middle | 0.7 | 8.9 | 1.1 | 9.3 | 917 | 0.0 | 0.0 | 0.0 | 0.0 | 242 |
| Fourth | 1.5 | 4.7 | 1.1 | 5.4 | 954 | 0.4 | 0.4 | 0.0 | 0.4 | 239 |
| Highest | 0.6 | 4.3 | 1.2 | 5.4 | 919 | 0.0 | 0.5 | 1.6 | 2.0 | 243 |
| Total | 0.9 | 7.3 | 1.3 | 7.9 | 4,549 | 0.1 | 0.2 | 0.5 | 0.7 | 1,111 |

Note: Currently married includes respondents in consensual union (living together). Formerly married includes divorced, separated, or widowed. 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.

As in the 2000 ADHS, almost no men interviewed in the 2005 ADHS reported having had an STI, an abnormal genital discharge, or a genital sore or ulcer.

If respondents reported an STI or an STI symptom (i.e., genital discharge or sore or ulcer) in the past 12 months, they were asked questions about their actions in response to the illness or symptom. Due to the small number of men reporting an STI or STI symptoms, only the data on women are meaningful. Slightly more than half of the women ( 52 percent) who reported an STI or STI symptoms in the past 12 months sought advice or treatment. Among women who sought treatment, almost all went to a medical facility or a health professional. However, 35 percent of women with an STI or STI symptoms did not solicit advice or seek treatment (data not shown in a table).

### 13.7 Prevalence of InJections

Respondents in the 2005 ADHS were asked if they had any injections from a doctor, nurse, pharmacist, dentist, or health worker in the 12 months preceding the survey and, if so, how many such injections (medical injections) they received in that period, and who gave the last of these injection. It should be noted that medical injections that are self-administered (e.g., insulin for diabetes) are not considered medical injections.

Table 13.8 shows the percentage of women and men age 15-49 who received a medical injection and whether the syringe and needle used were taken from an unopened package or not. Data in Table 13.8 show that 13 percent of women and 9 percent of men report having received an injection in the 12 months preceding the survey, with an average of 1.9 injections for women and 1.8 injections for men in the last 12 months. Older women are more likely than younger women to report getting an injection, with an average of 2.6 injections in the past 12 months. Women in Armavir, Lori, Kotayk, Gegharkunik, and Tavush regions report getting more injections (average of 2.7 to 3.1) than those in other regions.

When asked whether the syringe used in the last medical injection came from a new unopened package, 98 percent of women gave a positive response. There are small variations in this proportion across subgroups of population. Overall, 97 percent of men said that for the last medical injection they received, the syringe was taken from a new, unopened package.


### 13.8 HIV/AIDS-ReLAted Knowledge and Behavior among Youth

This section addresses knowledge of HIV/AIDS issues and related sexual behavior among youths age 15-24. This age group is of particular interest for HIV/AIDS programs. The period between initiation of sexual activity and marriage is often a time of sexual experimentation, but it may also involve risky behaviors. Comprehensive knowledge of HIV/AIDS transmission and prevention and knowledge of sources of condoms among youth is analyzed in this section. Issues such as abstinence, age at sexual debut, age differences between partners, and condom use are also covered. Young respondents in the 2005 ADHS were asked the same set of questions as older respondents about whether condom use and limiting number of partners to one uninfected partner can help protect against getting the AIDS virus, and whether a healthy-looking person can have the AIDS virus (see Tables 13.3.1 and 13.3.2).

The data in Table 13.9 show the level of comprehensive knowledge among young people. The table shows the proportion who, in response to prompted questions, answer in affirmative that people can reduce their chances of getting the AIDS virus by having sex with only one uninfected, faithful partner and by using condoms consistently; who know that a healthy-looking person can have the AIDS virus; and who know that HIV cannot be transmitted by mosquito bites or by sharing food with a person who is infected with the AIDS virus.

Only 23 percent of young women and 15 percent of young men have a comprehensive knowledge about HIV/AIDS. However, young women and men age 20-24 have virtually the same level of knowledge. The level of knowledge increases with education. The comprehensive knowledge of AIDS is much higher among urban young women than their rural counterparts, but the difference by residence among young men is rather small. Interestingly, never-married young women are as likely as those who have been married to have comprehensive knowledge about HIV/AIDS. Young men age $15-24$ who never had sex are least likely to have comprehensive knowledge about HIV/AIDS and there is virtually no difference between never-married young men who ever had sex and those who are married. Regional differences among young women are notable, ranging from 9 percent in Tavush to 34 percent in Syunik. Differentials in comprehensive knowledge of HIV/AIDS among young men are less pronounced than among young women.

Seven in ten young women and a slightly lower percentage of young men know a condom source. Women age 20-24 are more likely than those age 15-19 to know of a condom source. The relationship between age and knowing a condom source is reversed among young men. Five in ten men age 20-24 and more than seven in ten younger men know a condom source. Young women in urban areas are more likely to know a condom source than those who live in rural areas, but among young men, there is no such differential. Among women, the knowledge of a condom source increases with education and wealth index, but for men these two background characteristics show no clear relationships. The variation in knowledge of a condom source by region is greater for women than for men; knowledge of a condom source ranges between 32 and 88 percent for young women, and 44 and 85 percent for young men.

| Table 13.9 Comprehensive knowledge about AIDS and of a source for 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, Armenia 2005 |  |  |  |  |  |  |
| Women age 15-24 |  |  |  | M en age 15-24 |  |  |
| Background characteristic | Percentage with comprehensive knowledge of AIDS ${ }^{1}$ | Percentage who know a condom source ${ }^{2}$ | Number of women | Percentage with comprehensive knowledge of AIDS ${ }^{1}$ | Percentage who know a condom source ${ }^{2}$ | Number of men |
| Age |  |  |  |  |  |  |
| 15-19 | 19.3 | 56.7 | 1,123 | 6.7 | 71.6 | 292 |
| 15-17 | 15.7 | 46.8 | 683 | 7.0 | 73.1 | 220 |
| 18-19 | 24.8 | 72.0 | 440 | 5.9 | 67.0 | 72 |
| 20-24 | 26.0 | 81.1 | 1,131 | 25.4 | 51.0 | 237 |
| 20-22 | 24.1 | 78.4 | 735 | 26.5 | 53.5 | 151 |
| 23-24 | 29.5 | 86.0 | 396 | 23.5 | 46.5 | 86 |
| Marital status |  |  |  |  |  |  |
| Never married | 22.7 | 65.3 | 1,657 | 13.9 | 60.4 | 479 |
| Ever had sex | na | na | 0 | 25.0 | 19.3 | 164 |
| Never had sex | 22.7 | 65.3 | 1,656 | 8.1 | 81.7 | 315 |
| Currently married | 22.7 | 79.4 | 582 | (26.5) | (82.1) | 50 |
| Residence |  |  |  |  |  |  |
| Urban | 25.7 | 80.3 | 1,433 | 14.4 | 62.1 | 311 |
| Rural | 17.3 | 49.1 | 821 | 16.1 | 62.8 | 217 |
| Region |  |  |  |  |  |  |
| Yerevan | 27.1 | 87.9 | 857 | 13.0 | 60.2 | 180 |
| Aragatsotn | 18.7 | 32.0 | 100 | 43.9 | 54.8 | 22 |
| Ararat | 11.8 | 51.7 | 152 | 15.7 | 70.7 | 55 |
| Armavir | 26.3 | 65.9 | 196 | 18.0 | 73.0 | 55 |
| Gegharkunik | 27.2 | 37.4 | 158 | (14.4) | (67.8) | 29 |
| Lori | 10.6 | 69.2 | 194 | * | * | 34 |
| Kotayk | 12.1 | 67.2 | 201 | 15.8 | 60.1 | 64 |
| Shirak | 31.4 | 61.3 | 190 | (0.0) | (44.1) | 37 |
| Syunik | 34.0 | 58.4 | 82 | (13.7) | (54.5) | 21 |
| Vayots Dzor | 16.4 | 60.4 | 38 | (20.8) | (85.2) | 12 |
| Tavush | 9.4 | 51.4 | 85 | (19.6) | (82.0) | 19 |
| Education |  |  |  |  |  |  |
| Basic general | 8.8 | 42.8 | 292 | 9.0 | 57.5 | 115 |
| Secondary general | 16.6 | 56.7 | 828 | 14.9 | 65.9 | 265 |
| Specialized secondary | 26.5 | 81.3 | 529 | 12.1 | 55.7 | 41 |
| Higher | 34.2 | 87.4 | 606 | 23.2 | 61.6 | 108 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 11.9 | 36.4 | 377 | 15.9 | 63.9 | 87 |
| Second | 21.9 | 60.8 | 436 | 8.1 | 64.4 | 96 |
| Middle | 26.0 | 75.0 | 460 | 13.9 | 63.6 | 138 |
| Fourth | 21.1 | 75.5 | 451 | 18.1 | 62.7 | 123 |
| Highest | 29.3 | 87.9 | 530 | 19.6 | 56.2 | 84 |
| Total 15-24 | 22.6 | 68.9 | 2,254 | 15.1 | 62.4 | 529 |
| Note: The total includes 15 young women who were divorced, separated, or widowed. 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. <br> na $=$ Not applicable <br> ${ }^{1}$ Comprehensive knowledge means knowing that use of condoms 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 (transmission by mosquito bites and by sharing food with someone with AIDS). <br> ${ }^{2}$ Friends, family members, and home are not considered sources for condoms. |  |  |  |  |  |  |

### 13.9 Age at First Sex among Youth and Condom Use

This section discusses the initiation of sex, premarital and other higher-risk sex, and condom use among young women and young men. Overall, a few women and a small proportion of men age 15-24 in Armenia have had sex by age 15 (Table 13.10). By age 18, however, 9 percent of women and 28 percent of men have started their sexual debut. Never-married young women report never having any sexual relations. The initiation to sex varies according to the respondent's education, wealth status, and residence. Women with less education and those in the lowest wealth quintile are much more likely to start having sexual intercourse at an earlier age than other women. For example, 32 percent of women with basic general education started having sexual intercourse before age 18 , compared with only 3 percent of those with higher than specialized secondary education. Across regions, women in Gegharkunik start having sex at an earlier age than women in other regions; 20 percent of women age 1524 in Gegharkunik have had sex by age 18. On the other hand, only 5 percent of women in Aragatsotn region and 6 percent of women in Armavir and Vayots Dzor regions have had sex by that age.

Men show less definite differentials than women. Variations by education and wealth quintile show few distinct patterns. Regional differentials are also less clear, especially because of the small number of men who have had sex by the specified ages.

It is worth noting that women and men who know a source for condoms are less likely to have had sex at an early age than those who do not. The differences are more pronounced for young men; those who do not know a condom source are almost four times as likely to have had sexual intercourse by age 18 as young men who know a condom source.

Table 13.11 shows, among women and men age $15-24$ who have ever had sex, the percentage who used a condom at their first sexual encounter. Almost no young woman report using a condom when she had her first sexual intercourse. More than half of young men report using a condom at their first sex ( 55 percent). Young men who now know a condom source are less likely to have used a condom at first sex than those who do not know a condom source. The use of condom at first sex by men in urban and rural areas is about the same at just over 50 percent each. Discussion on differentials in using a condom at first sex by young men is limited due to the small number of cases.

| Table 13.10 Age at first sexual intercourse among young women and men |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of young women and young men age 15-24 who had sexual intercourse by exact ages 15 and 18 , by background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |
|  | W omen age 15-24 |  | W omen age 18-24 |  | Men age 15-24 |  | Men age 18-24 |  |
| Background characteristic | Percentage who had sexual intercourse before exact age 15 | Number of women | Percentage who had sexual intercourse before exact age 18 | Number of women | Percentage who had sexual intercourse before exact age 15 | Number of men | Percentage who had sexual intercourse before exact age 18 | Numbe of men |
| Age |  |  |  |  |  |  |  |  |
|  | 0.3 | 1,123 | na | na | 2.6 | 292 | na | na |
| 15-17 | 0.0 | 1,123 | na | na | 2.3 | 220 | na | na |
| 18-19 | 0.7 | 440 | 7.2 | 440 | 3.3 | 72 | 21.4 | 72 |
| 20-24 | 0.2 | 1,131 | 9.0 | 1,131 | 3.0 | 237 | 29.5 | 237 |
| 20-22 | 0.3 | 735 | 9.7 | 735 | 2.9 | 151 | 30.6 | 151 |
| 23-24 | 0.1 | 396 | 7.8 | 396 | 3.2 | 86 | 27.5 | 86 |
| Marital status |  |  |  |  |  |  |  |  |
| Never married | 0.0 | 1,657 | 0.0 | 990 | 2.8 | 479 | 26.0 | 259 |
| Currently married | 0.9 | +582 | 22.7 | 566 | (2.3) | 50 | (35.9) | 50 |
| Formerly married | * | 15 | * | 15 | nc | 0 | nc | 0 |
| Knows a condom source ${ }^{1}$ |  |  |  |  |  |  |  |  |
| Yes | 0.1 | 1,554 | 8.0 | 1,234 | 0.6 | 330 | 12.1 | 169 |
| No | 0.5 | 700 | 10.6 | 337 | 6.3 | 199 | 46.4 | 140 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 0.1 | 1,433 | 6.5 | 1,026 | 2.6 | 311 | 27.3 | 191 |
| Rural | 0.5 | 821 | 12.3 | +545 | 3.0 | 217 | 28.1 | 117 |
| Region |  |  |  |  |  |  |  |  |
| Yerevan | 0.0 | 857 | 6.6 | 628 | 3.7 | 180 | 32.9 | 117 |
| Aragatsotn | 0.0 | 100 | 5.4 | 62 | 9.8 | 22 | (37.0) | 11 |
| Ararat | 0.0 | 152 | 8.7 | 113 | 0.0 | 55 | (44.9) | 30 |
| Armavir | 0.2 | 196 | 6.0 | 126 | 0.0 | 55 | $(30.8$ | 30 |
| Gegharkunik | 0.9 | 158 | 19.5 | 109 | (4.0) | 29 | (19.6) | 18 |
| Kori | 0.0 0.7 | 194 | 8.0 10.9 | 133 | 6 ${ }^{*}$ | 34 64 | * 23.9 | 19 |
| Shirak | 0.7 | 190 | 8.0 | 121 | (0.0) | 37 | ${ }_{*}{ }^{\text {a }}$ | 17 |
| Syunik | 0.7 | 82 | 11.4 | 53 | (0.0) | 21 | 16.5 | 12 |
| Vayots Dzor | 0.0 | 38 | 6.0 | 27 | (0.0) | 12 | * | 7 |
| Tavush | 0.3 | 85 | 12.1 | 57 | (1.2) | 19 | * | 7 |
| Education |  |  |  |  |  |  |  |  |
| Basic general | 1.3 | 292 | 32.0 | 102 | 2.5 | 115 | 19.1 | 58 |
| Secondary general | 0.2 | 828 | 13.5 | 476 | 2.9 | 265 | 33.8 | 125 |
| Specialized secondary | 0.0 | 529 | 5.0 | 478 | 6.6 | 41 | (38.7) | 31 |
| Higher | 0.0 | 606 | 2.5 | 515 | 1.2 | 108 | 20.8 | 94 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 0.3 | 377 | 15.2 | 238 | 2.3 | 87 | 17.0 | 46 |
| Second | 0.4 | 436 | 8.4 | 302 | 3.0 | 96 | 30.3 | 41 |
| Middle | 0.5 | 460 | 10.6 | 328 | 3.1 | 138 | 21.0 | 90 |
| Fourth | 0.0 | 451 | 5.1 | 317 | 0.0 | 123 | 38.4 | 77 |
| Highest | 0.0 | 530 | 5.5 | 385 | 6.3 | 84 | (30.1) | 55 |
| Total | 0.2 | 2,254 | 8.5 | 1,571 | 2.8 | 529 | 27.6 | 308 |
| 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. <br> na $=$ Not applicable <br> nc = No cases <br> ${ }^{1}$ Friends, family members, and home are not considered sources for condoms. |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |


| Table 13.11 Condom use at first sexual intercourse among youth |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Among young women and young men age 15-24 who have ever had sexual intercourse, the percentage who used a condom the first time they had sexual intercourse, by background characteristics, Armenia 2005 |  |  |  |  |
|  | Women age 15-24 |  | M en age 15-24 |  |
| Background characteristic | Percentage who used a condom at first sexual intercourse | Number of women who have ever had sexual intercourse | Percentage who used a condom at first sexual intercourse | Number of men who have ever had sexual intercourse |
| Age |  |  |  |  |
| 15-19 | 0.0 | 79 | (80.1) | 39 |
| 15-17 | * | 17 | * | 18 |
| 18-19 | 0.0 | 63 | * | 21 |
| 20-24 | 0.4 | 518 | 48.8 | 174 |
| 20-22 | 0.2 | 290 | 54.8 | 98 |
| 23-24 | 0.7 | 228 | 41.0 | 76 |
| Marital status |  |  |  |  |
| N ever married | na | 0 | 57.9 | 164 |
| Currently married | 0.4 | 582 | (43.5) | 50 |
| Formerly married | * | 15 | na | 0 |
| Knows a condom source ${ }^{1}$ |  |  |  |  |
| Yes | 0.3 | 471 | 48.0 | 72 |
| No | 0.4 | 126 | 57.9 | 141 |
| Residence |  |  |  |  |
| Urban | 0.3 | 335 | 53.3 | 134 |
| Rural | 0.4 | 263 | 56.6 | 79 |
| Education |  |  |  |  |
| Basic general | 0.0 | 64 | (46.3) | 40 |
| Secondary general | 0.6 | 268 | 58.3 | 99 |
| Specialized secondary | 0.1 | 178 | * | 21 |
| Higher | 0.4 | 88 | (57.5) | 53 |
| Wealth quintile |  |  |  |  |
| Lowest | 0.0 | 118 | (53.8) | 26 |
| Second | 0.8 | 120 | 56.6 | 29 |
| Middle | 0.4 | 129 | 40.7 | 57 |
| Fourth | 0.5 | 127 | (62.5) | 51 |
| Highest | 0.0 | 103 | (61.2) | 51 |
| Total 15-24 | 0.4 | 598 | 54.5 | 213 |
| Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that figure is based on fewer than 25 unweighted cases and has been suppressed. na $=$ Not applicable <br> ${ }^{1}$ Friends, family members, and home are not considered sources for condoms. |  |  |  |  |

The most common means of HIV transmission in many countries is unprotected sex with an infected person. To prevent HIV transmission, it is important that young people practice safe sex through the advocated "ABC" methods (abstinence, being faithful to one uninfected partner, and condom use).

Table 13.12 is confined to young men age $15-24$ because, as mentioned before, young women in this age group report having sex only after marriage (Table 13.11). Table 13.12 shows the percentage of never-married young men who had never had sex, the percentage who had sex in the 12 months preceding the survey, and the percentage who used a condom the last time they had sex. Overall, 66 percent of never-married men 15-24 report that they have never had sex, 30 percent had sex in the 12 months preceding the survey, and, of these men, 88 percent used a condom at their last sexual intercourse. The proportion of never-married young men who have never had sex drops rapidly with increasing age and education. For instance, 92 percent of never-married men age 15-17 have never had sex compared with 17 percent of men age 23-24. Sexual initiation by household wealth shows a pattern similar to that of level of education. Less than half ( 47 percent) of young men in the highest wealth quintile have never had sex, compared with three-quarters ( 77 percent) of young men in the lowest wealth quintile.

| Table 13.12 Premarital sexual intercourse and condom use during premarital sexual intercourse among young men |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Among never-married men age 15-24, percentage who have never had sexual intercourse, percentage who had sexual intercourse in the past 12 months and, among those who had premarital sexual intercourse in the past 12 months, percentage who used a condom at last sexual intercourse, by background characteristics, Armenia 2005 |  |  |  |  |  |
| Background characteristic | Percentage who have never had sexual intercourse | Percentage who had sexual intercourse in the past 12 months | Number of nevermarried men | Percentage who used <br> a condom at last sexual intercourse | Number of men who had sexual intercourse in the past 12 months |
| Age |  |  |  |  |  |
| 15-19 | 86.6 | 12.3 | 292 | (84.2) | 36 |
| 15-17 | 91.6 | 7.6 | 220 | * | 17 |
| 18-19 | 71.1 | 26.5 | 72 | * | 19 |
| 20-24 | 33.4 | 56.3 | 187 | 88.7 | 105 |
| 20-22 | 40.5 | 48.1 | 130 | 87.3 | 63 |
| 23-24 | 17.0 | 75.3 | 57 | (90.9) | 43 |
| Knows a condom source ${ }^{1}$ |  |  |  |  |  |
| Yes | 89.1 | 5.5 | 289 | * | 16 |
| No | 30.5 | 66.0 | 190 | 98.7 | 125 |
| Residence |  |  |  |  |  |
| Urban | 61.0 | 35.6 | 291 | 89.1 | 104 |
| Rural | 73.4 | 19.9 | 188 | (83.3) | 38 |
| Education |  |  |  |  |  |
| Basic general | 73.3 | 23.6 | 102 | * | 24 |
| Secondary general | 66.6 | 27.4 | 248 | 85.0 | 68 |
| Specialized secondary | (60.2) | (34.6) | 34 | * | 12 |
| Higher | 57.7 | 39.5 | 94 | (88.9) | 37 |
| Wealth quintile |  |  |  |  |  |
| Lowest | 76.9 | 15.1 | 80 | * | 12 |
| Second | 78.7 | 18.8 | 84 | * | 16 |
| Middle | 64.5 | 31.5 | 126 | (84.1) | 40 |
| Fourth | 62.1 | 32.5 | 116 | (92.8) | 38 |
| Highest | 46.7 | 49.6 | 72 | (89.7) | 36 |
| Total | 65.8 | 29.5 | 479 | 87.6 | 141 |
| 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. <br> ${ }^{1}$ Friends, family members, and home are not considered sources for condoms. |  |  |  |  |  |

From an epidemiological point of view, Armenia has features of both developed and developing countries. The average life expectancy of a person born in Armenia in 2003 is 68 years- 72 years for women and 65 for men (WHO, 2006a). The major causes of death are similar to those of industrialized countries: cardiovascular disease, cancer, and accidents. At the same time, there is a rising incidence of certain infectious diseases, such as tuberculosis (Ministry of Statistics and United Nations Development Program, 1998). This chapter presents information on various aspects of adult health in Armenia, including health care access and barriers to care, visits to an eye doctor, smoking, knowledge of tuberculosis, and prevalence of hypertension.

### 14.1 AcCess to and Utilization of Health Care Services

## Health Facility Visits and Consultations

Utilization of health care services in Armenia declined during the 1990s (Government of Armenia et al., 1999). One goal of the 2005 ADHS was to provide insight into health care utilization patterns in Armenia. The ADHS asked questions to examine utilization of health care and to identify barriers to health care access. All respondents age 15-49 were asked about their experiences utilizing health care in the three months preceding the survey. First, respondents were asked whether in the three months preceding the survey they had an illness, an accident, or a chronic health problem. Respondents who said that they did have such a problem were asked whether they visited a health facility or consulted a medical professional. Respondents who had not visited a facility or consulted with a health professional were asked why they did not seek medical attention.

Table 14.1 shows that, according to the reports of the respondents, more than one in ten women, men, and children under age five had a health problem in the three months preceding the survey. However, not everyone who reported a health problem had contact with a health care provider. Eight percent of women, 6 percent of men, and 10 percent of children visited a health facility or had a consultation with a health professional in the three months preceding the survey. Less than one percent of respondents reported having had an operation in the three months prior to the survey (data not shown). There is little variation by urban-rural residence.

Table 14.1 also shows hospitalization rates for the one year preceding survey. Two percent of women (excluding births), 3 percent of men, and 6 percent of children were hospitalized in the year preceding the survey. Because of the low percentages of women, men, and children who were hospitalized, it is difficult to analyze by background characteristics.

## Table 14.1 Utilization of the health system

Percentage of women and men age 15-49 and children under five who had an illness, accident, or chronic health problem in the three months preceding the survey, percentage who visited a health facility or consulted a health professional in the three months preceding the survey, and percentage of women, men, and children who were hospitalized during the year preceding the survey, by background characteristic, Armenia 2005

| Background characteristic | Percentage with problem in past 3 months | Percentage who got consultation in past 3 months | Percentage hospitalized in past year ${ }^{1}$ | Number |
| :---: | :---: | :---: | :---: | :---: |
| WOMEN |  |  |  |  |
| Residence |  |  |  |  |
| Urban | 13.6 | 8.0 | 2.2 | 4,194 |
| Rural | 14.0 | 7.4 | 2.5 | 2,372 |
| Education |  |  |  |  |
| General basic | 14.3 | 6.2 | 2.0 | 529 |
| Secondary general | 14.1 | 8.1 | 2.2 | 2,440 |
| Specialized secondary | 15.4 | 8.8 | 2.6 | 1,997 |
| Higher | 11.1 | 6.4 | 2.3 | 1,600 |
| Total | 13.8 | 7.8 | 2.3 | 6,566 |
| MEN |  |  |  |  |
| Residence |  |  |  |  |
| Urban | 10.3 | 5.6 | 2.4 | 913 |
| Rural | 12.7 | 6.7 | 2.8 | 534 |
| Education |  |  |  |  |
| General basic | 16.8 | 7.3 | 1.7 | 205 |
| Secondary general | 8.3 | 3.9 | 2.0 | 586 |
| Specialized secondary | 18.6 | 11.3 | 4.3 | 310 |
| Higher | 6.1 | 4.0 | 2.5 | 346 |
| Total | 11.2 | 6.0 | 2.6 | 1,447 |
| CHILDREN |  |  |  |  |
| Residence |  |  |  |  |
| Urban | 12.7 | 9.8 | 6.9 | 908 |
| Rural | 14.6 | 10.0 | 5.1 | 562 |
| Mother's education |  |  |  |  |
| General basic | 9.0 | 4.6 | 2.2 | 135 |
| Secondary general | 12.6 | 8.3 | 7.4 | 563 |
| Specialized secondary | 14.8 | 12.0 | 5.9 | 436 |
| Higher | 14.7 | 11.8 | 6.2 | 335 |
| Total | 13.4 | 9.9 | 6.2 | 1,470 |
| ${ }^{1}$ Excludes hospitalization for births |  |  |  |  |

## Eye Health

As a population ages, eye health becomes increasingly important for maintenance of a good quality of life, as well as for productive work. Early detection of glaucoma, cataracts, retinal disorders, and eye complications of diabetes are vital for preserving good vision. All women and men interviewed in the ADHS were asked if they ever visited an eye doctor and, if yes, what was the reason for the consultation and what diagnosis, if any, was given.

Eight out of 10 respondents had never consulted an eye doctor (Figure 14.1). Less than one in ten respondents had consulted a doctor during the last two years. Among them, about half of respondents said that the reason for the visit was either a mandatory eye examination or a check up. In addition, about 30 percent of women and about 20 percent of men said that they needed new glasses or had blurry vision. This was confirmed by the doctor's diagnosis: over 40 percent of women and about 20 percent of men were prescribed glasses for reading or for distance (Table 14.2).

## Figure 14.1 Consultation with Eye Doctor



ADHS 2005
Among those who had a visit to an eye doctor during the last five years, only 1 percent or less were diagnosed with a cataract, glaucoma, or a diabetic eye disease; the one exception is among men who visited an eye doctor, 5 percent of whom were diagnosed with cataracts. Half of men and about 40 percent of women were given no diagnosis (Table 14.2). As expected, among those who visited an eye doctor in the five years before the survey, the need for glasses is highest among those over 45 years old; however, almost one-third of women age 15-19 who visited an eye doctor needed glasses for distance or for reading.

## Table 14.2 Results of consultation with an eye doctor

Among women and men age 15-49 who had a consultation with an eye doctor during the five years preceding the survey, percentage who received specific diagnoses from an eye doctor, by background characteristics, Armenia 2005

| Background characteristic | No diagnosis | Amblyopia | Cataract | Diabetic eye disease | Corneal eye disease | Glaucoma | Retinal disorder | Need glasses for distance | Need glasses for reading | Other | Number of women/ men |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 54.7 | 0.0 | 1.2 | 0.0 | 1.1 | 0.0 | 0.0 | 22.9 | 8.1 | 15.4 | 193 |
| 20-24 | 35.2 | 0.0 | 1.2 | 1.5 | 5.5 | 0.0 | 0.0 | 34.5 | 4.9 | 16.9 | 162 |
| 25-29 | 44.5 | 0.0 | 0.4 | 0.8 | 1.4 | 0.0 | 0.0 | 34.0 | 5.2 | 16.5 | 91 |
| 30-34 | 39.8 | 2.6 | 4.5 | 0.0 | 0.7 | 0.0 | 2.3 | 37.7 | 3.8 | 12.2 | 90 |
| 35-39 | 43.3 | 0.0 | 0.2 | 0.0 | 3.7 | 1.8 | 1.1 | 23.9 | 5.1 | 21.9 | 84 |
| 40-44 | 39.5 | 0.0 | 1.1 | 0.4 | 3.5 | 1.7 | 0.2 | 32.2 | 6.5 | 16.9 | 135 |
| 45-49 | 22.6 | 0.2 | 1.1 | 2.6 | 0.2 | 4.2 | 0.0 | 37.6 | 33.3 | 5.9 | 174 |
| Education |  |  |  |  |  |  |  |  |  |  |  |
| Basic general | 47.8 | 0.0 | 0.0 | 1.6 | 3.4 | 0.0 | 0.4 | 23.2 | 3.0 | 20.2 | 76 |
| Secondary general | 44.7 | 0.9 | 1.2 | 1.5 | 1.1 | 1.7 | 1.2 | 29.1 | 9.8 | 13.6 | 249 |
| Specialized secondary | 39.2 | 0.0 | 2.0 | 1.3 | 4.5 | 2.8 | 0.0 | 29.0 | 11.8 | 12.7 | 244 |
| Higher | 34.6 | 0.1 | 1.2 | 0.0 | 1.3 | 0.0 | 0.0 | 36.9 | 13.1 | 15.1 | 360 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 35.2 | 0.4 | 1.3 | 0.8 | 2.4 | 1.0 | 0.3 | 35.2 | 11.0 | 15.4 | 736 |
| Rural | 56.2 | 0.0 | 1.3 | 1.3 | 1.8 | 1.9 | 0.5 | 18.1 | 11.2 | 11.1 | 192 |
| Region |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 29.9 | 0.5 | 1.2 | 0.4 | 2.8 | 1.5 | 0.4 | 38.1 | 11.9 | 17.1 | 484 |
| Aragatsotn | 70.1 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 1.2 | 11.3 | 7.9 | 7.6 | 24 |
| Ararat | (43.8) | (0.0) | (0.0) | (0.0) | (10.0) | (0.0) | (0.0) | (23.9) | (22.0) | (1.2) | 32 |
| Armavir | 47.5 | 0.0 | 0.0 | 1.6 | 0.0 | 0.0 | 0.0 | 21.8 | 6.3 | 24.9 | 63 |
| Gegharkunik | (41.8) | (1.7) | (1.4) | (0.9) | (11.1) | (7.1) | (0.0) | (25.5) | ((1.8) | (8.8) | 21 |
| Lori | 46.6 | 0.0 | 0.0 | 4.1 | 1.2 | 3.9 | 0.0 | 31.6 | 10.9 | 0.0 | 57 |
| Kotayk | 55.3 | 0.0 | 2.9 | 2.4 | 1.2 | 0.0 | 0.0 | 23.1 | 9.7 | 10.2 | 109 |
| Shirak | 61.7 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 21.2 | 10.9 | 8.7 | 62 |
| Syunik | 42.1 | 0.0 | 2.8 | 0.0 | 0.0 | 0.0 | 0.0 | 36.9 | 13.2 | 6.2 | 39 |
| Vayots Dzor | (41.3) | (0.0) | (9.2) | (0.0) | (0.0) | (0.0) | (0.0) | (46.1) | (3.3) | (0.0) | 6 |
| Tavush | 29.1 | 0.0 | 1.9 | 0.0 | 0.0 | 0.0 | 3.1 | 19.2 | 8.9 | 42.0 | 31 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 44.8 | 0.0 | 1.7 | 1.5 | 4.3 | 3.3 | 0.0 | 24.1 | 7.6 | 14.7 | 79 |
| Second | 53.6 | 0.0 | 1.8 | 2.1 | 0.5 | 5.4 | 0.2 | 18.5 | 11.2 | 12.4 | 118 |
| Middle | 47.0 | 0.0 | 1.9 | 0.6 | 1.0 | 0.0 | 0.5 | 35.6 | 6.3 | 9.3 | 185 |
| Fourth | 31.7 | 1.0 | 0.5 | 0.3 | 3.4 | 0.9 | 0.9 | 31.3 | 11.9 | 20.3 | 235 |
| Highest | 34.5 | 0.1 | 1.4 | 0.8 | 2.4 | 0.0 | 0.0 | 36.3 | 14.1 | 13.9 | 312 |
| Total women | 39.6 | 0.3 | 1.3 | 0.9 | 2.3 | 1.2 | 0.4 | 31.6 | 11.0 | 14.5 | 929 |
| Total men | 54.8 | 0.0 | 5.0 | 0.7 | 3.1 | 0.8 | 0.0 | 15.6 | 6.9 | 12.9 | 217 |

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

## Perceived Barriers to Health Care

The 2005 ADHS included a series of questions designed to obtain information on the problems women perceive that they face in obtaining health care for themselves. This information is particularly important in understanding and addressing the barriers women may face in seeking care. To obtain this information, women age 15-49 were asked whether each of the following factors would be a big problem or not a big problem for them in obtaining health services: getting permission to go, getting money for treatment, the distance to the health facility, the cost of transportation, having to take transportation, not wanting to go alone, concern that there may not be a female provider, concern that there may not be any health provider, concern that the provider will be unfriendly, concern that no drugs will be available, and concern that the service will be poor. Table 14.3 shows the percentage of women who consider each of the individual factors to be a big problem and the percentage reporting at least one of the specified items to be a big problem, according to background characteristics.

Most women (89 percent) reported at least one factor or circumstance as a big problem. The major perceived barrier to women's access to health services is financial. Two-thirds of respondents ( 66 percent) believe that getting money for treatment is a big problem. Additionally, one-quarter ( 26 percent) cite the cost of transportation.

Women also report barriers to obtaining health care that are associated with quality of care: more than half ( 58 percent) report that poor service is a big problem and 44 percent cite concern that the provider may be unfriendly. Over one-third mentioned that availability of either a provider or drugs is a big problem ( 36 and 35 percent, respectively).

Personal reasons can also affect women's access to health care. Four in ten women cite not wanting to go alone to the health facility as a big problem, while 24 percent are concerned that there may not be a female provider and 19 percent say that getting permission to seek treatment is a big problem.

The proportion of women who say that at least one of the specified factors is a big problem is generally high across all background characteristics. Regional variation is the most significant, ranging from a low of 77 percent of women in Lori to a high of 100 percent in Syunik.

## Table 14.3 Problems in accessing health care

Percentage of women age 15-49 who reported they have big problems in accessing health care for themselves when they are sick, by type of problem and background characteristics, Armenia 2005

| Background Characteristic | Problems in accessing health care |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Getting permission to go for treatment | Getting money for treatment | Distance <br> to health facility | Cost of transportation | Having to take transportation | Not wanting to go alone | Concern there may not be a female provider | Concern no provider available | Concern provider unfriendly | Concern no drugs available | Concern service poor | Any of the specified problems | Number of women |
| Age |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 34.9 | 59.6 | 21.7 | 26.5 | 18.2 | 58.4 | 43.4 | 37.4 | 43.7 | 35.0 | 57.5 | 87.8 | 1,123 |
| 20-34 | 20.7 | 62.6 | 18.3 | 23.0 | 15.8 | 42.1 | 24.2 | 36.4 | 44.5 | 35.4 | 60.5 | 89.4 | 2,810 |
| 35-49 | 11.1 | 71.1 | 21.9 | 28.5 | 18.9 | 28.7 | 15.5 | 35.9 | 42.9 | 34.0 | 56.1 | 89.9 | 2,633 |
| Number of living children |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0 | 25.7 | 60.0 | 19.2 | 23.6 | 16.3 | 49.9 | 34.3 | 35.3 | 42.6 | 33.5 | 57.2 | 87.5 | 2,352 |
| 1-2 | 15.8 | 66.2 | 18.0 | 24.5 | 15.5 | 32.7 | 17.1 | 35.2 | 42.7 | 34.2 | 58.4 | 88.7 | 2,812 |
| $3+$ | 15.3 | 73.5 | 26.9 | 32.1 | 23.3 | 35.8 | 20.5 | 40.5 | 47.7 | 38.1 | 59.7 | 93.5 | 1,402 |
| Marital status |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Never married | 26.5 | 60.2 | 19.4 | 23.6 | 16.7 | 50.8 | 35.3 | 35.0 | 42.3 | 33.9 | 57.4 | 88.0 | 2,043 |
| Currently married | 17.3 | 66.6 | 20.7 | 25.7 | 17.1 | 35.8 | 19.5 | 37.3 | 44.9 | 35.6 | 59.6 | 89.9 | 4,044 |
| Formerly married | 5.0 | 79.1 | 20.8 | 36.0 | 23.7 | 22.7 | 13.5 | 34.7 | 40.0 | 31.5 | 49.9 | 90.0 | 479 |
| Employment |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Not employed | 22.7 | 67.0 | 20.5 | 25.8 | 17.6 | 42.9 | 26.3 | 36.8 | 43.9 | 35.7 | 57.5 | 89.8 | 4,645 |
| Working for cash | 9.5 | 59.1 | 16.3 | 21.2 | 13.9 | 27.1 | 15.7 | 34.0 | 42.9 | 31.8 | 59.0 | 87.1 | 1,615 |
| Not working for cash | 19.0 | 77.2 | 39.3 | 50.8 | 34.0 | 52.9 | 31.7 | 43.5 | 45.2 | 37.2 | 64.9 | 93.8 | 301 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Basic general | 28.6 | 74.8 | 28.2 | 39.1 | 27.7 | 54.2 | 35.0 | 38.7 | 47.6 | 40.7 | 62.5 | 93.3 | 529 |
| Secondary general | 24.0 | 72.8 | 26.2 | 31.6 | 21.5 | 43.3 | 27.1 | 36.9 | 43.2 | 36.0 | 57.0 | 92.3 | 2,440 |
| Specialized secondary | y 15.3 | 66.8 | 18.8 | 24.8 | 16.0 | 35.7 | 21.8 | 38.4 | 45.1 | 35.4 | 59.3 | 89.0 | 1,997 |
| Higher | 13.9 | 49.8 | 10.7 | 13.9 | 9.7 | 33.6 | 18.4 | 32.4 | 41.6 | 30.3 | 57.4 | 84.0 | 1,600 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 16.7 | 63.5 | 12.6 | 19.8 | 11.2 | 35.5 | 20.6 | 33.7 | 40.7 | 32.3 | 56.1 | 87.9 | 4,194 |
| Rural | 23.9 | 69.2 | 34.1 | 36.5 | 28.4 | 46.5 | 29.9 | 41.1 | 49.1 | 39.3 | 61.9 | 91.9 | 2,372 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 18.8 | 62.4 | 9.6 | 19.6 | 9.7 | 36.0 | 18.1 | 31.8 | 37.4 | 30.4 | 55.0 | 88.5 | 2,468 |
| Aragatsotn | 37.1 | 57.9 | 42.1 | 44.2 | 42.9 | 49.4 | 40.0 | 52.4 | 50.2 | 41.7 | 57.1 | 94.2 | 292 |
| Ararat | 36.6 | 73.1 | 39.7 | 57.5 | 37.6 | 73.8 | 30.7 | 57.3 | 40.9 | 40.4 | 63.6 | 99.3 | 462 |
| Armavir | 10.3 | 72.4 | 32.1 | 34.6 | 26.9 | 39.4 | 40.5 | 48.6 | 77.8 | 54.9 | 92.1 | 96.4 | 567 |
| Gegharkunik | 32.0 | 58.8 | 29.0 | 26.5 | 22.4 | 43.4 | 30.0 | 42.9 | 56.5 | 46.0 | 78.8 | 90.7 | 443 |
| Lori | 5.6 | 60.1 | 10.9 | 21.3 | 9.6 | 26.5 | 14.9 | 14.8 | 21.1 | 17.2 | 28.0 | 77.1 | 537 |
| Kotayk | 22.0 | 65.0 | 9.2 | 10.4 | 9.4 | 38.7 | 22.2 | 14.8 | 30.3 | 26.6 | 43.5 | 84.8 | 563 |
| Shirak | 14.0 | 72.8 | 17.9 | 9.3 | 11.2 | 30.3 | 18.0 | 42.4 | 49.6 | 36.6 | 51.8 | 88.9 | 563 |
| Syunik | 19.9 | 78.8 | 51.2 | 52.4 | 34.9 | 47.6 | 51.4 | 90.7 | 89.8 | 60.6 | 95.7 | 99.8 | 281 |
| Vayots Dzor | 12.5 | 84.3 | 72.1 | 79.7 | 55.7 | 37.3 | 26.7 | 52.5 | 53.7 | 62.4 | 64.0 | 95.1 | 107 |
| Tavush | 7.2 | 61.7 | 17.6 | 16.0 | 11.0 | 35.7 | 9.9 | 3.5 | 17.6 | 9.7 | 38.4 | 79.6 | 285 |
| Total | 19.3 | 65.5 | 20.3 | 25.8 | 17.4 | 39.5 | 24.0 | 36.4 | 43.7 | 34.8 | 58.2 | 89.3 | 6,566 |

Note: Currently married includes respondents in consensual union (living together). Formerly married includes divorced/separated/widowed. Total includes 4 women with missing information on employment, who are not shown separately.

## Cost of Consultation

As was mentioned above, the major perceived barrier to women's access to health services is financial. The 2005 ADHS included a series of questions designed to obtain information on the actual cost of the respondent's last visit to a health care provider.

All respondents who visited a health facility or consulted a health professional during the three months preceding the survey were asked a series of questions including how much was officially paid for their last visit to a heath care provider, how much they paid in additional expenses, how much was paid for round-trip transportation, and how much was paid for the medicine they obtained as a result of the visit.

A large majority of respondents had to pay for some of the components of the visit, with the median total cost ranging from 1,497 drams (US\$3) that was paid for children's visits, 4,997 drams (US\$10) paid for women's visits, and 6,598 drams (US\$15) paid for men's visits. About one-third of respondents paid for their own or their children's medicine (Table 14.4).

| Table 14.4 Cost of consultation |  |  |  |
| :---: | :---: | :---: | :---: |
| Among women and men age 15-49 and children under five who visited a health facility or consulted a health professional in the three months preceding the survey, percentage who did not pay and median cost for those who paid, Armenia 2005 |  |  |  |
| Component costs | Women | Men | Children |
| Official cost for visit |  |  |  |
| No payment | 31.8 | 50.2 | 65.4 |
| Cost not known/missing | 10.6 | 8.2 | 6.9 |
| Median cost in drams | 4,994 | 4,999 | 998 |
| Additional cost for visit |  |  |  |
| No payment | 70.5 | 58.5 | 77.6 |
| Cost not known/missing | 12.7 | 11.1 | 10.4 |
| Median cost in drams | 4,995 | 5,993 | 1,994 |
| Cost for transport |  |  |  |
| No payment | 46.8 | 64.4 | 69.4 |
| Cost not known/missing | 1.2 | 0.0 | 0.0 |
| Median cost in drams | 250 | 399 | 200 |
| Cost for medicine |  |  |  |
| No medicine | 70.5 | 67.5 | 48.2 |
| No payment | 2.4 | 3.6 | 15.5 |
| Cost not known/missing | 2.8 | 1.4 | 3.7 |
| Median cost in drams | 250 | 500 | 200 |
| Total cost for visit |  |  |  |
| No payment | 13.5 | 20.3 | 24.9 |
| Cost not known/missing | 17.5 | 13.5 | 13.5 |
| Median cost for all components in drams | 4,997 | 6,598 | 1,497 |
| Number of respondents with any consultation | 1,104 | 127 | 485 |

## Knowledge of and Attitude Toward Family Medicine Program

In 1997, the MOH introduced the family medicine program. The purpose of the program is to strengthen primary health care in Armenia by registering all family members with a doctor who can provide ongoing care for people of all ages and be the point of entry into the health care system. Since 1999, implementation of this program has extended coverage to the marz and community levels.

Table 14.5 shows the percent distribution of women and men who have heard of the family medicine program (or "family doctors"), by background characteristics. Although a majority of respondents have heard of the program, women are more likely than men to report knowledge ( 73 and 53 percent, respectively). The youngest women and men are the least likely to have heard of the program. Urban dwellers are more likely to have heard of family medicine than their rural counterparts; the differential is especially large among women. Regional variation is substantial. There is a positive relationship between educational attainment and exposure to the program. For example, women with higher education are twice as likely to have heard of family medicine as women with general basic education (89 and 45 percent, respectively).

| Percentage of women and men who have heard of "family medicine" or "family doctors," by background characteristics, Armenia 2005 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Background characteristic | Women |  | Men |  |
|  | Percentage | Number of women | Percentage | Number of men |
| Age |  |  |  |  |
| 15-19 | 57.7 | 1,123 | 28.8 | 292 |
| 20-24 | 74.0 | 1,131 | 49.3 | 237 |
| 25-29 | 78.0 | 929 | 58.8 | 202 |
| 30-34 | 77.7 | 749 | 58.8 | 156 |
| 35-39 | 77.5 | 711 | 59.9 | 150 |
| 40-44 | 73.0 | 965 | 63.3 | 199 |
| 45-49 | 76.7 | 958 | 63.7 | 211 |
| Education |  |  |  |  |
| General basic | 44.7 | 529 | 31.6 | 205 |
| Secondary general | 63.8 | 2,440 | 41.1 | 586 |
| Specialized secondary | 78.8 | 1,997 | 61.4 | 310 |
| Higher | 88.5 | 1,600 | 76.8 | 346 |
| Residence |  |  |  |  |
| Urban | 79.2 | 4,194 | 54.5 | 913 |
| Rural | 61.6 | 2,372 | 49.4 | 534 |
| Region |  |  |  |  |
| Yerevan | 82.8 | 2,468 | 57.4 | 547 |
| Aragatsotn | 71.2 | 292 | 71.9 | 71 |
| Ararat | 54.1 | 462 | 39.4 | 110 |
| Armavir | 66.0 | 567 | 69.4 | 139 |
| Gegharkunik | 59.1 | 443 | 33.8 | 81 |
| Lori | 85.2 | 537 | 58.4 | 87 |
| Kotayk | 74.1 | 563 | 56.7 | 151 |
| Shirak | 56.3 | 563 | 28.6 | 98 |
| Syunik | 69.4 | 281 | 34.7 | 67 |
| Vayots Dzor | 56.6 | 107 | 14.1 | 31 |
| Tavush | 70.1 | 285 | 57.4 | 64 |
| Total | 72.8 | 6,566 | 52.6 | 1,447 |

Those respondents who had heard of family medicine were asked what the term meant to them (Figure 14.2). The majority of respondents-more than seven in ten-said that the term meant "only one doctor for the family." Other common answers were "preventative health care" and "better family health."

Figure 14.2 Meaning of "Family Medicine"


Among those respondents who had heard of family medicine, more than half think that it is appropriate for Armenia (Figure 14.3). However, a sizable proportion of respondents state that they either do not approve or that they are unsure of their attitude toward the program. Less than six percent of respondents who heard about the family medicine program reported having been registered with a family medicine provider at any point during the last 36 months prior to the survey (data not shown).

Figure 14.3 Approval of Family Medicine Program


Table 14.6 shows the reasons for not approving of the family medicine program among respondents who said that the family medicine program is not appropriate for Armenia. The most common reason is the belief that family medicine is "expensive." Other reasons were also given; for the most part, these concerns indicate an uncertainty that a single family doctor has enough professional knowledge to treat the entire family.

Table 14.6 Reasons for not approving of family medicine
Among women and men who have heard of family medicine and who say they do not approve of family medicine, percentage citing specific reasons for disapproval, for all men and for women by background characteristics, Armenia 2005

| Background characteristic | Doctors not professional | Doctors less knowledgeable | Doctors have no specific knowledge | Do not Trust doctors | Prefer old system | Expensive | Other | Don't know | Number of respondents |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  |  |  |  |  |  |
| 15-19 | 7.0 | 9.2 | 12.6 | 15.7 | 7.0 | 53.7 | 1.6 | 5.1 | 131 |
| 20-24 | 3.9 | 11.5 | 12.0 | 15.5 | 12.4 | 53.0 | 1.9 | 4.7 | 188 |
| 25-29 | 5.2 | 12.7 | 11.6 | 18.2 | 14.4 | 51.5 | 0.5 | 3.3 | 151 |
| 30-34 | 10.4 | 11.5 | 13.1 | 16.5 | 19.3 | 50.9 | 2.2 | 6.0 | 120 |
| 35-39 | 6.5 | 9.0 | 14.2 | 14.9 | 16.6 | 63.2 | 0.0 | 0.0 | 127 |
| 40-44 | 5.1 | 11.2 | 10.5 | 13.1 | 11.4 | 62.8 | 1.2 | 1.7 | 171 |
| 45-49 | 7.5 | 14.3 | 12.4 | 9.4 | 14.2 | 60.0 | 1.9 | 0.0 | 191 |
| Education |  |  |  |  |  |  |  |  |  |
| General basic | (5.4) | (8.6) | (1.6) | (23.6) | (3.0) | (66.4) | (0.0) | (0.0) | 35 |
| Secondary general | 4.0 | 11.9 | 5.1 | 14.5 | 13.4 | 60.5 | 1.4 | 4.2 | 322 |
| Specialized secondary | 7.1 | 9.6 | 12.2 | 12.9 | 9.5 | 64.2 | 1.0 | 1.7 | 352 |
| Higher | 7.7 | 13.4 | 19.5 | 15.1 | 18.3 | 45.2 | 1.8 | 3.0 | 371 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 6.9 | 10.2 | 14.1 | 14.7 | 15.1 | 55.9 | 1.6 | 2.5 | 807 |
| Rural | 4.7 | 15.5 | 6.6 | 14.0 | 8.7 | 58.7 | 0.8 | 3.9 | 273 |
| All women | 6.3 | 11.6 | 12.2 | 14.5 | 13.5 | 56.6 | 1.4 | 2.8 | 1,080 |
| All men | 8.3 | 22.4 | 17.8 | 16.3 | 23.1 | 36.1 | 3.8 | 3.2 | 131 |

### 14.2 Use of Smoking Tobacco

Smoking tobacco has a negative impact on the smoker's health status. Increased levels of lung cancer, emphysema, and other respiratory illnesses are caused by tobacco use. Lung cancer is the most prevalent type of cancer among Armenian males. Furthermore, smoking is believed to contribute to the risk of cardiovascular diseases (Government of Armenia et al., 1999). It may also have an impact on individuals who are exposed to secondhand smoke. For example, inhaling secondhand smoke may adversely affect children's growth and cause childhood illness, especially respiratory diseases.

Since the mid-1990s, a number of tobacco control measures have been put into effect in Armenia. Advertising of tobacco products is banned in the mass media; however, there is no control over Russian or any other foreign television programs widely seen in Armenia. Recently, Armenia has introduced legislation regarding health warnings and tar and nicotine content labeling as well as prohibiting the sale of cigarettes to minors under 18 years old. Since 2005, smoking is restricted in main public areas, in government and health facilities, in restaurants and bars, in indoor workplaces and offices, and in methods of public transportation, such as buses, taxis, and trains.

Overall, very few women interviewed in the ADHS reported that they currently smoke (2 percent). It is possible that some female respondents were reluctant to report that they smoke because of the traditional Armenian prohibition against women smoking. Urban dwellers, women residing in Yerevan, women age 35-49, more educated women, and women in the highest wealth quintile are the most likely to smoke (3-4 percent) (data not shown).

Although smoking among women does not appear to be a pressing public health issue at this time, efforts should be made to discourage women from smoking and to encourage smoking women to quit. It is highly desirable for health reasons that cigarette smoking does not become popular among the women of Armenia. The possibility of an increasing use of cigarettes by women should be closely monitored so that appropriately targeted health education programs can be initiated in a timely manner, should that become necessary.

Smoking is considerably more common among men (Table 14.7). Three-fifths of men report that they are smokers, a slight decline from 67 percent of men 15-49 in 2000. Among current smokers, over 90 percent reported that they smoked 10 or more cigarettes during the last 24 hours. As with women, the likelihood that a man is a smoker increases with age. There is no significant difference by residence.

| Percentage of men who smoke cigarettes or tobacco or use other tobacco products and percent distribution of cigarette smokers by number of cigarettes smoked in preceding 24 hours, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Background characteristic | Uses tobacco |  |  | Does not use tobacco | Number of men | Number of cigarettes |  |  |  |  |  | Number of cigarette smokers |
|  | Cigarettes | Pipe | Other tobacco |  |  | 1-2 | 3-5 | 6-9 | $10+$ | Don't know missing | Total |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 15.6 | 0.7 | 0.1 | 84.4 | 292 | (6.9) | (5.7) | (9.4) | (69.4) | (8.6) | (100.0) | 46 |
| 20-34 | 69.9 | 0.1 | 2.6 | 30.1 | 594 | 0.2 | 4.1 | 3.2 | 91.8 | 0.8 | 100.0 | 415 |
| 35-49 | 73.9 | 1.9 | 4.0 | 26.1 | 561 | 0.1 | 2.3 | 1.6 | 94.0 | 2.1 | 100.0 | 414 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 60.3 | 1.5 | 2.7 | 39.6 | 913 | 0.5 | 3.5 | 2.4 | 92.3 | 1.4 | 100.0 | 551 |
| Rural | 60.7 | 0.0 | 2.6 | 39.3 | 534 | 0.5 | 3.0 | 3.3 | 90.7 | 2.5 | 100.0 | 324 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 61.5 | 1.8 | 3.6 | 38.5 | 547 | 0.6 | 4.0 | 1.0 | 93.3 | 1.2 | 100.0 | 336 |
| Aragatsotn | 64.9 | 0.0 | 0.3 | 34.9 | 71 | 3.4 | 0.7 | 0.7 | 84.7 | 10.5 | 100.0 | 46 |
| Ararat | 65.4 | 0.3 | 2.5 | 34.6 | 110 | 0.0 | 3.3 | 3.4 | 93.0 | 0.3 | 100.0 | 72 |
| Armavir | 62.0 | 0.0 | 0.0 | 38.0 | 139 | 0.0 | 4.5 | 4.4 | 91.1 | 0.0 | 100.0 | 86 |
| Gegharkunik | 68.3 | 0.3 | 5.3 | 31.4 | 81 | 0.0 | 2.4 | 4.8 | 92.7 | 0.0 | 100.0 | 55 |
| Lori | 46.6 | 2.0 | 2.0 | 53.4 | 87 | (0.0) | (0.0) | (6.9) | (93.1) | (0.0) | (100.0) | 41 |
| Kotayk | 57.3 | 0.6 | 0.0 | 42.7 | 151 | 0.0 | 6.2 | 7.2 | 80.6 | 6.0 | 100.0 | 87 |
| Shirak | 55.2 | 0.0 | 0.0 | 44.8 | 98 | 0.0 | 0.0 | 0.0 | 98.2 | 1.8 | 100.0 | 54 |
| Syunik | 63.8 | 0.0 | 0.0 | 36.2 | 67 | 1.0 | 3.1 | 1.0 | 95.0 | 0.0 | 100.0 | 43 |
| Vayots Dzor | 52.3 | 0.0 | 32.4 | 47.7 | 31 | 2.9 | 0.0 | 9.0 | 85.4 | 2.7 | 100.0 | 16 |
| Tavush | 60.5 | 0.0 | 0.0 | 39.5 | 64 | 0.0 | 2.2 | 1.2 | 96.6 | 0.0 | 100.0 | 39 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |
| Basic general | 56.6 | 0.9 | 2.6 | 43.4 | 205 | 0.0 | 3.7 | 2.2 | 91.6 | 2.5 | 100.0 | 116 |
| Secondary general | 58.5 | 1.6 | 2.9 | 41.4 | 586 | 0.8 | 4.7 | 3.1 | 89.0 | 2.5 | 100.0 | 343 |
| Specialized secondary | 71.4 | 0.0 | 2.8 | 28.6 | 310 | 0.0 | 1.4 | 2.6 | 94.5 | 1.5 | 100.0 | 222 |
| Higher | 56.3 | 0.7 | 2.2 | 43.6 | 346 | 0.9 | 2.8 | 2.5 | 93.4 | 0.4 | 100.0 | 195 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 64.8 | 0.0 | 3.2 | 35.2 | 261 | 0.3 | 1.3 | 4.1 | 91.8 | 2.5 | 100.0 | 169 |
| Second | 59.6 | 0.0 | 4.1 | 40.4 | 264 | 1.0 | 3.1 | 0.7 | 93.3 | 1.9 | 100.0 | 157 |
| Middle | 59.2 | 0.1 | 0.7 | 40.8 | 326 | 1.2 | 3.4 | 2.1 | 90.5 | 2.8 | 100.0 | 193 |
| Fourth | 54.2 | 0.7 | 1.7 | 45.7 | 316 | 0.0 | 3.8 | 4.5 | 90.5 | 1.2 | 100.0 | 171 |
| Highest | 65.9 | 3.9 | 4.3 | 34.1 | 280 | 0.0 | 4.7 | 2.2 | 92.6 | 0.4 | 100.0 | 184 |
| Total | 60.5 | 0.9 | 2.7 | 39.5 | 1,447 | 0.5 | 3.3 | 2.7 | 91.7 | 1.8 | 100.0 | 875 |

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

Comparison of international statistics on prevalence of smoking is difficult because of differences in definitions and age groups in the published results. Nevertheless, the current cigarette smoking rate for men in the 2005 ADHS ( 61 percent) is high relative to rates from other studies in Eastern and Western Europe, with the exception of the Russian Federation, Ukraine, and Byelorussia where the rates are similar to those in Armenia (WHO, 2005b).

Among all smoking-related diseases, lung cancer is considered to be the best indicator of the long-term exposure to tobacco smoke. According to the World Health Organization (WHO), Armenia is in the "intermediate and increasing rate" country category based on the standard death rate for cancer of the trachea, bronchus, and lung that is attributable to tobacco use ( 53 per 100,000 population of men and women age $0-64$ years in 2003). For males alone, the standard death rate estimate for 2003 is 65 per 100,000 population (WHO, 2005b). Because smoking is an acquired behavior, which is chosen by an individual, all morbidity and mortality due to smoking are preventable. The life expectancy of individuals who quit smoking before age 35 does not differ significantly from that of lifelong nonsmokers (Doll et al., 1994). Health education programs that promote the benefits of not starting smoking as well as those of stopping should be targeted toward men.

### 14.3 TUbERCULOSIS

Tuberculosis (TB) is caused by bacteria called Mycobacterium tuberculosis. The disease usually affects the lungs, although other organs are involved in up to one-third of cases. If properly treated, TB caused by drug-susceptible strains is curable in virtually all cases. If untreated, more than half the cases may be fatal within five years. Transmission is usually airborne through the spread of droplets produced when patients with infectious pulmonary tuberculosis cough.

TB is a major global health problem and is currently responsible for the deaths of approximately two million people each year. Of great public health concern in countries of the former Soviet Union is the increasing prevalence of TB caused by strains of bacteria that are resistant to all major anti-TB drugs, in particular isoniazid and rifampicin. Contributing factors to multidrug-resistant TB (MDR-TB) include patients failing to take their drugs regularly and for the required length of time, doctors and health workers prescribing the wrong treatment regimens, and unreliable drug supplies. While MDR-TB is treatable, it requires extensive chemotherapy, which may be prohibitively expensive and is more toxic to patients.

TB is a significant public health problem in Armenia. According to information reported to the "Health for All database" for the European region of the WHO for 2004, the estimated annual TB incidence rate in Armenia is 52 per 100,000 population (WHO, 2006b). This estimate represents a substantial increase since 1998, when the estimated incidence rate was 43 per 100,000 (WHO, 2006b). According to official country statistics, the number of cases of active TB was 3,205 ( 92.8 per 100,000 population) in 1988, compared with 6,455 cases ( 200.5 per 100,000 population) in 2005. Similarly, the number of new cases of TB in 1988 was 642 ( 18.6 per 100,000 population) and in 2005 it had risen to 2006 new cases (62.3 per 100,000 population) (MOH, 2006).

The WHO recommends a TB control strategy known as DOTS (directly observed treatment, short-course) that combines: 1) case detection by sputum smear microscopy among symptomatic patients who self-report to health services; 2) standardized short-course chemotherapy with directly observed treatment; and 3) a standardized recording and reporting system that tracks the treatment of each patient and in turn provides data to the TB control program. In Armenia, coverage for the DOTS program had reached 100 percent of the population by the end of 2002.

In the ADHS, women and men were asked a series of questions about their knowledge of TB symptoms, its mode of transmission, and proper treatment of TB. This section summarizes the information at the national level and for geographic and socioeconomic subgroups of the population.

## Knowledge of TB and Mode of Transmission

In the ADHS, women and men were asked questions on whether they had heard of an illness called tuberculosis and, if so, how they perceive the illness is transmitted from person to person.

As shown in Table 14.8, the majority of adults have heard of TB (92 percent of women and 87 percent of men), but there is some variability by background characteristics. Among both women and men, awareness of TB increases with both education and age. Unlike men, female urban dwellers are more likely than rural dwellers to have heard of TB. This is consistent with regional breakdowns, which show the highest awareness rates among women living in Yerevan ( 97 percent of women). Among men the lowest awareness rates are in Syunik (40 percent) and Lori (73 percent). Practically all men (99 percent) in Aragatsotn and Armavir have heard about TB. Around half of respondents were able to correctly identify the mode of TB transmission (through the air when coughing), about the same as in 2000.

Further examination of knowledge about modes of transmission by subgroups reveals patterns similar to those for TB awareness. For both women and men, the correct knowledge that TB is transmitted through the air when coughing increases with both level of education ( 68 percent among those with higher education) and age (over 61 percent among those age 40-49 years). Residents of urban areas are more likely to give this response than residents of rural areas. Regionally, the percentage with correct knowledge about transmission of TB varies considerably, ranging from 26 to 72 percent among women and 5 to 91 percent among men. The lowest percentages for men are found in Ararat (5 percent) and Shirak (6 percent). Over 20 percent of women and 30 percent of men have either never heard about TB or do not know how it is transmitted.

## Knowledge of Symptoms of TB

In the ADHS, women and men were asked the following question: "What are the signs or symptoms that would lead you to think that a person has tuberculosis?" Tables 14.9.1 and 14.9.2 show the distributions of signs and symptoms of TB as reported by women and men, respectively. Nonspecific coughing, fever, and paleness are the most frequently named symptoms among women, ranging from 61 to 31 percent, together with coughing with sputum production (29 percent) and blood in sputum ( 26 percent), while nighttime sweating and chest pain are the least frequently named symptoms.

| Table 14.8 Knowledge of tuberculosis |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of women and men who have heard of tuberculosis (TB) and the percent distribution by knowledge of the way TB is spread, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Women |  |  |  |  |  |  | Men |  |  |  |  |  |  |
|  | Knowledge of ways TB spreads |  |  |  | Never <br> heard <br> of TB | Total | Number of women | Ever heard of TB | Knowledge of ways TB spreads |  |  | Never heard of TB | Total | Number of men |
| Background characteristic | Ever <br> heard <br> of TB | Through the air when coughing | Reported other ways of TB spread | Does <br> not know how TB spreads |  |  |  |  | Through the air when coughing | Reported other ways of TB spread | Does not know how TB spreads |  |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 81.6 | 41.4 | 18.5 | 21.7 | 18.4 | 100.0 | 1,123 | 74.1 | 32.4 | 9.9 | 31.8 | 25.9 | 100.0 | 292 |
| 20-24 | 92.4 | 52.9 | 22.4 | 17.2 | 7.6 | 100.0 | 1,131 | 89.7 | 53.7 | 17.1 | 18.9 | 10.3 | 100.0 | 237 |
| 25-29 | 91.6 | 61.3 | 18.6 | 11.7 | 8.4 | 100.0 | 929 | 87.5 | 59.9 | 14.4 | 13.2 | 12.5 | 100.0 | 202 |
| 30-34 | 95.4 | 60.5 | 23.5 | 11.3 | 4.6 | 100.0 | 749 | 91.6 | 68.0 | 9.0 | 14.6 | 8.4 | 100.0 | 156 |
| 35-39 | 95.0 | 60.0 | 24.6 | 10.4 | 5.0 | 100.0 | 711 | 87.9 | 59.6 | 19.9 | 8.4 | 12.1 | 100.0 | 150 |
| 40-44 | 94.2 | 60.8 | 22.9 | 10.4 | 5.8 | 100.0 | 965 | 91.9 | 56.2 | 20.3 | 15.4 | 8.1 | 100.0 | 199 |
| 45-49 | 94.9 | 61.2 | 23.4 | 10.4 | 5.1 | 100.0 | 958 | 93.8 | 63.5 | 18.0 | 12.3 | 6.2 | 100.0 | 211 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 94.9 | 60.2 | 21.9 | 12.7 | 5.1 | 100.0 | 4,194 | 86.0 | 56.4 | 15.7 | 13.9 | 14.0 | 100.0 | 913 |
| Rural | 86.1 | 48.9 | 21.5 | 15.7 | 13.9 | 100.0 | 2,372 | 89.2 | 50.5 | 14.5 | 24.2 | 10.8 | 100.0 | 534 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 96.9 | 63.6 | 21.3 | 12.0 | 3.1 | 100.0 | 2,468 | 84.4 | 62.9 | 12.3 | 9.2 | 15.6 | 100.0 | 547 |
| Aragatsotn | 89.2 | 56.9 | 13.8 | 18.5 | 10.8 | 100.0 | 292 | 99.0 | 91.0 | 3.7 | 4.3 | 1.0 | 100.0 | 71 |
| Ararat | 90.4 | 55.6 | 21.8 | 13.0 | 9.6 | 100.0 | 462 | 94.8 | 4.5 | 34.0 | 56.2 | 5.2 | 100.0 | 110 |
| Armavir | 88.1 | 55.5 | 15.8 | 16.7 | 11.9 | 100.0 | 567 | 98.8 | 89.9 | 3.0 | 5.9 | 1.2 | 100.0 | 139 |
| Gegharkunik | 73.1 | 26.1 | 30.9 | 16.2 | 26.9 | 100.0 | 443 | 86.4 | 47.1 | 14.0 | 25.4 | 13.6 | 100.0 | 81 |
| Lori | 90.9 | 71.7 | 10.1 | 9.0 | 9.1 | 100.0 | 537 | 73.3 | 32.2 | 11.9 | 29.2 | 26.7 | 100.0 | 87 |
| Kotayk | 94.6 | 54.3 | 19.3 | 21.0 | 5.4 | 100.0 | 563 | 98.1 | 65.7 | 10.7 | 21.7 | 1.9 | 100.0 | 151 |
| Shirak | 89.9 | 33.0 | 38.2 | 18.7 | 10.1 | 100.0 | 563 | 92.5 | 6.4 | 45.3 | 40.7 | 7.5 | 100.0 | 98 |
| Syunik | 80.9 | 69.3 | 8.2 | 3.4 | 19.1 | 100.0 | 281 | 39.9 | 30.6 | 3.5 | 5.8 | 60.1 | 100.0 | 67 |
| Vayots Dzor | 94.4 | 54.2 | 33.9 | 6.3 | 5.6 | 100.0 | 107 | 90.4 | 20.5 | 54.7 | 15.2 | 9.6 | 100.0 | 31 |
| Tavush | 96.2 | 47.3 | 34.3 | 14.6 | 3.8 | 100.0 | 285 | 93.3 | 72.7 | 12.0 | 8.6 | 6.7 | 100.0 | 64 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Basic general | 74.5 | 34.3 | 18.1 | 22.1 | 25.5 | 100.0 | 529 | 75.2 | 46.6 | 7.7 | 20.8 | 24.8 | 100.0 | 205 |
| Secondary general Specialized | 89.1 | 48.5 | 23.2 | 17.4 | 10.9 | 100.0 | 2,440 | 87.7 | 46.6 | 18.3 | 22.8 | 12.3 | 100.0 | 586 |
| secondary | 94.9 | 61.5 | 22.5 | 10.9 | 5.1 | 100.0 | 1,997 | 89.1 | 58.2 | 14.7 | 16.2 | 10.9 | 100.0 | 310 |
| Higher | 97.3 | 68.3 | 19.9 | 9.1 | 2.7 | 100.0 | 1,600 | 91.6 | 67.9 | 15.0 | 8.6 | 8.4 | 100.0 | 346 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 82.9 | 41.1 | 22.5 | 19.3 | 17.1 | 100.0 | 1,164 | 89.1 | 51.2 | 14.2 | 23.7 | 10.9 | 100.0 | 261 |
| Second | 89.6 | 52.7 | 21.7 | 15.2 | 10.4 | 100.0 | 1,284 | 89.9 | 43.9 | 22.3 | 23.7 | 10.1 | 100.0 | 264 |
| Middle | 93.3 | 56.1 | 24.3 | 12.8 | 6.7 | 100.0 | 1,303 | 88.3 | 52.7 | 17.3 | 18.4 | 11.7 | 100.0 | 326 |
| Fourth | 94.4 | 62.2 | 21.0 | 11.3 | 5.6 | 100.0 | 1,375 | 85.5 | 61.1 | 13.5 | 10.9 | 14.5 | 100.0 | 316 |
| Highest | 96.6 | 65.6 | 19.6 | 11.4 | 3.4 | 100.0 | 1,440 | 83.4 | 60.7 | 9.4 | 13.4 | 16.6 | 100.0 | 280 |
| Total | 91.7 | 56.1 | 21.8 | 13.8 | 8.3 | 100.0 | 6,566 | 87.2 | 54.2 | 15.3 | 17.7 | 12.8 | 100.0 | 1,447 |


| Among women who have heard of TB, percentage who know specific symptoms of TB, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Background characteristic | Nonspecific coughing | Coughing with sputum | Coughing for a few weeks | Any coughing | Fever | Blood in sputum | Loss of appetite | Night sweating | Pain in chest | Tiredness/ fatigue | Weight loss | Paleness | Other | Don't know | Number of women |
| Age |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 55.4 | 21.2 | 6.2 | 68.2 | 23.3 | 19.4 | 3.7 | 4.3 | 3.4 | 5.9 | 9.1 | 27.8 | 1.2 | 21.9 | 917 |
| 20-24 | 59.5 | 27.6 | 8.1 | 77.7 | 26.6 | 23.7 | 5.1 | 3.3 | 4.4 | 5.5 | 15.2 | 35.0 | 1.2 | 13.0 | 1,045 |
| 25-29 | 60.4 | 29.6 | 7.8 | 77.7 | 29.4 | 26.9 | 6.0 | 5.4 | 5.4 | 10.7 | 12.8 | 36.1 | 1.3 | 14.6 | 851 |
| 30-34 | 62.0 | 28.6 | 9.6 | 81.7 | 35.6 | 25.2 | 9.3 | 6.8 | 6.5 | 10.4 | 16.6 | 41.0 | 0.4 | 10.1 | 715 |
| 35-39 | 64.3 | 34.6 | 9.7 | 84.9 | 37.7 | 33.2 | 8.9 | 5.4 | 7.0 | 11.1 | 18.3 | 39.2 | 1.0 | 7.6 | 676 |
| 40-44 | 61.6 | 30.9 | 12.0 | 82.2 | 32.4 | 31.1 | 7.7 | 6.2 | 5.7 | 9.6 | 16.7 | 40.1 | 1.2 | 9.0 | 909 |
| 45-49 | 66.4 | 31.8 | 10.2 | 83.3 | 37.2 | 26.7 | 6.9 | 6.5 | 5.7 | 10.9 | 16.3 | 41.5 | 1.6 | 8.2 | 909 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 64.7 | 28.6 | 10.3 | 81.9 | 32.2 | 25.3 | 7.2 | 6.2 | 6.3 | 9.8 | 16.9 | 37.2 | 1.3 | 10.4 | 3,979 |
| Rural | 54.3 | 29.6 | 6.5 | 73.6 | 29.4 | 28.3 | 5.5 | 3.6 | 3.4 | 7.2 | 10.9 | 36.7 | 0.9 | 15.9 | 2,042 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 68.0 | 30.8 | 11.0 | 84.7 | 34.5 | 24.0 | 8.1 | 7.9 | 6.3 | 10.9 | 19.9 | 32.6 | 1.7 | 8.9 | 2,391 |
| Aragatsotn | 63.1 | 34.4 | 3.4 | 71.3 | 22.6 | 7.0 | 8.5 | 5.6 | 0.4 | 3.0 | 7.2 | 16.8 | 1.0 | 17.5 | 261 |
| Ararat | 16.3 | 50.8 | 3.8 | 65.6 | 59.3 | 58.0 | 3.6 | 6.0 | 3.7 | 4.3 | 17.2 | 22.0 | 0.0 | 14.5 | 418 |
| Armavir | 67.7 | 19.7 | 4.4 | 77.0 | 22.9 | 20.1 | 1.8 | 0.3 | 2.0 | 2.0 | 7.2 | 42.9 | 1.1 | 17.1 | 499 |
| Gegharkunik | 24.5 | 21.4 | 17.8 | 59.7 | 26.6 | 26.8 | 11.4 | 7.1 | 2.0 | 21.1 | 16.8 | 44.5 | 0.0 | 19.0 | 324 |
| Lori | 71.0 | 30.9 | 21.3 | 86.6 | 35.5 | 39.6 | 15.4 | 7.2 | 9.1 | 12.8 | 22.3 | 63.1 | 0.0 | 10.7 | 488 |
| Kotayk | 60.3 | 10.0 | 0.4 | 67.4 | 15.1 | 9.1 | 1.0 | 1.0 | 6.1 | 3.8 | 8.7 | 40.8 | 3.2 | 16.4 | 532 |
| Shirak | 61.2 | 32.9 | 5.4 | 74.1 | 24.0 | 42.8 | 4.9 | 4.1 | 10.0 | 6.1 | 9.6 | 43.8 | 0.0 | 18.1 | 507 |
| Syunik | 51.2 | 49.1 | 16.4 | 94.5 | 42.8 | 35.7 | 5.0 | 1.9 | 2.3 | 19.9 | 6.6 | 55.1 | 0.0 | 3.5 | 227 |
| Vayots Dzor | 86.2 | 36.3 | 3.4 | 93.3 | 39.0 | 6.8 | 1.8 | 0.9 | 1.8 | 0.9 | 8.5 | 13.3 | 0.0 | 3.9 | 101 |
| Tavush | 83.3 | 6.5 | 1.5 | 85.3 | 14.8 | 5.9 | 0.6 | 0.0 | 0.7 | 5.3 | 3.7 | 24.7 | 1.9 | 11.7 | 274 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Basic general | 45.7 | 21.4 | 7.8 | 63.7 | 20.5 | 15.5 | 4.4 | 1.7 | 3.2 | 7.7 | 7.3 | 27.5 | 1.8 | 27.4 | 394 |
| Secondary general | I 58.3 | 24.4 | 6.8 | 74.4 | 27.0 | 22.8 | 5.5 | 4.8 | 4.3 | 6.4 | 11.0 | 33.4 | 1.0 | 16.5 | 2,174 |
| Specialized secondary | 63.2 | 31.7 | 10.7 | 81.8 | 33.9 | 29.6 | 7.6 | 5.9 | 6.1 | 10.6 | 15.4 | 39.3 | 0.7 | 9.4 | 1,896 |
| Higher | 66.7 | 33.9 | 10.4 | 86.2 | 36.8 | 30.1 | 7.5 | 6.2 | 6.3 | 10.8 | 21.4 | 41.6 | 1.8 | 6.0 | 1,557 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 58.1 | 24.8 | 5.5 | 71.6 | 22.0 | 22.2 | 4.1 | 3.8 | 3.6 | 6.0 | 9.5 | 31.9 | 0.4 | 20.3 | 964 |
| Second | 57.6 | 30.1 | 6.6 | 76.6 | 32.2 | 29.8 | 5.0 | 3.8 | 4.1 | 6.6 | 10.7 | 35.1 | 1.0 | 13.8 | 1,150 |
| Middle | 57.7 | 29.9 | 10.1 | 77.9 | 31.6 | 29.3 | 7.2 | 6.0 | 6.7 | 9.5 | 13.0 | 36.3 | 2.0 | 11.5 | 1,216 |
| Fourth | 64.1 | 29.2 | 10.5 | 82.4 | 33.2 | 24.7 | 8.0 | 5.9 | 6.0 | 11.4 | 18.3 | 42.9 | 0.7 | 10.6 | 1,299 |
| Highest | 66.6 | 29.8 | 11.3 | 84.3 | 34.9 | 25.1 | 7.8 | 6.4 | 5.7 | 10.1 | 20.5 | 37.2 | 1.5 | 7.7 | 1,391 |
| Total | 61.2 | 28.9 | 9.0 | 79.1 | 31.3 | 26.3 | 6.6 | 5.3 | 5.3 | 8.9 | 14.8 | 37.0 | 1.2 | 12.3 | 6,021 |

The percentage of women naming coughing of any kind as a symptom increases with age, from 68 percent in the lowest age group to 83 percent in the oldest age group, and with level of education, from 64 percent in the lowest level to 86 percent in the highest level of education. Coughing of any kind is more frequently cited by women in urban areas ( 82 percent) than in rural areas ( 74 percent). There are large differences among regions in the reporting of coughing of any kind, non-specific coughing, and coughing with sputum. It is notable that both coughing with sputum and persistent coughing, which are more specific symptoms than coughing, are cited least frequently by Kotayk and Tavush women.

| Table 14.9.2 Knowledge of symptoms of tuberculosis: Men |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Among men who have heard of TB, percentage who know specific symptoms of TB, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Background characteristic | Nonspecific coughing | Coughing with sputum | Coughing for a few weeks | Any coughing | Fever | Blood in sputum | Loss of appetite | Night sweating | Pain in chest | Tiredness/ fatigue | Weight loss | Paleness | Other | Don't know | Number of men |
| Age |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 39.9 | 19.1 | 15.1 | 55.4 | 13.7 | 22.0 | 5.6 | 6.5 | 5.4 | 5.4 | 6.8 | 18.7 | 0.4 | 40.2 | 217 |
| 20-24 | 51.4 | 35.5 | 17.4 | 75.5 | 19.9 | 37.3 | 2.9 | 3.1 | 5.2 | 6.4 | 8.1 | 28.7 | 0.5 | 18.9 | 212 |
| 25-29 | 55.1 | 43.4 | 18.5 | 84.1 | 22.3 | 33.4 | 2.7 | 3.5 | 3.7 | 5.5 | 10.8 | 31.3 | 1.9 | 11.8 | 177 |
| 30-34 | 62.6 | 52.0 | 10.1 | 84.2 | 23.4 | 35.1 | 3.3 | 10.8 | 3.1 | 3.5 | 9.5 | 31.7 | 0.0 | 14.3 | 143 |
| 35-39 | 49.9 | 37.7 | 23.1 | 85.4 | 28.1 | 47.0 | 2.0 | 4.9 | 8.2 | 4.4 | 13.3 | 32.1 | 1.3 | 9.3 | 132 |
| 40-44 | 57.3 | 30.6 | 13.4 | 77.8 | 25.9 | 32.9 | 5.8 | 8.1 | 5.9 | 6.5 | 14.8 | 38.4 | 0.5 | 15.9 | 183 |
| 45-49 | 49.9 | 39.0 | 21.1 | 80.9 | 15.8 | 39.5 | 4.7 | 9.0 | 6.7 | 4.2 | 14.4 | 23.3 | 1.2 | 14.0 | 198 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 50.6 | 45.9 | 22.2 | 80.1 | 17.7 | 39.9 | 3.1 | 6.2 | 6.8 | 6.2 | 12.8 | 27.3 | 0.5 | 15.3 | 785 |
| Rural | 53.4 | 19.0 | 8.2 | 70.5 | 25.5 | 25.9 | 5.5 | 6.9 | 3.2 | 3.7 | 7.8 | 30.7 | 1.3 | 24.7 | 476 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 51.7 | 63.6 | 29.7 | 88.0 | 13.7 | 48.0 | 2.3 | 7.7 | 9.4 | 5.2 | 9.4 | 18.7 | 0.0 | 9.0 | 461 |
| Aragatsotn | 87.6 | 9.6 | 8.5 | 90.6 | 53.0 | 10.1 | 16.6 | 33.3 | 13.3 | 8.1 | 13.1 | 38.7 | 0.3 | 5.6 | 70 |
| Ararat | 20.6 | 30.4 | 24.0 | 58.5 | 42.9 | 33.5 | 3.2 | 3.6 | 0.0 | 0.2 | 0.3 | 14.9 | 0.0 | 38.8 | 104 |
| Armavir | 72.7 | 3.4 | 1.0 | 73.4 | 10.4 | 33.6 | 5.6 | 1.3 | 1.9 | 3.2 | 17.4 | 64.0 | 3.4 | 21.7 | 138 |
| Gegharkunik | 48.2 | 25.1 | 7.9 | 70.9 | 12.6 | 13.0 | 3.6 | 2.2 | 1.0 | 12.6 | 6.7 | 25.3 | 0.0 | 24.6 | 70 |
| Lori | (30.5) | (25.3) | (2.8) | (44.6) | (9.4) | (22.3) | (2.8) | (8.0) | (7.7) | (5.5) | (8.4) | (7.6) | (6.7) | (47.4) | 64 |
| Kotayk | 76.7 | 8.2 | 0.7 | 79.5 | 13.3 | 23.5 | 1.3 | 3.0 | 2.2 | 11.1 | 15.6 | 36.1 | 0.7 | 14.3 | 148 |
| Shirak | 10.1 | 28.5 | 11.6 | 50.3 | 41.5 | 24.6 | 0.0 | 1.0 | 1.6 | 0.0 | 11.8 | 29.5 | 0.0 | 43.1 | 91 |
| Syunik | 7.0 | 61.2 | 44.3 | 82.0 | 19.6 | 75.3 | 3.4 | 0.0 | 4.1 | 3.5 | 46.3 | 72.0 | 0.0 | 12.3 | 27 |
| Vayots Dzor | 14.7 | 32.5 | 42.2 | 63.0 | 72.3 | 44.6 | 29.7 | 16.3 | 0.9 | 6.0 | 2.3 | 3.6 | 0.0 | 16.6 | 28 |
| Tavush | 80.0 | 27.8 | 3.2 | 86.0 | 5.6 | 22.6 | 2.3 | 0.4 | 2.5 | 0.8 | 6.5 | 33.9 | 0.0 | 9.9 | 60 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Basic general | 49.4 | 24.3 | 13.9 | 69.1 | 15.8 | 25.0 | 3.0 | 4.0 | 4.7 | 1.7 | 9.1 | 26.2 | 2.1 | 25.2 | 154 |
| Secondary general | l 45.5 | 26.4 | 16.6 | 69.8 | 21.6 | 31.9 | 4.1 | 5.7 | 5.1 | 4.9 | 7.1 | 25.6 | 0.6 | 24.2 | 514 |
| Specialized secondary | 56.5 | 37.5 | 17.1 | 79.3 | 23.4 | 36.5 | 4.5 | 7.9 | 6.7 | 5.1 | 9.3 | 30.9 | 0.4 | 15.0 | 277 |
| Higher | 58.6 | 54.8 | 18.7 | 88.3 | 19.0 | 42.0 | 3.8 | 7.6 | 5.2 | 7.7 | 19.5 | 32.6 | 0.8 | 10.3 | 317 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 54.4 | 15.9 | 8.5 | 68.5 | 24.1 | 21.8 | 5.4 | 9.1 | 3.8 | 2.6 | 9.7 | 27.1 | 2.3 | 27.0 | 233 |
| Second | 48.1 | 27.0 | 15.2 | 73.1 | 24.5 | 27.2 | 5.0 | 4.2 | 3.7 | 4.3 | 7.6 | 35.6 | 0.0 | 22.1 | 238 |
| Middle | 43.3 | 30.8 | 21.5 | 74.0 | 21.8 | 41.9 | 4.4 | 7.5 | 3.5 | 6.4 | 10.3 | 27.1 | 0.3 | 21.6 | 288 |
| Fourth | 52.2 | 48.1 | 26.1 | 82.3 | 21.0 | 45.2 | 3.6 | 6.8 | 9.1 | 4.6 | 12.6 | 32.4 | 0.8 | 10.8 | 270 |
| Highest | 62.4 | 56.2 | 10.8 | 84.1 | 11.7 | 33.7 | 1.4 | 4.4 | 6.9 | 8.2 | 14.2 | 20.4 | 0.7 | 13.2 | 233 |
| Total | 51.7 | 35.7 | 16.9 | 76.5 | 20.7 | 34.6 | 4.0 | 6.4 | 5.4 | 5.2 | 10.9 | 28.6 | 0.8 | 18.8 | 1,261 |

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

Among men, nonspecific coughing, coughing with sputum production, and blood in sputum are the most frequently named symptoms ( 52,36 , and 35 percent, respectively), followed by paleness ( 29 percent), fever ( 21 percent), and persistent coughing (17 percent). Nighttime sweating, tiredness or fatigue, chest pain, loss of appetite, and weight loss are the least frequently named symptoms among men. Consistent with the patterns described for women, the percentage of men naming coughing of any kind as a symptom increases significantly with age and education, and is higher in urban versus rural areas. Again, the reporting of these symptoms by men varies considerably by region.

Since 2000, both women and men have become more aware of symptoms of TB. For example, the number of men who mentioned non-specific coughing as a symptom of TB has doubled ( 25 percent in 2000 and 52 percent in 2005).

## Knowledge That TB Is Curable and Willingness to Keep Secret a Family Member's TB Status

Respondents were also asked if they knew that TB can be completely cured with proper medication. Table 14.10 shows that half of women and three-fifths of men who have heard of TB know that it can be cured completely, a decline from about 70 percent of women and men in 2000. Urban dwellers, more educated respondents, and those from the highest wealth index are more likely to know that TB can be completely cured. The percent aware of a positive prognosis varies widely by region. Among women, knowledge that TB can be cured ranges from a low of 28 percent in Vayots Dzor to a high of 60-62 percent in Yerevan and Armavir regions; the range is even wider for men. Notably, men are significantly more likely than women to be aware of a positive prognosis, while the opposite is true of men in Gegharkunik and Shirak.

These same respondents were also asked if a member of their family got TB, whether they would want it to remain a secret or not. Less than 20 percent of respondents said they would want a family member's TB status kept secret, indicating that a majority of women and men in Armenia have open attitudes toward TB. This positive response implies an absence of stigma attached to TB and a general belief that, following hospital treatment, a diseased individual is no longer able to spread the bacteria.

Women living in urban settings, better educated women, and those from the higher wealth quintiles are more likely than their less fortunate counterparts to want to keep secret the fact that a relative has TB. Unlike women, men in these same categories are least likely to respond affirmatively to this question. Responses vary across subgroups and by region without any noticeable pattern; in Yerevan, 25 percent of women and 6 percent of men say they would want to keep a family member's TB status secret, while in Armavir, 17 percent of women and 46 percent of men responded affirmatively to this question.

TB is an entirely curable disease that primarily strikes adults under age 45 (i.e., a population group that is less likely than children or older adults to have frequent contact with health care providers, apart from women in antenatal care). Hence, education of the public with regard to TB transmission, symptoms, treatment, and prognosis is an important part of a TB control program.

| Among women and men who have heard of TB, the percentage reporting that TB can be completely cured and the percentage reporting a desire to keep secret the fact that a member of a family has TB, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Women |  |  | Men |  |  |
| Background characteristic | Knows that TB can be completely cured | Would want a family member's TB kept secret | Number of women | Knows that TB can be completely cured | Would want a family member's TB kept secret | Number of men |
| Age |  |  |  |  |  |  |
| 15-19 | 36.9 | 19.7 | 917 | 43.7 | 22.3 | 217 |
| 20-24 | 48.0 | 19.1 | 1,045 | 57.3 | 10.1 | 212 |
| 25-29 | 50.4 | 20.3 | 851 | 61.1 | 12.8 | 177 |
| 30-34 | 54.4 | 19.5 | 715 | 69.4 | 12.8 | 143 |
| 35-39 | 51.8 | 19.8 | 676 | 66.9 | 9.9 | 132 |
| 40-44 | 57.5 | 18.6 | 909 | 62.5 | 16.1 | 183 |
| 45-49 | 61.4 | 18.4 | 909 | 70.3 | 15.8 | 198 |
| Residence |  |  |  |  |  |  |
| Urban | 54.8 | 21.1 | 3,979 | 63.1 | 10.0 | 785 |
| Rural | 44.5 | 15.9 | 2,042 | 56.7 | 22.3 | 476 |
| Region |  |  |  |  |  |  |
| Yerevan | 60.1 | 24.7 | 2,391 | 67.4 | 6.4 | 461 |
| Aragatsotn | 52.0 | 24.5 | 261 | 57.8 | 34.0 | 70 |
| Ararat | 40.2 | 4.9 | 418 | 55.0 | 0.0 | 104 |
| Armavir | 61.7 | 17.1 | 499 | 75.3 | 45.7 | 138 |
| Gegharkunik | 34.7 | 31.0 | 324 | 28.3 | 15.3 | 70 |
| Lori | 48.1 | 15.7 | 488 | (79.3) | (45.4) | 64 |
| Kotayk | 53.2 | 24.1 | 532 | 59.3 | 11.6 | 148 |
| Shirak | 28.5 | 2.2 | 507 | 17.0 | 0.9 | 91 |
| Syunik | 35.6 | 1.5 | 227 | 46.8 | 3.5 | 27 |
| Vayots Dzor | 27.8 | 10.6 | 101 | 78.2 | 4.5 | 28 |
| Tavush | 56.7 | 26.4 | 274 | 74.6 | 13.1 | 60 |
| Education |  |  |  |  |  |  |
| Basic general | 29.5 | 14.7 | 394 | 48.4 | 22.3 | 154 |
| Secondary general | 41.9 | 18.5 | 2,174 | 55.3 | 12.3 | 514 |
| Specialized secondary | 55.1 | 19.2 | 1,896 | 59.8 | 15.1 | 277 |
| Higher | 65.3 | 21.7 | 1,557 | 76.2 | 14.1 | 317 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 37.7 | 14.8 | 964 | 48.2 | 22.1 | 233 |
| Second | 42.5 | 16.5 | 1,150 | 51.3 | 14.7 | 238 |
| Middle | 51.9 | 22.2 | 1,216 | 62.2 | 12.2 | 288 |
| Fourth | 55.7 | 19.7 | 1,299 | 66.6 | 13.5 | 270 |
| Highest | 63.3 | 21.9 | 1,391 | 73.8 | 11.4 | 233 |
| Total | 51.3 | 19.3 | 6,021 | 60.7 | 14.6 | 1,261 |
| Note: Figures in parentheses are based on 25-49 unweighted cases. |  |  |  |  |  |  |

### 14.4 Hypertension

As in most countries of the world, cardiovascular diseases are the leading cause of death in Armenia, where they accounted for 58 percent of all deaths in 2003 (WHO, 2006a). Mortality rates for cardiovascular diseases differ between males and females. Standardized death rates for all circulatory system causes for males exceeded that for females by 40 percent in 2003 ( 536 versus 751 per 100,000) (WHO, 2006b).

The National Statistical Service (NSS) data for persons age 15-49 indicate that 27 percent of all deaths in Armenia in 2005 were related to the diseases of the circulatory system and the rate for males was over 10 percent greater than the rate for females (NSS, personal correspondence).

One of the objectives of the ADHS was to provide information on cardiovascular risk factors (hypertension, smoking, and nutritional status), based on data representative of the general population, as opposed to clinic-based data.

## Measurement Procedures

The Women's and Men's Questionnaires for the 2005 ADHS included questions to determine if the respondent had been diagnosed as hypertensive and if she/he was taking medication to control blood pressure. Respondents were also asked if their blood pressure could be measured as part of the survey. Approximately 94 percent of women and 83 percent of men had valid blood pressure measurements taken as part of the survey.

Health technicians, who were mostly physicians, made the blood pressure measurements. Prior to fieldwork, they were given refresher training in measurement procedures in nonclinical settings using oscillometric, digital, self-inflated blood pressure monitors (Samsung Model HD-503 with adjustable inflation), according to the manufacturer's recommended protocol. Three measurements of systolic and diastolic blood pressure (measured in millimeters of mercury, mmHg ) were made, with an interval of at least five minutes between measurements.

The average of the second and third measurements was used to classify individuals with respect to hypertension according to the following internationally recommended categories (WHO, 1999):

| Level of hypertension | Systolic <br> $(\mathrm{mmHg})$ | Diastolic <br> $(\mathrm{mmHg})$ |
| :--- | :--- | :--- |
| Optimal | $<120$ | $<80$ |
| Normal | $120-129$ | $80-84$ |
| High-normal | $130-139$ | $85-89$ |
| Stage 1, mildly elevated | $140-159$ | $90-99$ |
| Stage 2, moderately elevated | $160-179$ | $100-109$ |
| Stage 3, severely elevated | $110+$ |  |

Individuals were classified as hypertensive if they were taking antihypertensive drugs, if their systolic blood pressure was $\geq 140 \mathrm{mmHg}$, or if their diastolic blood pressure was $\geq 90 \mathrm{mmHg}$.

## Levels of Hypertension

Tables 14.11.1 and 14.11.2 show hypertension prevalence rates for women and men. Among women, 22 percent are classified as hypertensive. One percent of all women are taking antihypertensive medication, 15 percent are classified as stage 1 hypertensive, 4 percent are stage 2 , and 2 percent are stage 3.

Among men, 27 percent are classified as hypertensive. Less than 1ne percent of men are classified with hypertension controlled by medication, 23 percent are stage 1 hypertensive, 2 percent are stage 2 , and 2 percent are stage 3 .

The Armenian statistics can be placed in context by reference to strictly comparable international statistics. ${ }^{1}$ A literature review found comparable statistics for the age range $35-44$ for the United States (National Center for Health Statistics, 2004). Armenian hypertensive rates over this age range are 31 percent for women (same if inclusive and exclusive of pregnant women) and 36 percent for men. In comparison with the United States ( 15 percent for non-pregnant women and 17 percent for men), the rates in Armenia are substantially higher for both women and men, indicating that hypertension is a serious public health problem in Armenia.

## Differentials

Comparison of gender-specific rates of hypertension indicates little difference between women (22 percent) and men (27 percent) (Tables 14.1.1 and 14.1.2), with men more likely to develop mild forms of hypertension compared with women (23 and 15 percent, respectively). However, more differences exist in the distributions between women and men across the three categories of optimal, normal, and high-normal blood pressure categories. Thirty-seven percent of women recorded optimal blood pressure levels, while 41 percent were in the normal or high-normal range. The distribution for men is less favorable, with 19 percent in the optimal range and 53 percent in the normal or high-normal range.

Epidemiological studies have shown that hypertension is positively associated with age, a finding confirmed by the 2005 ADHS. Nearly half of men and women age 45 and older are suffering from any form of hypertension, indicating that hypertension is a serious health problem in Armenia. For women, rates of hypertension increase from about 8 percent (women under age 25) to 49 percent (age 45-49). Similarly for men, the rates increase about four times from 13 percent (age 15-19) to 47 percent (age 4549). The age-specific rates of hypertension were lower for women than for men below age 45 and higher at older ages.

Hypertension prevalence is slightly higher in men with more education. However, education in women has no clear pattern; women with secondary-general or specialized secondary education are more likely to be hypertensive ( 24 percent each) compared with women with no education or with higher education (16 percent each), respectively.

Differentials in hypertension rates by urban-rural residence are modest for women, but not for men. There are relatively fewer urban than rural men with hypertension ( 25 versus 32 percent) and relatively more urban than rural men in the optimal category ( 22 versus 15 percent). The highest prevalence of hypertension is found in Lori for both women ( 38 percent) and for men ( 53 percent).

[^14]Significant differences in the prevalence of hypertension are found among respondents classified by their body mass index (BMI). As expected, hypertension levels are higher among overweight/obese subjects compared with those of normal weight. The hypertensive rate among obese women (BMI $\geq 30$ ) is 50 percent, compared with 8 and 12 percent, respectively, among women who were thin ( BMI < 18.5) or normal weight (BMI 18.5-24.9). The same pattern was found in men; the hypertensive rate among obese men is 62 percent, compared with 8 and 23 percent, respectively, among men who were thin or normal weight.

Hypertension is slightly higher among smokers in both women and men. To be married or living in union has a positive impact on prevention of hypertension. Women who are currently married or living together are less likely to have hypertension compared with those who are separated, widowed, or divorced ( 25 percent compared with 33 percent, respectively).

To be employed is positively correlated with hypertension, especially in men; 32 percent of men who were currently working were hypertensive, compared with 19 percent of men who were not working.

In general, rates of hypertension were positively associated with age and being overweight/obese, and with education, employment, and urban residence in men. Hypertension is a serious health problem in Armenia with nearly half of surveyed men and women age 45 and older found hypertensive.

## Awareness and Control of Hypertension

Figure 14.4 shows awareness of hypertension and treatment status among hypertensive women and men age $15-49$. Four out of five hypertensive women and men are unaware of their condition (82 and 81 percent, respectively). Only 7 percent of women and 2 percent of men with high blood pressure are aware of their hypertension and are treating it. Surprisingly, 11 percent of men and 5 percent of women are aware that they are hypertensive but are not treating it.

A first step toward bringing hypertension under control is awareness by individuals of their condition and its implications in terms of premature disability and death. Population education concerning the adverse consequences of hypertension and promotion of blood pressure measurement, particularly targeted at older individuals and men, are areas in which health programs could be strengthened.

Figure 14.4 Awareness of Hypertension and Treatment Status


| Table 14.11.1 Levels of hypertension: Women |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Prevalence of hypertension among women and percent distribution of women by blood pressure (BP) status, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |  |  |
|  |  | Classification of BP |  |  |  |  |  |  |  |  |
| Background characteristic | Prevalence of hypertension ${ }^{1}$ | Optimal | Normal | High normal | Mildly elevated (stage 1) | Moderately elevated (stage 2) | Severely elevated (stage 3) | Normal BP and taking medications | Total | Number of women |
| Age |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 8.4 | 58.6 | 24.3 | 8.7 | 6.6 | 1.5 | 0.2 | 0.1 | 100.0 | 1,055 |
| 20-24 | 8.1 | 51.3 | 27.6 | 13.0 | 7.4 | 0.2 | 0.5 | 0.1 | 100.0 | 1,059 |
| 25-29 | 13.3 | 45.7 | 27.5 | 13.4 | 11.3 | 0.9 | 0.4 | 0.7 | 100.0 | 889 |
| 30-34 | 18.2 | 32.5 | 28.7 | 20.6 | 12.9 | 2.4 | 0.8 | 2.1 | 100.0 | 702 |
| 35-39 | 24.9 | 29.8 | 24.2 | 21.1 | 18.9 | 3.3 | 2.1 | 0.5 | 100.0 | 684 |
| 40-44 | 34.8 | 19.4 | 22.6 | 23.2 | 19.2 | 10.5 | 2.4 | 2.7 | 100.0 | 914 |
| 45-49 | 49.4 | 14.4 | 17.5 | 18.8 | 29.1 | 11.9 | 4.3 | 4.0 | 100.0 | 879 |
| Marital status |  |  |  |  |  |  |  |  |  |  |
| Never married | 11.9 | 52.9 | 25.2 | 10.0 | 9.1 | 2.0 | 0.5 | 0.2 | 100.0 | 1,900 |
| Currently married | 25.2 | 30.7 | 24.3 | 19.7 | 16.6 | 5.2 | 1.9 | 1.5 | 100.0 | 3,827 |
| Formerly married | 33.4 | 26.7 | 24.8 | 15.1 | 20.0 | 6.1 | 1.9 | 5.4 | 100.0 | 453 |
| Working status |  |  |  |  |  |  |  |  |  |  |
| Currently working | 25.4 | 30.7 | 25.1 | 18.9 | 16.7 | 4.7 | 1.6 | 2.3 | 100.0 | 1,668 |
| Worked in the past year | 18.8 | 36.8 | 31.5 | 12.9 | 12.6 | 2.1 | 0.0 | 4.1 | 100.0 | 134 |
| Not working | 20.4 | 39.8 | 24.2 | 15.6 | 13.8 | 4.2 | 1.5 | 1.0 | 100.0 | 4,379 |
| Smoking |  |  |  |  |  |  |  |  |  |  |
| Yes | 26.4 | 36.7 | 29.0 | 7.9 | 9.4 | 10.7 | 1.6 | 4.7 | 100.0 | 103 |
| No | 21.7 | 37.3 | 24.5 | 16.6 | 14.6 | 4.2 | 1.5 | 1.3 | 100.0 | 6,078 |
| Body mass index (BMI) |  |  |  |  |  |  |  |  |  |  |
| $<18.5$ (thin) | 8.3 | 62.1 | 19.0 | 10.6 | 5.7 | 2.6 | 0.0 | 0.0 | 100.0 | 312 |
| 18.5-24.9 (normal) | 11.8 | 48.3 | 26.8 | 13.1 | 8.6 | 1.7 | 0.4 | 1.1 | 100.0 | 3,239 |
| 25.0-29.9 (overweight) | 28.7 | 24.1 | 25.4 | 21.8 | 20.0 | 5.2 | 1.6 | 1.9 | 100.0 | 1,656 |
| $\geq 30$ (obese) | 50.0 | 12.2 | 17.4 | 20.4 | 29.4 | 12.8 | 5.6 | 2.1 | 100.0 | 919 |
| Residence |  |  |  |  |  |  |  |  |  |  |
| Urban | 21.1 | 39.1 | 24.9 | 14.9 | 13.7 | 4.5 | 1.6 | 1.3 | 100.0 | 3,932 |
| Rural | 22.8 | 34.0 | 24.0 | 19.2 | 16.0 | 4.0 | 1.3 | 1.6 | 100.0 | 2,249 |
| Region |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 17.1 | 45.7 | 24.7 | 12.5 | 11.4 | 3.6 | 0.9 | 1.2 | 100.0 | 2,265 |
| Aragatsotn | 23.1 | 37.8 | 20.2 | 18.9 | 14.2 | 3.8 | 2.9 | 2.1 | 100.0 | 281 |
| Ararat | 29.9 | 16.0 | 30.1 | 24.0 | 21.7 | 5.1 | 1.2 | 1.9 | 100.0 | 442 |
| Armavir | 14.0 | 42.8 | 29.0 | 14.2 | 10.9 | 1.8 | 0.3 | 1.1 | 100.0 | 551 |
| Gegharkunik | 10.2 | 55.7 | 21.2 | 13.0 | 5.7 | 1.5 | 0.2 | 2.7 | 100.0 | 398 |
| Lori | 37.8 | 22.5 | 20.1 | 19.6 | 22.1 | 9.6 | 5.4 | 0.8 | 100.0 | 524 |
| Kotayk | 19.9 | 33.9 | 26.6 | 19.6 | 13.1 | 3.6 | 2.1 | 1.2 | 100.0 | 525 |
| Shirak | 31.9 | 23.5 | 25.4 | 19.1 | 22.0 | 7.2 | 1.4 | 1.3 | 100.0 | 550 |
| Syunik | 17.7 | 44.0 | 19.6 | 18.7 | 12.2 | 3.2 | 1.3 | 1.0 | 100.0 | 277 |
| Vayots Dzor | 37.8 | 21.9 | 21.3 | 19.0 | 30.7 | 5.0 | 2.1 | 0.0 | 100.0 | 93 |
| Tavush | 28.8 | 23.4 | 24.6 | 23.2 | 20.0 | 5.3 | 0.6 | 2.9 | 100.0 | 275 |
| Education |  |  |  |  |  |  |  |  |  |  |
| Basic general | 16.2 | 43.4 | 24.6 | 15.7 | 10.5 | 3.2 | 0.9 | 1.6 | 100.0 | 501 |
| Secondary general | 24.3 | 33.8 | 25.2 | 16.8 | 16.7 | 4.2 | 1.6 | 1.7 | 100.0 | 2,314 |
| Specialized secondary | 24.5 | 33.8 | 23.4 | 18.3 | 16.4 | 4.7 | 1.8 | 1.6 | 100.0 | 1,879 |
| Higher | 16.2 | 44.9 | 25.2 | 13.8 | 10.2 | 4.3 | 0.9 | 0.7 | 100.0 | 1,487 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |
| Lowest | 23.5 | 33.6 | 23.8 | 19.0 | 16.1 | 4.0 | 1.0 | 2.4 | 100.0 | 1,113 |
| Second | 26.2 | 31.5 | 24.7 | 17.6 | 18.4 | 4.6 | 2.0 | 1.2 | 100.0 | 1,230 |
| Middle | 23.9 | 34.9 | 24.2 | 17.0 | 17.8 | 4.1 | 1.3 | 0.7 | 100.0 | 1,231 |
| Fourth | 20.2 | 39.0 | 24.0 | 16.8 | 11.6 | 4.7 | 1.6 | 2.3 | 100.0 | 1,262 |
| Highest | 15.6 | 46.0 | 26.1 | 12.3 | 9.5 | 4.1 | 1.4 | 0.6 | 100.0 | 1,345 |
| Total | 21.7 | 37.2 | 24.6 | 16.4 | 14.6 | 4.3 | 1.5 | 1.4 | 100.0 | 6,181 |
| Note: When systolic and diastolic blood pressures fall into different categories, the higher category determines the individual's status. Currently married includes respondents in consensual union (living together). Formerly married includes divorced/separated/widowed. Figures in parentheses are based on 25-49 unweighted cases. <br> ${ }^{1}$ Blood pressure $\geq 140 / 90 \mathrm{mmHg}$ or currently taking antihypertensive medication |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

Table 14.11.2 Levels of hypertension: Men
Prevalence of hypertension among men and percent distribution of men by blood pressure (BP) status, according to background characteristics, Armenia 2005

| Background characteristic | Prevalence of hypertension ${ }^{1}$ | Classification of BP |  |  |  |  |  |  |  | Number of men |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Optimal | Normal | High normal | Mildly elevated (stage 1) | Moderately elevated (stage 2) | Severely elevated (stage 3) | Normal BP and taking medications | Total |  |
| Age |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 13.2 | 36.3 | 37.4 | 13.1 | 13.1 | 0.1 | 0.0 | 0.0 | 100.0 | 246 |
| 20-24 | 18.7 | 20.9 | 41.5 | 18.9 | 17.4 | 0.0 | 1.3 | 0.0 | 100.0 | 196 |
| 25-29 | 27.4 | 17.1 | 30.8 | 24.6 | 25.2 | 2.2 | 0.0 | 0.0 | 100.0 | 164 |
| 30-34 | 22.5 | 14.2 | 31.8 | 31.6 | 18.1 | 2.9 | 1.5 | 0.0 | 100.0 | 135 |
| 35-39 | 29.6 | 13.9 | 27.3 | 29.3 | 27.1 | 2.5 | 0.0 | 0.0 | 100.0 | 118 |
| 40-44 | 40.0 | 12.1 | 23.4 | 24.5 | 30.1 | 3.7 | 4.7 | 1.6 | 100.0 | 168 |
| 45-49 | 46.9 | 11.2 | 17.5 | 24.4 | 35.3 | 6.1 | 3.0 | 2.5 | 100.0 | 173 |
| Marital status |  |  |  |  |  |  |  |  |  |  |
| Never married | 16.1 | 28.3 | 38.6 | 16.9 | 15.1 | 0.6 | 0.4 | 0.0 | 100.0 | 505 |
| Currently married | 35.2 | 13.3 | 25.3 | 26.2 | 28.9 | 3.5 | 2.0 | 0.7 | 100.0 | 682 |
| Formerly married | * | * | * | * | * | * | * | * | * | 14 |
| Working status |  |  |  |  |  |  |  |  |  |  |
| Currently working | 32.0 | 15.6 | 28.0 | 24.4 | 28.5 | 1.7 | 1.5 | 0.5 | 100.0 | 601 |
| Worked in the past year | 30.4 | 12.6 | 33.7 | 23.3 | 21.8 | 4.7 | 4.0 | 0.0 | 100.0 | 193 |
| Not working | 18.8 | 28.6 | 33.2 | 19.5 | 15.3 | 2.1 | 0.3 | 1.0 | 100.0 | 404 |
| Smoking |  |  |  |  |  |  |  |  |  |  |
| Yes | 29.5 | 16.3 | 28.5 | 25.8 | 24.7 | 2.3 | 1.9 | 0.7 | 100.0 | 729 |
| No | 23.9 | 24.3 | 34.2 | 17.5 | 20.3 | 2.3 | 0.9 | 0.4 | 100.0 | 471 |
| Body mass index (BMI) |  |  |  |  |  |  |  |  |  |  |
| $<18.5$ (thin) | (8.2) | (35.1) | (52.7) | (3.9) | (8.2) | (0.0) | (0.0) | (0.0) | (100.0) | 38 |
| 18.5-24.9 (normal) | 22.8 | 22.5 | 31.9 | 22.8 | 20.1 | 1.5 | 0.7 | 0.5 | 100.0 | 796 |
| 25.0-29.9 (overweight) | 35.0 | 9.9 | 26.8 | 28.3 | 30.0 | 2.5 | 2.2 | 0.3 | 100.0 | 273 |
| $\geq 30$ (obese) | 62.4 | 6.1 | 20.9 | 10.6 | 40.4 | 10.5 | 8.5 | 3.0 | 100.0 | 76 |
| Residence |  |  |  |  |  |  |  |  |  |  |
| Urban | 24.7 | 21.9 | 32.4 | 21.0 | 20.9 | 1.8 | 1.6 | 0.4 | 100.0 | 780 |
| Rural | 32.1 | 14.9 | 27.6 | 25.4 | 26.9 | 3.1 | 1.2 | 0.9 | 100.0 | 421 |
| Region |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 20.3 | 26.4 | 34.5 | 18.9 | 18.9 | 0.4 | 0.7 | 0.3 | 100.0 | 489 |
| Aragatsotn | 38.9 | 10.6 | 21.1 | 29.4 | 27.8 | 3.5 | 4.4 | 3.2 | 100.0 | 61 |
| Ararat | 40.8 | 6.2 | 18.3 | 34.7 | 35.7 | 5.1 | 0.0 | 0.0 | 100.0 | 103 |
| Armavir | 28.8 | 12.8 | 31.8 | 26.6 | 26.2 | 2.0 | 0.0 | 0.6 | 100.0 | 135 |
| Gegharkunik | 10.4 | 39.4 | 33.7 | 16.6 | 9.6 | 0.7 | 0.0 | 0.0 | 100.0 | 55 |
| Lori | 52.9 | 14.7 | 19.2 | 13.2 | 35.9 | 7.9 | 9.0 | 0.0 | 100.0 | 81 |
| Kotayk | 20.1 | 19.5 | 37.5 | 22.9 | 15.2 | 3.4 | 0.8 | 0.8 | 100.0 | 99 |
| Shirak | 24.5 | 12.5 | 35.6 | 27.4 | 21.8 | 1.8 | 0.9 | 0.0 | 100.0 | 83 |
| Syunik | (5.9) | (21.1) | (31.7) | (41.2) | (5.9) | (0.0) | (0.0) | (0.0) | (100.0) | 14 |
| Vayots Dzor | 41.0 | 18.7 | 19.0 | 21.3 | 34.6 | 3.8 | 2.6 | 0.0 | 100.0 | 19 |
| Tavush | 43.2 | 7.6 | 27.0 | 22.2 | 31.4 | 5.0 | 4.1 | 2.7 | 100.0 | 61 |
| Education |  |  |  |  |  |  |  |  |  |  |
| Basic general | 24.1 | 27.5 | 30.6 | 17.8 | 22.6 | 1.5 | 0.0 | 0.0 | 100.0 | 175 |
| Secondary general | 26.2 | 19.9 | 29.1 | 24.8 | 21.3 | 2.1 | 2.0 | 0.8 | 100.0 | 494 |
| Specialized secondary | 30.1 | 15.9 | 31.5 | 22.5 | 25.0 | 3.5 | 0.4 | 1.1 | 100.0 | 260 |
| Higher | 28.7 | 16.9 | 33.0 | 21.3 | 24.3 | 2.0 | 2.4 | 0.1 | 100.0 | 271 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |
| Lowest | 32.8 | 18.8 | 21.9 | 26.5 | 28.2 | 2.1 | 1.6 | 0.9 | 100.0 | 215 |
| Second | 30.9 | 14.8 | 33.3 | 21.0 | 25.5 | 3.6 | 1.8 | 0.0 | 100.0 | 220 |
| Middle | 26.8 | 18.8 | 30.5 | 23.8 | 21.8 | 2.7 | 1.6 | 0.8 | 100.0 | 279 |
| Fourth | 21.8 | 19.5 | 36.9 | 21.9 | 17.6 | 1.8 | 1.3 | 1.1 | 100.0 | 254 |
| Highest | 25.4 | 25.1 | 30.0 | 19.4 | 23.0 | 1.3 | 1.2 | 0.0 | 100.0 | 233 |
| Total | 27.3 | 19.4 | 30.7 | 22.5 | 23.0 | 2.3 | 1.5 | 0.6 | 100.0 | 1,200 |

Note: When systolic and diastolic blood pressures fall into different categories, the higher category determines the individual's status. Currently married includes respondents in consensual union (living together). Formerly married includes divorced/separated/widowed. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that the figure is based on fewer than 25 unweighted cases and has been suppressed.
${ }^{1}$ Blood pressure $\geq 140 / 90 \mathrm{mmHg}$ or currently taking antihypertensive medication

# WOMEN'S EMPO WERMENT AND DEMOGRAPHIC AND HEALTH OUTCOMES 

This chapter presents information on indicators of women's empowerment, develops three empowerment indices, and relates those indices to select demographic and health outcomes.

The ADHS Women's Questionnaire collected data on the general background characteristics of female respondents (e.g., age, education, wealth quintile, employment status) and also data more specific to women's empowerment such as receipt of cash earnings, the magnitude of a woman's earnings relative to those of her husband/partner, and control over the use of her own earnings and those of her husband/partner. This chapter tabulates and presents the indicators of woman's empowerment according to the general background characteristics of female respondents. The ADHS Women's Questionnaire also collected data on a woman's participation in household decisionmaking, on the circumstances under which she feels that a woman is justified in refusing to have sexual intercourse with her husband/partner, and on her attitude toward wife beating. Three separate indices of empowerment are developed based on the number of household decisions in which the respondent participates, her opinion on the number of circumstances for which a woman is justified in refusing to have sexual intercourse with her husband/partner, and her opinion on the number of reasons that justify wife beating. The ranking of women on these three indices is then related to selected demographic and health outcomes including contraceptive use, ideal family size and unmet need for contraception. In addition, survivorship of children is presented by the ranking of their mothers on the indices.

### 15.1 EMPLOYMENT AND CASH EARNINGS

In the ADHS, respondents were asked a number of questions to determine their employment status at the time of the survey and continuity of employment in the 12 months prior to the survey. They were also asked about the form of payment for their work. Table 15.1 shows the percentage of currently married women who were employed at any time during the 12 months preceding the survey and the percent distribution of those employed in the 12 months preceding the survey by the type of earnings they received (cash, in-kind, or both).

According to the ADHS data, 30 percent of currently married women were employed in the preceding 12 months. Younger women, especially those age 15-19 and 20-24, were less likely to be employed than women in other age groups, possibly due to their being in school or in training rather than in the job market. As women get older, their likelihood of being employed increases. Of those who had been employed within the preceding 12 months, about three-fourths ( 73 percent) received only cash for their work, while one in five ( 20 percent) did not receive any payment at all. Six percent of women received cash and in-kind earnings for their work in the last 12 months, while less than 1 percent received payment in-kind only. The proportion of currently married women employed in the preceding 12 months has decreased somewhat from 36 percent in 2000 ADHS to the current level of 30 percent.

Table 15.1 Employment and cash earnings of currently married women
Percentage of currently married women age 15-49 who were employed at any time in the last 12 months and the percent distribution of currently married women employed in the last 12 months by type of earnings, according to age, Armenia 2005

| Age | Employment |  | Percent distribution by type of earnings for currently married women employed in last 12 months |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage employed | Number of currently married women | Cash only | Cash and in-kind | In-kind only | Not paid | Missing / do not know | Total | Number of women employed |
| 15-19 | 6.4 | 78 | * | * | * | * | * | * | 5 |
| 20-24 | 11.2 | 504 | (73.9) | (3.1) | (0.0) | (22.1) | (0.9) | (100.0) | 56 |
| 25-29 | 18.2 | 695 | 71.4 | 3.3 | 0.0 | 23.8 | 1.5 | 100.0 | 127 |
| 30-34 | 31.0 | 601 | 77.8 | 4.4 | 0.7 | 17.1 | 0.0 | 100.0 | 186 |
| 35-39 | 37.7 | 602 | 72.5 | 6.1 | 0.8 | 20.5 | 0.0 | 100.0 | 227 |
| 40-44 | 39.4 | 824 | 72.8 | 7.5 | 0.5 | 19.2 | 0.0 | 100.0 | 325 |
| 45-49 | 40.8 | 741 | 72.1 | 5.2 | 1.3 | 21.4 | 0.0 | 100.0 | 303 |
| Total | 30.4 | 4,044 | 73.2 | 5.6 | 0.7 | 20.2 | 0.2 | 100.0 | 1,229 |

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.

### 15.2 UsE OF EARNINGS

Currently married women who were employed in the last 12 months and who earned cash for their work were asked the relative magnitude of their earnings in comparison to their husband/partner's earnings. In addition, they were asked who the main decisionmaker is with regard to the use of their earnings. This information has implications for the empowerment of women. It is expected that employment and earnings are more likely to empower women if women themselves control their own earnings and perceive their earnings as significant relative to those of their husband/partner.

Table 15.2 shows how women's control over their own earnings and their perception of the magnitude of their earnings relative to those of their husband/partner varies by background characteristics. Among married women receiving cash earnings, about one in four ( 23 percent) decide mainly themselves how to use the money, while seven in ten (70 percent) decide jointly with their husband/partner. Six percent say that mainly their husband decides on the allocation of the woman's earnings. More educated women, those with fewer children, urban women, and women in the higher wealth quintiles are more likely to decide mainly themselves on how their earning are used when compared with other groups. Among regions, women's independence in decisionmaking on use of their earnings ranges from a low of 7 percent in Ararat to a high of 37 percent in Syunik.

Comparing the results from the 2000 and 2005 ADHS surveys, there has been a decrease in the percentage of currently married women who decide mainly themselves how to use their cash (36 percent in 2000 compared with 23 percent in 2005) and an increase in the percentage who decide jointly with their husband/partner ( 52 percent compared with 70 percent).

Table 15.2 also shows that a large majority of married women ( 67 percent) report that they earn less than their husband/partner for their work, while 13 percent earn the same amount. Only one in ten women report earning more cash than their husband/partner for their work.

| 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 cash earnings are used and by whether she earned more or less than her husband/partner, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Person who decides how cash earnings are used |  |  |  |  |  | W omen's cash earnings compared to husband/partner's earnings |  |  |  |  |  |  |
| Background characteristic | Mainly respondent | Respondent and hus-band/partner jointly | Mainly husband/ partner | Other | Total | M ore | Less | Same | Husband/ partner has no earnings | Do not know/ missing | Total | Number of women |
| Age |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | * | * | * | * | * | * | * | * | * | * | * | 5 |
| 20-24 | (19.8) | (71.1) | (6.0) | (3.1) | (100.0) | (10.1) | (79.3) | (3.9) | (0.0) | (6.7) | (100.0) | 43 |
| 25-29 | 23.1 | 69.3 | 4.4 | 3.1 | 100.0 | 7.8 | 77.6 | 10.8 | 2.0 | 1.7 | 100.0 | 94 |
| 30-34 | 21.8 | 67.9 | 6.8 | 3.5 | 100.0 | 8.8 | 74.0 | 11.7 | 3.4 | 2.1 | 100.0 | 153 |
| 35-39 | 23.5 | 69.6 | 4.7 | 2.3 | 100.0 | 6.6 | 67.7 | 15.6 | 7.1 | 3.0 | 100.0 | 179 |
| 40-44 | 19.9 | 72.8 | 5.4 | 1.9 | 100.0 | 13.7 | 63.2 | 15.3 | 5.7 | 2.1 | 100.0 | 261 |
| 45-49 | 26.6 | 67.7 | 5.0 | 0.7 | 100.0 | 11.8 | 61.0 | 12.8 | 10.6 | 3.8 | 100.0 | 234 |
| Number of living children |  |  |  |  |  |  |  |  |  |  |  |  |
| 0 | 31.6 | 52.6 | 13.6 | 2.3 | 100.0 | 6.5 | 75.5 | 11.5 | 4.3 | 2.3 | 100.0 | 61 |
| 1-2 | 24.9 | 68.5 | 4.6 | 2.0 | 100.0 | 9.6 | 68.8 | 12.1 | 6.8 | 2.7 | 100.0 | 578 |
| 3+ | 17.2 | 74.3 | 6.1 | 2.3 | 100.0 | 12.4 | 63.5 | 15.2 | 5.7 | 3.1 | 100.0 | 331 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 26.2 | 67.3 | 4.3 | 2.1 | 100.0 | 9.8 | 67.4 | 13.3 | 7.0 | 2.4 | 100.0 | 676 |
| Rural | 14.5 | 74.5 | 8.9 | 2.1 | 100.0 | 11.6 | 67.3 | 12.8 | 4.4 | 3.7 | 100.0 | 294 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |
| Yerevan | 28.9 | 64.6 | 5.5 | 1.1 | 100.0 | 9.4 | 70.9 | 11.3 | 6.9 | 1.4 | 100.0 | 386 |
| Aragatsotn | 24.9 | 55.0 | 20.1 | 0.0 | 100.0 | 17.7 | 63.9 | 13.9 | 0.7 | 3.7 | 100.0 | 32 |
| Ararat | 6.5 | 82.9 | 9.7 | 0.9 | 100.0 | 13.8 | 68.3 | 11.7 | 2.2 | 4.1 | 100.0 | 43 |
| Armavir | 13.4 | 71.6 | 13.1 | 1.9 | 100.0 | 6.7 | 65.5 | 18.4 | 8.3 | 1.1 | 100.0 | 132 |
| Gegharkunik | 15.4 | 84.0 | 0.0 | 0.6 | 100.0 | 10.6 | 74.4 | 7.6 | 6.4 | 1.0 | 100.0 | 62 |
| Lori | 10.6 | 82.9 | 0.0 | 6.6 | 100.0 | 10.2 | 61.1 | 14.9 | 5.5 | 8.4 | 100.0 | 60 |
| Kotayk | 21.6 | 73.1 | 2.0 | 3.3 | 100.0 | 9.3 | 62.2 | 11.2 | 12.0 | 5.2 | 100.0 | 89 |
| Shirak | 22.7 | 68.3 | 3.8 | 5.3 | 100.0 | 17.1 | 48.5 | 19.0 | 6.5 | 8.8 | 100.0 | 48 |
| Syunik | 36.6 | 56.6 | 2.4 | 4.4 | 100.0 | 10.5 | 68.3 | 17.7 | 0.0 | 3.6 | 100.0 | 69 |
| Vayots Dzor | 11.1 | 81.2 | 7.7 | 0.0 | 100.0 | 8.1 | 83.0 | 6.8 | 2.1 | 0.0 | 100.0 | 11 |
| Tavush | 20.2 | 78.0 | 0.8 | 1.0 | 100.0 | 17.1 | 68.8 | 11.7 | 1.4 | 0.9 | 100.0 | 37 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |
| Basic general | (26.6) | (56.3) | (9.9) | (7.2) | (100.0) | (5.7) | (53.7) | (13.8) | (20.5) | (6.3) | (100.0) | 37 |
| Secondary general | 18.5 | 69.3 | 9.0 | 3.1 | 100.0 | 11.6 | 57.9 | 20.4 | 7.5 | 2.6 | 100.0 | 224 |
| Specialized secondary | 23.6 | 68.8 | 5.5 | 2.0 | 100.0 | 8.7 | 70.9 | 9.1 | 8.2 | 3.1 | 100.0 | 348 |
| Higher | 24.0 | 71.6 | 3.4 | 1.0 | 100.0 | 11.7 | 71.3 | 12.6 | 2.2 | 2.3 | 100.0 | 361 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 13.2 | 70.4 | 12.4 | 4.0 | 100.0 | 17.2 | 53.5 | 19.7 | 6.3 | 3.3 | 100.0 | 127 |
| Second | 18.0 | 70.3 | 9.1 | 2.6 | 100.0 | 10.0 | 65.1 | 13.9 | 5.6 | 5.3 | 100.0 | 139 |
| Middle | 19.1 | 74.9 | 4.0 | 2.0 | 100.0 | 7.4 | 63.0 | 14.8 | 11.6 | 3.2 | 100.0 | 193 |
| Fourth | 28.5 | 64.6 | 5.3 | 1.6 | 100.0 | 11.8 | 70.2 | 11.4 | 5.3 | 1.4 | 100.0 | 223 |
| Highest | 27.1 | 68.9 | 2.5 | 1.4 | 100.0 | 8.4 | 75.5 | 10.1 | 3.7 | 2.2 | 100.0 | 286 |
| Total | 22.7 | 69.5 | 5.7 | 2.1 | 100.0 | 10.4 | 67.4 | 13.2 | 6.3 | 2.8 | 100.0 | 969 |

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 15.3 shows, for currently married women who earned cash in the past 12 months, the person who decides how their cash earnings are used and for all currently married women whose husbands earned cash in the past 12 months, the person who decides how their husband's cash earnings are used, according to the relative magnitude of the earnings of women and their husband or partner. In particular,
it shows whether the person who decides how the woman's own earnings are used and the person who decides how her partner's earnings are used are each affected and vary by whether the woman works and by the magnitude of women's earnings relative to those of her husband. As expected, women are more likely to decide mainly themselves how their cash earnings are used if they earn more than their husband/partner for their work and if their husband/partner makes no earnings or did not work in the preceding 12 months. Furthermore, women are also more likely to be the main decision-makers on how their husband/partner's earning are used if they make more cash for their work.

Table 15.3 W omen's control over their own earnings and over those of their husband/partner
Percent distribution of currently married women who received cash earnings for employment in the 12 months preceding the survey by person who decides how the woman's cash earnings are used and the percent distribution of currently married women whose husband/partner has cash earnings by who decides how the husband/partner's earnings are used, according to the relationship between the woman's and husband's earnings, Armenia 2005

|  | Person who decides how earnings are used |  |  |  | Person who decides how husband/partner's earnings are used |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| W omen's earnings relative to husband/ partner's earnings | Respondent only | Respondent and husband/ partner jointly | Husband/ partner only | O ther/ missing | Total | Number of women | Respondent only | Respondent and husband/ partner jointly | Husband/ partner only | O ther | Missing | Total | Number of women |
| More than husband/ partner | 30.4 | 63.5 | 6.1 | 0.0 | 100.0 | 101 | 16.0 | 54.5 | 12.2 | 16.5 | 0.9 | 100.0 | 101 |
| Less than husband/partner | 20.1 | 73.2 | 5.2 | 1.5 | 100.0 | 653 | 8.9 | 80.4 | 8.8 | 1.7 | 0.1 | 100.0 | 653 |
| Same as husband/partner | 16.8 | 73.2 | 9.9 | 0.0 | 100.0 | 128 | 4.9 | 80.7 | 14.5 | 0.0 | 0.0 | 100.0 | 128 |
| Husband/partner has no cash earnings/did not work | 48.6 | 47.0 | 1.3 | 3.1 | 100.0 | 63 | na | na | na | na | na | na | 0 |
| W oman has no cash earnings | na | na | na | na | na | 0 | 10.0 | 78.4 | 5.1 | 5.7 | 0.9 | 100.0 | 257 |
| W oman did not work in past 12 months | na | na | na | na | na | 0 | 7.9 | 67.0 | 13.5 | 11.5 | 0.2 | 100.0 | 2,815 |
| Total | 22.7 | 70.4 | 5.7 | 1.2 | 100.0 | 944 | 8.3 | 70.1 | 12.1 | 9.2 | 0.3 | 100.0 | 3,953 |
| na=N ot applicable |  |  |  |  |  |  |  |  |  |  |  |  |  |

### 15.3 Household DEcisionmaking

In order to assess women's decisionmaking autonomy, information was collected in the ADHS survey on women's participation in four different types of decisions: on the respondent's own health care, on making large household purchases, on making household purchases for daily needs, and on visits to family friends or relatives. Table 15.4 shows the percent distribution of currently married women according to the person in the household who usually makes decisions concerning these matters. The ability of women to make decisions that affect the circumstances of their own lives is an essential aspect of empowerment.

According to the data, one-third of married women make decisions on their own about their own health care, about six in ten ( 57 percent) decide jointly with their husband/partner, while one in ten currently married women have no say in decisions about their own health care. Almost one-fourth (23 percent) of currently married women decide mainly themselves about the purchase of large household items, more than half ( 54 percent) decide jointly with their husband, while more than one-fifth ( 22 percent) have no say in these matters. Married women are more likely than their husbands to make decisions about daily household purchases, while decisions about visits to family or relatives are mostly made jointly ( 74 percent).

A substantial increase between the 2000 and 2005 surveys is observed in the proportion of currently married women who decide mainly themselves about the purchase of large household items (10 percent versus 23 percent). Overall, between the two surveys, there has been an increase in the proportion of women who decide jointly with their husbands/partners about each of the household decisions and a decrease in the proportion whose husbands/partners alone decide about such decisions.

Table 15.4 W omen's participation in decisionmaking
Percent distribution of currently married women age 15-49 by person who usually makes decisions on four specific issues in the household, Armenia 2005

| Decision | Mainly woman | Woman and husband/ partner jointly | Mainly husband/ partner | Someone else | O ther | Missing | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| O wn health care | 33.3 | 56.6 | 7.6 | 2.1 | 0.2 | 0.2 | 100.0 |
| Major household purchases | 23.0 | 53.9 | 12.3 | 10.1 | 0.6 | 0.2 | 100.0 |
| Daily household purchases | 41.1 | 37.5 | 9.1 | 11.5 | 0.7 | 0.2 | 100.0 |
| Visits to family or relatives | 12.7 | 74.3 | 7.1 | 5.4 | 0.4 | 0.2 | 100.0 |

Table 15.5 shows how participation in decisionmaking varies by background characteristics. In general, a large majority of married women either make household decisions themselves or participate in the decision jointly with their husband or partner. Overall, nine in ten women participate in the decision about their own health care, while about eight in ten are involved in decisionmaking about daily and large household purchases. Eighty-seven percent of women report that they participate in the decision on visits to family and friends. About seven in ten ( 68 percent) married women participate in all four specified household decisions, while 5 percent report having no say in any household decisions (Figure 15.1)

Figure 15.1 Percentage of Currently Married Women Who (Alone or Jointly with Husband/partner) Make Specific Household Decisions


| Percentage of currently married women age 15-49 who usually make decisions on four specific issues in the household either by themselves or jointly with their husband/partner, by background characteristics, Armenia 2005 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alone or jointly has final say in |  |  |  |  |  |  |  |
| Background characteristic | Own health care | Making major household purchases | Making purchases for daily household needs | Visits to her family or relatives | ```Percentage who participate in all four decisions``` | Percentage <br> who participate in none of the four decisions | Number of women |
| Age |  |  |  |  |  |  |  |
| 15-19 | 66.0 | 35.9 | 31.6 | 59.5 | 28.0 | 27.0 | 78 |
| 20-24 | 83.5 | 54.5 | 50.8 | 74.2 | 43.2 | 12.9 | 504 |
| 25-29 | 87.3 | 65.9 | 67.7 | 82.6 | 54.9 | 5.0 | 695 |
| 30-34 | 91.1 | 77.6 | 80.8 | 87.1 | 68.8 | 3.2 | 601 |
| 35-39 | 92.5 | 84.6 | 86.7 | 89.7 | 77.8 | 2.9 | 602 |
| 40-44 | 92.5 | 86.8 | 90.2 | 92.7 | 79.4 | 2.3 | 824 |
| 45-49 | 93.1 | 88.5 | 91.2 | 94.1 | 80.9 | 1.8 | 741 |
| Employment in the last 12 months |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Not employed | 89.1 | 73.6 | 75.8 | 85.2 | 65.3 | 5.5 | 2,906 |
| Employed for cash | 92.4 | 86.4 | 86.1 | 92.4 | 76.6 | 2.5 | 895 |
| Employed not for cash | 91.6 | 80.7 | 83.3 | 89.2 | 71.8 | 2.7 | 240 |
| Number of living children |  |  |  |  |  |  |  |
| 0 | 82.8 | 60.4 | 59.3 | 74.5 | 50.8 | 13.0 | 265 |
| 1-2 | 90.6 | 74.8 | 76.8 | 87.1 | 66.5 | 4.4 | 2,458 |
| 3+ | 89.9 | 83.9 | 85.6 | 89.4 | 74.7 | 3.6 | 1,321 |
| Residence |  |  |  |  |  |  |  |
| Urban | 91.7 | 78.9 | 79.9 | 89.6 | 69.8 | 2.9 | 2,447 |
| Rural | 87.1 | 73.7 | 76.4 | 83.0 | 65.7 | 7.4 | 1,597 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 93.0 | 78.4 | 80.0 | 91.0 | 69.8 | 2.1 | 1,362 |
| Aragatsotn | 85.1 | 71.8 | 77.3 | 78.8 | 60.4 | 9.5 | 196 |
| Ararat | 92.5 | 75.7 | 78.8 | 88.3 | 74.3 | 6.3 | 307 |
| Armavir | 85.7 | 69.5 | 73.8 | 82.7 | 62.5 | 11.3 | 381 |
| Gegharkunik | 78.4 | 69.2 | 73.7 | 79.2 | 57.7 | 6.5 | 303 |
| Lori | 95.6 | 88.2 | 86.3 | 94.7 | 79.4 | 1.7 | 343 |
| Kotayk | 90.7 | 75.5 | 76.8 | 85.0 | 67.8 | 5.5 | 357 |
| Shirak | 92.2 | 77.0 | 77.3 | 83.2 | 72.9 | 4.9 | 357 |
| Syunik | 76.9 | 81.0 | 75.2 | 84.3 | 51.6 | 2.0 | 189 |
| Vayots Dzor | 83.7 | 73.4 | 75.4 | 86.9 | 64.7 | 10.5 | 65 |
| Tavush | 93.9 | 78.4 | 82.4 | 85.3 | 71.9 | 4.1 | 184 |
| Education |  |  |  |  |  |  |  |
| Basic general | 80.4 | 64.0 | 69.1 | 76.4 | 59.3 | 14.0 | 235 |
| Secondary general | 88.8 | 74.4 | 76.8 | 84.5 | 66.5 | 5.4 | 1,629 |
| Specialized secondary | 91.0 | 79.6 | 80.3 | 88.7 | 70.0 | 3.7 | 1,353 |
| Higher | 92.9 | 80.7 | 81.7 | 92.0 | 71.1 | 2.3 | 828 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 85.3 | 73.3 | 74.0 | 78.8 | 63.4 | 9.7 | 764 |
| Second | 89.0 | 75.6 | 78.8 | 87.8 | 68.6 | 5.0 | 809 |
| Middle | 91.4 | 78.8 | 81.3 | 87.9 | 71.8 | 3.4 | 788 |
| Fourth | 88.7 | 74.2 | 77.6 | 87.2 | 65.7 | 4.7 | 841 |
| Highest | 94.7 | 82.0 | 80.8 | 92.5 | 71.1 | 1.1 | 842 |
| Total | 89.9 | 76.8 | 78.5 | 87.0 | 68.2 | 4.7 | 4,044 |

There is a strong correlation between age and decisionmaking. The percentage of women participating in all decisions increases from 28 percent among women 15-19 to 81 percent among women age 45-49. Furthermore, the proportion of women participating in decisionmaking increases with women's education. Fifty-nine percent of women with basic education participate in all specified decisions, compared with 71 percent of women with higher than secondary education. The proportion of currently married women participating in all decisions varies significantly among regions: it ranges from 52 percent in Syunik to 79 percent in Lori.

### 15.4 AtTITUDES towards Wife Beating

The ADHS gathered information on women's attitudes toward wife beating, a proxy for women's perception of their status. Women who believe that a husband is justified in hitting or beating his wife for any of the specified reasons may believe themselves to be low in status both absolutely and relative to men. Such a perception could act as a barrier to accessing health care for themselves and their children, affect their attitude toward contraceptive use, and impact their general wellbeing. Women were asked whether a husband is justified in beating his wife under a series of circumstances: if the wife burns the food, argues with him, goes out without telling him, neglects the children, and refuses sexual relations. Table 15.6.1 summarizes women's attitudes toward wife beating in these five specific circumstances.

Twenty-two percent of women agree with at least one of the specified reasons justifying a husband beating his wife. Seventeen percent agree that a husband is justified in beating his wife if she neglects their children, 15 percent agree if she argues with him, 10 percent agree if she goes out without telling him, 4 percent agree if she refuses sexual relations with him, and 2 percent agree if she burns the food. The percentage of women who agree with at least one of the specified reasons justifying a husband beating his wife has decreased from 32 percent in 2000 to the current level of 22 percent.

Women with higher education are less likely to agree with any of the specified reasons, as are women who are employed for cash. Twenty-five percent of women who are currently married agree with at least one reason justifying a man beating his wife; this is a higher percentage than for never-married women or formerly married women (18 and 19 percent, respectively). About one-third of rural women ( 34 percent) agree with at least one reason justifying a wife's beating, compared with 15 percent of urban women. The proportion of women agreeing with at least one of the given reasons varies by region, from 7 percent in Syunik to 47 percent in Armavir. Women in the lowest wealth quintile are much more likely to agree with at least one of the specified reasons than women in the highest quintile ( 41 percent versus 10 percent).

Men were also asked about their opinion on the justification of wife beating under certain circumstances. As shown in Table 15.6.2, men are more likely to agree with one of the reasons justifying a husband's beating of his wife ( 31 percent compared with 22 percent of women). About one-fourth of men agree that a husband has the right to beat his wife if she either neglects the children or argues with him. Fourteen percent agree that a man is justified in hitting or beating his wife if she goes out without telling him, 5 percent of men agree if she refuses to have sex with him, while 1 percent believe he may beat her if she burns the food. Similar to women, the proportion of men who agree with at least one of the specified reasons justifying a husband beating his wife has decreased from 42 percent in the 2000 ADHS to 31 percent.

| Table 15.6.1 Attitudes toward wife beating: Women |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of women 15-49 who agree that a husband is justified in hitting or beating his wife for specific reasons, according to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |
|  | Husband is justified in hitting or beating his wife if she: |  |  |  |  | Percentage who agree with at least one specified reason | Number of women |
| Background characteristic | Burns the food | Argues with him | Goes out without telling him | Neglects the children | Refuses to have sex with him |  |  |
| Age |  |  |  |  |  |  |  |
| 15-19 | 1.6 | 15.3 | 10.2 | 17.5 | 3.0 | 22.0 | 1,123 |
| 20-24 | 2.4 | 13.9 | 9.1 | 15.6 | 3.0 | 20.2 | 1,131 |
| 25-29 | 1.0 | 15.0 | 10.0 | 16.3 | 4.2 | 21.8 | 929 |
| 30-34 | 2.6 | 14.2 | 10.5 | 18.8 | 3.2 | 23.5 | 749 |
| 35-39 | 1.9 | 13.7 | 11.1 | 16.7 | 4.1 | 22.3 | 711 |
| 40-44 | 2.6 | 15.7 | 11.5 | 20.4 | 5.7 | 25.0 | 965 |
| 45-49 | 2.5 | 15.2 | 10.3 | 16.8 | 3.1 | 20.8 | 958 |
| Employment in the last 12 months |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Not employed | 2.1 | 16.0 | 11.7 | 18.5 | 3.9 | 23.6 | 4,789 |
| Employed for cash | 1.6 | 10.2 | 6.4 | 12.6 | 2.9 | 16.1 | 1,488 |
| Employed not for cash | 3.9 | 17.8 | 7.5 | 23.4 | 5.0 | 28.4 | 282 |
| Number of living children |  |  |  |  |  |  |  |
| 0 | 1.4 | 12.4 | 7.9 | 14.8 | 2.7 | 18.8 | 2,352 |
| 1-2 | 1.9 | 14.1 | 9.4 | 15.2 | 3.5 | 20.4 | 2,812 |
| $3+$ | 3.7 | 20.0 | 16.1 | 26.2 | 5.9 | 31.1 | 1,402 |
| Marital status |  |  |  |  |  |  |  |
| Never married | 1.4 | 11.8 | 7.5 | 14.2 | 2.4 | 17.9 | 2,043 |
| Currently married | 2.5 | 16.5 | 12.1 | 19.4 | 4.1 | 24.7 | 4,044 |
| Formerly married | 1.5 | 12.5 | 7.0 | 13.6 | 6.2 | 18.5 | 479 |
| Residence |  |  |  |  |  |  |  |
| Urban | 1.2 | 9.9 | 5.7 | 11.3 | 2.4 | 15.2 | 4,194 |
| Rural | 3.7 | 23.3 | 18.4 | 28.2 | 5.9 | 34.3 | 2,372 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 1.1 | 6.7 | 3.0 | 6.9 | 1.6 | 10.0 | 2,468 |
| Aragatsotn | 7.7 | 32.5 | 23.1 | 33.5 | 10.5 | 45.9 | 292 |
| Ararat | 0.0 | 8.8 | 3.6 | 15.8 | 1.3 | 16.9 | 462 |
| Armavir | 4.1 | 36.1 | 20.2 | 38.2 | 5.2 | 47.2 | 567 |
| Gegharkunik | 3.7 | 24.1 | 26.9 | 31.9 | 3.1 | 38.0 | 443 |
| Lori | 1.3 | 19.3 | 9.4 | 14.7 | 3.7 | 24.6 | 537 |
| Kotayk | 3.1 | 21.8 | 17.4 | 23.8 | 8.3 | 29.5 | 563 |
| Shirak | 1.5 | 12.1 | 18.1 | 24.7 | 6.8 | 25.9 | 563 |
| Syunik | 0.6 | 3.9 | 2.7 | 6.1 | 1.7 | 7.3 | 281 |
| Vayots Dzor | 0.0 | 9.2 | 2.9 | 8.3 | 1.8 | 11.8 | 107 |
| Tavush | 4.3 | 14.3 | 8.3 | 22.8 | 4.3 | 28.2 | 285 |
| Education |  |  |  |  |  |  |  |
| Basic general | 4.0 | 21.5 | 16.2 | 22.4 | 5.8 | 28.3 | 529 |
| Secondary general | 2.9 | 20.2 | 15.1 | 24.1 | 5.5 | 29.4 | 2,440 |
| Specialized secondary | 1.6 | 14.5 | 8.8 | 16.5 | 3.1 | 22.2 | 1,997 |
| Higher | 0.8 | 4.6 | 3.0 | 6.5 | 1.1 | 8.8 | 1,600 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 4.8 | 29.2 | 21.6 | 32.8 | 7.7 | 41.1 | 1,164 |
| Second | 2.8 | 19.1 | 15.7 | 23.4 | 4.5 | 28.8 | 1,284 |
| Middle | 1.2 | 11.6 | 8.4 | 15.0 | 3.7 | 18.7 | 1,303 |
| Fourth | 1.6 | 10.9 | 5.5 | 11.7 | 2.3 | 16.0 | 1,375 |
| Highest | 0.5 | 5.7 | 2.8 | 7.1 | 1.1 | 9.7 | 1,440 |
| Total | 2.1 | 14.8 | 10.3 | 17.4 | 3.7 | 22.1 | 6,566 |
| Note: Currently married includes respondents in consensual union (living together). Formerly married includes divorced/separated/widowed. |  |  |  |  |  |  |  |


| Table 15.6.2 Attitudes toward wife beating: Men |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of men 15-49 who agree that a husband is justified in hitting or beating his wife for specific reasons, accordin to background characteristics, Armenia 2005 |  |  |  |  |  |  |  |
|  | Husband is justified in hitting or beating his wife if she: |  |  |  |  | Percentage who agree with at least one specified reason |  |
| Background characteristic | Burns the food | Argues with him | Goes out without telling him | Neglects the children | Refuses to have sex with him |  | Number of men |
| Age |  |  |  |  |  |  |  |
| 15-19 | 1.4 | 22.5 | 13.0 | 23.5 | 11.2 | 30.5 | 292 |
| 20-24 | 0.1 | 27.8 | 13.6 | 26.1 | 3.8 | 38.3 | 237 |
| 25-29 | 2.6 | 21.6 | 11.5 | 19.1 | 4.9 | 28.8 | 202 |
| 30-34 | 0.6 | 21.9 | 17.9 | 21.1 | 3.9 | 26.4 | 156 |
| 35-39 | 0.7 | 17.7 | 14.5 | 22.9 | 1.3 | 28.8 | 150 |
| 40-44 | 1.5 | 24.4 | 18.4 | 28.6 | 4.5 | 34.0 | 199 |
| 45-49 | 0.2 | 13.4 | 12.0 | 19.4 | 3.4 | 24.4 | 211 |
| Employment in the last 12 months |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Not employed | 1.4 | 22.4 | 13.8 | 22.8 | 7.6 | 31.9 | 716 |
| Employed for cash | 0.8 | 19.3 | 13.4 | 21.9 | 2.9 | 28.1 | 666 |
| Employed not for cash | 0.0 | 39.4 | 27.3 | 39.3 | 2.8 | 41.4 | 60 |
| Number of living children |  |  |  |  |  |  |  |
| 0 | 1.2 | 24.6 | 14.3 | 23.7 | 7.3 | 33.1 | 688 |
| 1-2 | 0.7 | 16.0 | 11.9 | 21.0 | 2.2 | 26.3 | 519 |
| $3+$ | 1.4 | 25.1 | 18.7 | 25.9 | 5.8 | 32.1 | 240 |
| Marital status |  |  |  |  |  |  |  |
| N ever married | 1.1 | 26.1 | 14.7 | 25.2 | 7.6 | 35.3 | 615 |
| Currently married | 1.0 | 18.4 | 13.7 | 21.4 | 3.4 | 26.9 | 815 |
| Formerly married | 2.5 | 14.7 | 22.5 | 27.5 | 6.8 | 27.5 | 17 |
| Residence |  |  |  |  |  |  |  |
| Urban | 0.4 | 16.4 | 10.2 | 20.8 | 4.2 | 27.0 | 913 |
| Rural | 2.2 | 30.5 | 21.0 | 27.1 | 7.0 | 36.5 | 534 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 0.0 | 13.3 | 7.9 | 19.3 | 2.6 | 24.9 | 547 |
| Aragatsotn | 5.2 | 54.6 | 33.7 | 35.4 | 10.6 | 57.9 | 71 |
| Ararat | 0.0 | 6.5 | 4.0 | 2.5 | 0.0 | 6.5 | 110 |
| Armavir | 1.0 | 34.0 | 23.0 | 36.3 | 2.8 | 40.8 | 139 |
| Gegharkunik | 3.0 | 49.1 | 32.3 | 36.5 | 3.6 | 57.1 | 81 |
| Lori | 1.6 | 12.1 | 7.8 | 18.2 | 1.6 | 22.3 | 87 |
| Kotayk | 0.0 | 31.0 | 17.0 | 26.8 | 9.8 | 38.3 | 151 |
| Shirak | 0.0 | 1.0 | 0.0 | 3.0 | 0.0 | 3.9 | 98 |
| Syunik | 4.7 | 47.6 | 37.9 | 64.1 | 30.3 | 73.1 | 67 |
| Vayots Dzor | 0.0 | 11.5 | 13.9 | 13.3 | 4.7 | 13.9 | 31 |
| Tavush | 4.6 | 20.6 | 20.8 | 21.4 | 14.0 | 29.7 | 64 |
| Education |  |  |  |  |  |  |  |
| Basic general | 2.4 | 28.7 | 24.1 | 32.7 | 10.9 | 40.9 | 205 |
| Secondary general | 1.1 | 25.1 | 13.2 | 25.1 | 4.8 | 33.4 | 586 |
| Specialized secondary | 0.6 | 20.4 | 16.1 | 24.0 | 4.5 | 29.9 | 310 |
| Higher | 0.5 | 12.6 | 8.3 | 13.2 | 3.3 | 20.1 | 346 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 3.2 | 34.7 | 26.6 | 32.6 | 8.8 | 42.3 | 261 |
| Second | 1.2 | 22.5 | 17.0 | 22.8 | 6.0 | 31.0 | 264 |
| Middle | 0.7 | 20.6 | 13.7 | 23.5 | 3.7 | 31.4 | 326 |
| Fourth | 0.2 | 19.8 | 10.8 | 25.3 | 4.2 | 32.4 | 316 |
| Highest | 0.3 | 11.9 | 4.5 | 11.5 | 4.2 | 15.8 | 280 |
| Total | 1.0 | 21.6 | 14.2 | 23.1 | 5.2 | 30.5 | 1,447 |

Men who are either employed for cash or have a higher level of education are less likely to agree with any of the stated reasons. Men in rural areas are more likely than those from urban areas to agree with at least one reason justifying a man beating his wife ( 37 percent versus 27 percent). The percentage of men agreeing with at least one of these reasons is highest in Syunik (73 percent) and lowest in Shirak (4 percent). It is worth noting that while women residing in Syunik are the least likely to agree with any of the given reasons for wife beating ( 7 percent), men residing in the same region are the most likely to do so (73 percent).

### 15.5 Attitudes towards Refusing Sexual Relations

The extent of control women have over when they have sexual intercourse has important implications for demographic and health outcomes. It is also an indicator of women's empowerment because it measures women's degree of acceptance of norms in certain societies that socialize women into believing that a woman does not have the right to refuse to have sexual intercourse with her husband for any reason.

The ADHS survey included a question on whether the respondent thinks that a wife is justified in refusing to have sexual intercourse with her husband under three circumstances: she knows her husband has a sexually transmitted infection (STI); she knows her husband has sexual intercourse with other women; and when she is tired or not in the mood. These three circumstances for which women's opinions are sought have been chosen because they are effective in combining issues of women's rights and consequences for women's health. Table 15.7.1 shows the percentages of women who say that a wife is justified in refusing to have sexual intercourse with her husband for these reasons according to background characteristics.

Overall, 56 percent of women in Armenia agree that a woman is justified in refusing to have sex with her husband for all three of the selected reasons. Specifically, 88 percent of women said that a woman can refuse to have sex with her husband if they know the husband has an STI, 82 percent said they can refuse if they know that the husband is having sexual relations with another woman, and 59 percent said they can refuse if she is not in the mood or is tired.

Overall, only one in ten women do not agree with any of the given reasons for a wife to refuse sex with her husband. Younger women are more likely not to agree with any of the reasons; 28 percent of women 15-19 do not feel that a woman is justified in refusing sex with her husband in any of the specified circumstances, compared with 9 percent or less in other age groups. Twenty-nine percent of women with basic education and 12 percent of women with a secondary general education disagree with all of the scenarios, as opposed to 7 percent of women with a specialized secondary education and 6 percent of women with a higher education. Among unemployed women, 12 percent do not agree with any of the reasons compared with 5 percent of women employed for cash. Women who have never been married or have no children are also more likely not to agree with any of the specified reasons. Rural women tend to disagree more with any of the reasons than urban women (14 percent versus 9 percent). The proportion of women who do not agree with any of the given reasons for a wife to refuse sex with her husband decreases with increasing wealth.

Table 15.7.2 shows the percentage of men who say that women are justified in refusing sex with their husband by background characteristics. Men are about as likely as women to agree with all three of the selected reasons for a wife to withhold sex from her husband ( 55 percent). Specifically, 92 percent of men said that she can refuse if she knows that her husband has an STI, 74 percent agree that a woman can refuse to have sex with her husband if she is not in the mood or is tired, and 62 percent said she can refuse if she knows that her husband is having sexual relations with another woman.

Table 15.7.1 Attitudes toward refusing sexual intercourse with husband: Women
Percentage of women age 15-49 who believe that a wife is justified in refusing to have sexual intercourse with her husband in specific circumstances, by background characteristics, Armenia 2005

| Background characteristic | W ife is justified in refusing sex with her husband if she: |  |  | Percentage who agree with all of the specified reasons | Percentage who agree with none of the specified reasons | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Knows husband has a sexually transmitted infection | Knows husband has sex with other women | Is tired or not in the mood |  |  |  |
| Age |  |  |  |  |  |  |
| 15-19 | 71.1 | 65.5 | 44.2 | 42.6 | 27.6 | 1,123 |
| 20-24 | 89.5 | 84.2 | 59.8 | 57.3 | 8.9 | 1,131 |
| 25-29 | 90.8 | 86.1 | 60.4 | 57.6 | 7.2 | 929 |
| 30-34 | 92.4 | 85.2 | 61.1 | 55.7 | 4.8 | 749 |
| 35-39 | 92.9 | 85.4 | 65.9 | 62.0 | 5.7 | 711 |
| 40-44 | 91.8 | 86.2 | 63.1 | 59.5 | 6.2 | 965 |
| 45-49 | 91.5 | 84.0 | 62.9 | 59.3 | 7.1 | 958 |
| Employment in the past 12 months |  |  |  |  |  |  |
| Not employed | 86.2 | 80.6 | 57.5 | 54.5 | 12.1 | 4,789 |
| Employed for cash | 93.6 | 87.6 | 66.6 | 63.2 | 5.1 | 1,488 |
| Employed not for cash | 86.3 | 71.1 | 43.8 | 38.9 | 8.4 | 282 |
| Number of living children |  |  |  |  |  |  |
| 0 | 79.4 | 73.7 | 50.6 | 48.7 | 19.3 | 2,352 |
| 1-2 | 93.9 | 87.6 | 65.3 | 61.6 | 4.6 | 2,812 |
| 3+ | 90.0 | 83.6 | 60.3 | 55.9 | 6.9 | 1,402 |
| Marital status |  |  |  |  |  |  |
| Never married | 77.5 | 72.3 | 49.8 | 48.2 | 21.2 | 2,043 |
| Currently married | 92.9 | 86.5 | 62.6 | 58.8 | 5.0 | 4,044 |
| Formerly married | 89.8 | 82.4 | 67.0 | 62.7 | 9.7 | 479 |
| Residence |  |  |  |  |  |  |
| Urban | 90.0 | 85.8 | 62.1 | 59.3 | 8.5 | 4,194 |
| Rural | 84.1 | 74.7 | 53.4 | 49.5 | 13.6 | 2,372 |
| Region |  |  |  |  |  |  |
| Yerevan | 91.4 | 89.1 | 67.2 | 64.6 | 7.3 | 2,468 |
| Aragatsotn | 62.3 | 58.2 | 54.3 | 46.5 | 32.6 | 292 |
| Ararat | 78.4 | 55.8 | 28.8 | 27.8 | 20.9 | 462 |
| Armavir | 93.8 | 88.4 | 79.0 | 74.8 | 5.7 | 567 |
| Gegharkunik | 83.2 | 76.4 | 54.5 | 50.0 | 12.9 | 443 |
| Lori | 84.1 | 76.2 | 44.4 | 42.5 | 14.8 | 537 |
| Kotayk | 82.2 | 76.2 | 53.2 | 45.9 | 13.0 | 563 |
| Shirak | 94.8 | 90.3 | 65.1 | 64.6 | 5.0 | 563 |
| Syunik | 98.0 | 95.2 | 36.7 | 36.1 | 2.0 | 281 |
| Vayots Dzor | 88.0 | 69.3 | 37.7 | 36.8 | 11.8 | 107 |
| Tavush | 88.6 | 76.6 | 65.1 | 59.0 | 7.7 | 285 |
| Education |  |  |  |  |  |  |
| Basic general | 67.4 | 62.7 | 45.1 | 41.0 | 29.0 | 529 |
| Secondary general | 85.4 | 79.1 | 54.2 | 51.1 | 12.2 | 2,440 |
| Specialized secondary | 91.7 | 83.9 | 63.0 | 59.2 | 7.0 | 1,997 |
| Higher | 93.5 | 89.6 | 65.7 | 63.5 | 5.6 | 1,600 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 82.1 | 75.4 | 54.1 | 50.2 | 15.0 | 1,164 |
| Second | 84.5 | 76.5 | 53.9 | 50.6 | 13.5 | 1,284 |
| Middle | 90.4 | 81.0 | 59.2 | 55.7 | 8.5 | 1,303 |
| Fourth | 89.4 | 85.3 | 60.3 | 57.1 | 8.7 | 1,375 |
| Highest | 91.7 | 89.1 | 66.0 | 63.7 | 7.1 | 1,440 |
| Total | 87.9 | 81.8 | 59.0 | 55.8 | 10.4 | 6,566 |

Table 15.7.2 Attitudes toward refusing sexual intercourse with husband: Men
Percentage of men age 15-49 who believe that a wife is justified in refusing to have sexual intercourse with her husband in specific circumstances and percentage who say a woman is justified in asking her husband to use condoms if she knows he has a sexually transmitted infection (STI), by background characteristics, Armenia 2005

| Background characteristic | Wife is justified in refusing sex with her husband if she: |  |  | Percentage who agree with all of the specified reasons | Percentage who agree with none of the specified reasons | Percentage who say a wife is justified in asking husband to use condoms if he has an STI | Number of men |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Knows husband has a sexually transmitted infection | Knows husband has sex with other women | Is tired or not in the mood |  |  |  |  |
| Age |  |  |  |  |  |  |  |
| 15-19 | 70.2 | 41.6 | 44.2 | 31.3 | 26.8 | 72.8 | 292 |
| 20-24 | 95.7 | 53.4 | 76.8 | 49.9 | 3.4 | 92.0 | 237 |
| 25-29 | 98.5 | 72.8 | 82.3 | 63.9 | 1.5 | 94.9 | 202 |
| 30-34 | 99.1 | 66.8 | 83.5 | 60.3 | 0.9 | 96.2 | 156 |
| 35-39 | 95.9 | 67.4 | 81.6 | 62.4 | 2.9 | 93.2 | 150 |
| 40-44 | 98.3 | 71.1 | 81.7 | 61.3 | 1.0 | 89.9 | 199 |
| 45-49 | 99.2 | 71.7 | 87.1 | 66.3 | 0.8 | 93.7 | 211 |
| Employment in the past 12 |  |  |  |  |  |  |  |
| Not employed | 86.8 | 57.7 | 66.4 | 50.0 | 11.7 | 84.0 | 716 |
| Employed for cash | 97.6 | 68.2 | 82.3 | 61.1 | 1.9 | 94.0 | 666 |
| Employed not for cash | 96.1 | 39.7 | 80.8 | 36.0 | 3.9 | 94.7 | 60 |
| Number of living children |  |  |  |  |  |  |  |
| 0 | 85.0 | 52.8 | 64.2 | 45.2 | 13.2 | 84.4 | 688 |
| 1-2 | 98.2 | 73.9 | 83.4 | 66.5 | 1.6 | 93.0 | 519 |
| 3+ | 100.0 | 60.9 | 84.2 | 55.0 | 0.0 | 93.9 | 240 |
| Marital status |  |  |  |  |  |  |  |
| Never married | 83.3 | 51.3 | 61.5 | 43.3 | 14.7 | 83.2 | 615 |
| Currently married | 98.8 | 69.6 | 84.3 | 62.8 | 1.1 | 93.6 | 815 |
| Formerly married | 100.0 | 60.6 | 68.2 | 60.6 | 0.0 | 83.7 | 17 |
| Residence |  |  |  |  |  |  |  |
| Urban | 93.0 | 70.7 | 78.4 | 63.0 | 5.7 | 91.7 | 913 |
| Rural | 90.7 | 46.4 | 67.6 | 39.9 | 8.7 | 84.6 | 534 |
| Region |  |  |  |  |  |  |  |
| Yerevan | 94.6 | 79.5 | 85.2 | 73.3 | 3.9 | 96.5 | 547 |
| Aragatsotn | 96.7 | 37.7 | 88.7 | 35.3 | 3.3 | 97.3 | 71 |
| Ararat | 76.4 | 39.7 | 67.3 | 38.5 | 21.7 | 71.9 | 110 |
| Armavir | 100.0 | 41.9 | 85.1 | 37.4 | 0.0 | 100.0 | 139 |
| Gegharkunik | 88.6 | 38.3 | 55.5 | 31.9 | 11.0 | 93.3 | 81 |
| Lori | 93.9 | 65.7 | 59.6 | 57.2 | 4.8 | 87.0 | 87 |
| Kotayk | 94.3 | 53.1 | 62.6 | 45.5 | 5.0 | 95.5 | 151 |
| Shirak | 84.3 | 68.9 | 43.3 | 42.5 | 15.7 | 29.1 | 98 |
| Syunik | 82.7 | 65.4 | 58.5 | 53.0 | 17.3 | 83.2 | 67 |
| Vayots Dzor | 87.3 | 33.3 | 81.6 | 31.5 | 12.7 | 95.2 | 31 |
| Tavush | 98.3 | 61.6 | 87.9 | 57.0 | 0.0 | 99.3 | 64 |
| Education |  |  |  |  |  |  |  |
| Basic general | 86.0 | 47.5 | 64.3 | 43.3 | 10.8 | 84.8 | 205 |
| Secondary general | 89.8 | 56.1 | 67.9 | 46.1 | 9.1 | 85.9 | 586 |
| Specialized secondary | 96.2 | 68.5 | 84.5 | 62.6 | 3.6 | 92.0 | 310 |
| Higher | 96.2 | 73.7 | 82.3 | 67.8 | 3.5 | 94.4 | 346 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 90.3 | 48.7 | 66.9 | 40.2 | 9.5 | 79.9 | 261 |
| Second | 88.6 | 53.5 | 71.5 | 45.9 | 9.6 | 82.4 | 264 |
| Middle | 91.5 | 62.7 | 72.1 | 55.1 | 7.3 | 88.6 | 326 |
| Fourth | 94.3 | 64.7 | 78.1 | 58.0 | 5.1 | 95.2 | 316 |
| Highest | 95.8 | 77.1 | 82.6 | 71.1 | 3.2 | 97.6 | 280 |
| Total | 92.2 | 61.7 | 74.4 | 54.5 | 6.8 | 89.1 | 1,447 |

Overall, only 7 percent of men do not agree with any of the three reasons given for a wife to refuse to have sex with her husband. Similar patterns among men and women are seen as to which groups are more likely not to agree with any of the given reasons. Younger men age 15-19 (27 percent), men with only a basic general education ( 11 percent), never-married men ( 15 percent), men with no children (13 percent), those residing in rural areas ( 9 percent), and unemployed men (12 percent) all have a higher than average likelihood of not agreeing with any reason given for a wife to withhold sex from her husband. As with women, the proportion of men who do not agree with any of the given reasons for a wife to refuse sex with her husband is reversely related with wealth.

Since 2000, there have not been significant changes in the attitudes of women or men with regard to the issue of a wife's justification in refusing to have sexual intercourse with her husband.

In addition, men were asked if they thought a woman is justified in asking that they use condoms if she knows that her husband has an STI. The results show that almost 90 percent of men agree. Younger men, those in the lower wealth quintiles, and those in Shirak region are less likely than other men to agree that a wife is justified in asking that they use condoms in such a case.

### 15.6 Indicators of Women's Empowerment

The three sets of empowerment indicators, namely women's participation in making household decisions, their attitudes toward women's ability to refuse sexual intercourse with their husband/partner, and their attitudes toward wife beating can be summarized into three separate indices. The first index shows the number of decisions (see Table 15.5 for the list of decisions) in which women participate alone or jointly with their husband/partner. This index ranges in value from 0 to 4 and is positively related to women's empowerment. It reflects the degree of decisionmaking control that women are able to exercise in areas that affect their own lives and environments. The second indicator, which ranges in value from 0 to 3 , is the number of circumstances (see Table 15.7.1 for the list of the circumstances) in which the respondent feels that a woman is justified in refusing sexual intercourse with her husband or partner. This indicator reflects perceptions of sexual roles and women's rights over their bodies and relates positively to women's sense of self and empowerment. The final indicator, which ranges in value from 0 to 5 , is the total number of reasons (see Table 15.6.1 for the list of reasons) for which the respondent feels that a husband is justified in beating his wife. A lower score on this indicator is interpreted as reflecting a greater sense of entitlement and self-esteem and a higher status of women.

Table 15.8 shows how these three indicators relate to each other for female respondents. In general, the expectation is that women who participate in making household decisions are also more likely to have gender-egalitarian beliefs. The data show that there is a direct relationship between woman's participation in decisionmaking and number of reasons to refuse sex with husband. For example, the proportion of women who participate in the household decisionmaking increases from 22 percent among those who do not agree with any of the reasons for a wife to refuse sex with her husband to 46 percent among women who agree with all three reasons.

Generally, there is a positive relationship between number of decisions in which the woman participates and the proportion who agree with none of the given reasons for a husband to beat his wife. Sixty-one percent of women who do not participate in any of the household decisions disagree with all of the given reasons for a husband to beat his wife compared with 76 percent among those who participate in three to four decisions. There is no clear relationship between the proportion who disagree with all of the reasons to justify wife beating and number of reasons to refuse sex with the husband.

Table 15.8 Indicators of women's empowerment
Percentage of women age 15-49 who participate in making all specified household decisions, percentage who disagree with all reasons for justifying wife beating, and percentage who agree with all reasons for refusing sexual intercourse with husband/partner, by value on each of the indicators of women's empowerment, Armenia 2005

na $=$ Not applicable
${ }^{1}$ Restricted to currently married women. See Table 15.5 for the list of decisions.
${ }^{2}$ See Table 15.7.1 for reasons.
${ }^{3}$ See Table 15.6.1 for reasons.

### 15.7 CURRENT USE OF CONTRACEPTION By WOMEN's Status

A woman's ability to control her fertility and the contraceptive method she chooses are likely to be affected by her status, self-image, and sense of empowerment. A woman who feels that she is unable to control other aspects of her life may be less likely to feel she can make and carry out decisions on her fertility. She may also feel the need to choose methods that are less likely to be evident or which do not depend on her husband's cooperation. The ADHS collected information on three indicators of women's empowerment: number of decisions in which the respondent participates, the number of reasons for which a woman can refuse to have sexual relations with her husband, and the number of reasons for which the respondent feels a husband is justified in beating his wife. This section focuses on the relationship between contraceptive use and women's status.

Table 15.9 shows the relationship of each of these three indicators of women's empowerment with current use of contraceptive methods by currently married women age $15-49$. Overall, women who are more empowered (i.e., respondents with higher scores on the first two indicators of status and a lower score on the third indicator of women's status) are more likely to be using a modern method of contraception. For example, 43 percent of women who do not participate in any of the household decisions are using a method of contraception, as opposed to almost 54 percent of women who participate in three or four of the specified decisions. Results of the second indicator (number of reasons to refuse sexual intercourse with husband) follow the same pattern. Forty-six percent of women who do not agree with any of the
given reasons for refusing sex with husband are using a method of contraception as opposed to 53 percent of women who agree with all three reasons. Although the third indicator (number of reasons for which wife beating is justified) appears to have no discernable relationship to contraceptive use, these results suggest that, overall, different dimensions of women's empowerment are positively associated with women's use of contraception in Armenia.

Table 15.9 Current use of contraception by women's status
Percent distribution of currently married women by contraceptive method currently used, according to selected indicators of women's status, Armenia 2005

| Empowerment indicator | Any method | M odern method |  |  | Anytraditional method | Not currently using method | Total | $\begin{aligned} & \text { Number } \\ & \text { of } \\ & \text { women } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Any modern method | Temporary female methods ${ }^{1}$ | Male condom |  |  |  |  |
| Number of decisions in which woman participates ${ }^{2}$ |  |  |  |  |  |  |  |  |
| 0 | 42.8 | 11.3 | 6.3 | 5.0 | 31.5 | 57.2 | 100.0 | 182 |
| 1-2 | 50.7 | 17.3 | 9.5 | 7.8 | 33.4 | 49.3 | 100.0 | 629 |
| 3-4 | 54.1 | 20.4 | 12.1 | 8.3 | 33.7 | 45.9 | 100.0 | 3,233 |

## Number of reasons given for refusing to have sexual intercourse with husband ${ }^{3}$

| 0 | 45.9 | 13.8 | 8.2 | 5.5 | 32.2 | 54.1 | 100.0 | 202 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1-2 | 53.5 | 18.1 | 11.1 | 7.1 | 35.3 | 46.5 | 100.0 | 1,465 |
| 3 | 53.4 | 20.8 | 11.9 | 8.9 | 32.7 | 46.6 | 100.0 | 2,377 |
| Number of reasons for which wife beating is justified ${ }^{4}$ |  |  |  |  |  |  |  |  |
| 0 | 53.3 | 20.4 | 11.5 | 8.9 | 32.9 | 46.7 | 100.0 | 3,047 |
| 1-2 | 54.0 | 18.8 | 12.4 | 6.3 | 35.2 | 46.0 | 100.0 | 633 |
| 3-4 | 49.4 | 13.6 | 8.3 | 5.3 | 35.8 | 50.6 | 100.0 | 319 |
| 5 | 52.1 | 9.8 | 9.8 | 0.0 | 42.3 | 47.9 | 100.0 | 45 |
| Total | 53.1 | 19.5 | 11.4 | 8.1 | 33.6 | 46.9 | 100.0 | 4,044 |

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 amenorrhea method
${ }^{2}$ Restricted to currently married women. See Table 15.5 for the list of decisions.
${ }^{3}$ See Table 15.7.1 for the list of reasons.
${ }^{4}$ See Table 15.6.1 for the list of reasons.

### 15.8 Women's Status and Ideal Family Size and Unmet Need

An increase in women's status and empowerment is recognized as important for efforts to reduce fertility through at least two main pathways: 1) desired family size decreases as women become more empowered and 2) empowerment increases a woman's ability to meet family-size goals through the effective use of contraception. Table 15.10 shows how women's ideal family size and their unmet need for family planning vary by the three indicators of women's empowerment-number of decisions in which the respondent has the final say, number of reasons for which the respondent feels a husband is justified in beating his wife, and number of reasons for which a woman can refuse to have sexual intercourse with her husband.

| Mean ideal number of children and the percentage of women with an unmet need for family planning, by indicators of women's empowerment, Armenia 2005 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Empowerment indicator | Mean ideal number of children ${ }^{1}$ | Number of women | Percentage of women with an unmet need for family planning ${ }^{2}$ |  |  | Number of women |
|  |  |  | $\begin{gathered} \text { For } \\ \text { spacing } \end{gathered}$ | $\begin{gathered} \text { For } \\ \text { limiting } \end{gathered}$ | Total |  |
| Number of decisions in which woman participates ${ }^{3}$ |  |  |  |  |  |  |
| 0 | 2.5 | 182 | 7.0 | 12.5 | 19.5 | 182 |
| 1-2 | 2.6 | 619 | 7.4 | 11.0 | 18.4 | 629 |
| 3-4 | 2.7 | 3,198 | 2.6 | 9.3 | 11.9 | 3,233 |
| Number of reasons given for refusing to have sexual intercourse with husband ${ }^{4}$ |  |  |  |  |  |  |
| 0 | 2.3 | 660 | 1.1 | 3.2 | 4.3 | 681 |
| 1-2 | 2.6 | 2,199 | 2.3 | 5.9 | 8.2 | 2,223 |
| 3 | 2.6 | 3,611 | 2.4 | 6.9 | 9.3 | 3,662 |
| Number of reasons for which wife beating is justified ${ }^{5}$ |  |  |  |  |  |  |
| 0 | 2.5 | 5,027 | 2.3 | 5.9 | 8.1 | 5,114 |
| 1-2 | 2.6 | 936 | 1.8 | 7.6 | 9.4 | 942 |
| 3-4 | 2.7 | 455 | 2.6 | 6.7 | 9.3 | 457 |
| 5 | (2.6) | 52 | 1.8 | 6.4 | 8.2 | 53 |
| Total | 2.6 | 6,470 | 2.2 | 6.2 | 8.4 | 6,566 |
| Note: Figures in parentheses are based on 25-49 unweighted cases. <br> ${ }^{1}$ M ean excludes respondents who gave non-numeric responses. <br> ${ }^{2}$ See Table 7.3 for definition of unmet need for family planning. <br> ${ }^{3}$ Restricted to currently married women. See Table 15.5 for the list of decisions. <br> ${ }^{4}$ See Table 15.7.1 for the list of reasons. <br> ${ }^{5}$ See Table 15.6.1 for the list of reasons. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

The data show that there is no clear pattern in the relationship of women's empowerment indicators and the mean ideal number of children. On the other hand, the unmet need for family planning, both for spacing and limiting, is related to the women's participation in decisionmaking. For example, the total unmet need for family planning is lower for women who participate in three to four decisions when compared with those who participate in none ( 12 percent versus 20 percent). The pattern is not clear when looking at the effect of the other two indicators of women's empowerment (reasons to refuse sex with husband and reasons for which wife beating is justified).

### 15.9 Women's Status and Reproductive Health Care

A woman's status and level of self-respect can be major determinants of a woman's ability to obtain adequate health care for herself. Table 15.11 examines whether women's use of antenatal, delivery, and postnatal care services from health workers varies by their level of empowerment as measured by the three indicators of empowerment. In societies where health care is widespread, women's empowerment may not affect their access to reproductive health services; in other societies, however, increased empowerment of women is likely to increase their ability to seek out and use health services to better meet their own reproductive health goals, including the goal of safe motherhood.

Table 15.11 Reproductive health care by women's empowerment
Percentage of women with a live birth in the five years preceding the survey who received antenatal care, delivery assistance, and postnatal care from a health worker for the most recent birth, by indicators of women's empowerment, Armenia 2005

| Empowerment indicator | Received antenatal care from a health professional | Received delivery assistance from a health professional | $\qquad$ | Number of births |
| :---: | :---: | :---: | :---: | :---: |
| Number of decisions in which woman participates ${ }^{2}$ |  |  |  |  |
| 0 | 87.8 | 100.0 | 97.3 | 87 |
| 1-2 | 92.2 | 99.5 | 99.0 | 292 |
| 3-4 | 94.2 | 98.7 | 96.6 | 746 |
| Number of reasons given for refusing to have sexual intercourse with husband ${ }^{3}$ |  |  |  |  |
| 0 | 82.6 | 95.8 | 93.9 | 63 |
| 1-2 | 92.5 | 98.2 | 95.9 | 359 |
| 3 | 94.5 | 99.7 | 98.4 | 754 |
| Number of reasons for which wife beating is justified ${ }^{4}$ |  |  |  |  |
| 0 | 95.6 | 99.2 | 98.5 | 894 |
| 1-2 | 88.7 | 99.2 | 96.9 | 176 |
| 3-4 | 79.5 | 97.0 | 89.4 | 88 |
| 5 | 85.7 | 100.0 | 85.5 | 19 |
| Total | 93.2 | 99.1 | 97.4 | 1,176 |

Note: Health personnel includes doctor, nurse, or midwife.
${ }^{1}$ Pertains to all recent deliveries, including those delivered in a health facility
${ }^{2}$ Restricted to currently married women. See Table 15.5 for the list of decisions.
${ }^{3}$ See Table 15.7.1 for the list of reasons.
${ }^{4}$ See Table 15.6.1 for the list of reasons.

The data indicate that there is a relationship between each of the selected indicators of women's status and women's utilization of antenatal care, suggesting that in Armenia, as women's status increases, so does their access to reproductive health care from a professional. For example, among women who participate in all of the specified household decisions, 94 percent received antenatal care from a trained health professional, compared with 88 percent of women who do not participate in any decisions. Similarly, the proportion of women who received antenatal care from a health professional increases with the number of reasons women feel justified in refusing sex with their husband. Finally, the percentage of women with professional antenatal care declines as the number of reasons justifying wife beating increases.

Virtually all Armenian women receive delivery care from a health professional (99 percent) or receive postnatal care from a health professional within two days of delivery ( 97 percent). Therefore, there is less variation in these two components of reproductive health care by women's status. In summary, the data suggest that a woman's status and empowerment has a positive relationship with access to quality health care.

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## SAMPLE DESIGN

Appendix $\boldsymbol{A}$
Table A. 1 Sample implementation: Women

${ }^{1}$ Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

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

${ }^{2}$ The eligible women response rate (EWRR) is equivalent to the percentage of interviews completed (EWC)
The overall women response rate (OWRR) is calculated as:


Estimates derived from a sample survey are affected by two types of errors: 1) non-sampling errors, and 2 ) sampling errors. Non-sampling errors are the results of mistakes made in implementing data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the 2005 Armenia DHS (2005 ADHS) to minimize this type of error, non-sampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the 2005 ADHS is only one of many samples that could have been selected from the same population, using the same design and expected size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

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

If the sample of respondents had been selected as a simple random sample, it would have been possible to use straightforward formulas for calculating sampling errors. However, the 2005 ADHS sample is the result of a multi-stage stratified design, and, consequently, it was necessary to use a more complex formula. The computer software used to calculate sampling errors for the 2005 ADHS is the sampling error module in ISSA (Integrated System for Survey Analysis). This module uses the Taylor linearization method of variance estimation for survey estimates that are means or proportions. Another approach, the Jackknife repeated replication method is used for variance estimation of more complex statistics such as fertility and mortality rates.

The Taylor 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:

$$
S E^{2}(r)=\operatorname{var}(r)=\frac{1-f}{x^{2}} \sum_{h=1}^{H}\left[\frac{m_{h}}{m_{h-1}}\left(\sum_{i=1}^{m_{h}} z_{h i}^{2}-\frac{z_{h}^{2}}{m_{h}}\right)\right]
$$

in which

$$
z_{h i}=y_{h i}-r x_{h i}, \text { and } z_{h}=y_{h}-r x_{h}
$$

where $h \quad$ represents the stratum which varies from 1 to $H$,
$m_{h} \quad$ is the total number of clusters selected in the $h^{\text {th }}$ stratum,
$y_{h i} \quad$ is the sum of the weighted values of variable $y$ in the $i^{\text {th }}$ cluster in the $h^{\text {th }}$ stratum,
$x_{h i} \quad$ is the sum of the weighted number of cases in the $i^{\text {th }}$ cluster in the $h^{\text {th }}$ stratum, and
$f \quad$ is the overall sampling fraction, which is so small that it is ignored.
The Jackknife repeated replication method derives estimates of complex rates from each of several replications of the parent sample, and calculates standard errors for these estimates using simple formulas. Each replication considers all but one cluster in the calculation of the estimates. Pseudoindependent replications are thus created. In the 2005 ADHS, there were 308 non-empty clusters. Hence, 308 replications were created. The variance of a rate $r$ is calculated as follows:

$$
S E^{2}(r)=\operatorname{var}(r)=\frac{1}{k(k-1)} \sum_{i=1}^{k}\left(r_{i}-r\right)^{2}
$$

in which

$$
r_{i}=k r-(k-1) r_{(i)}
$$

where $r$ is the estimate computed from the full sample of 308 clusters,
$r_{(i)} \quad$ is the estimate computed from the reduced sample of 307 clusters ( $i^{\text {th }}$ cluster excluded), and
$k \quad$ is the total number of clusters.
In addition to the standard error, the design effect (DEFT) for each estimate is also calculated. The design effect is defined as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient design. Relative errors and confidence limits for the estimates are also computed.

Sampling errors for the 2005 ADHS are calculated for selected variables considered to be of primary interest for the women's and men's samples. The results are presented in this appendix for the country as a whole, for urban and rural areas, and for 11 regions. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table B.1.1 for women and in Table B.1.2 for men. Tables B.2.1 to B.15.2 present the value of the statistic (R), its standard error (SE), the number of unweighted ( N ) and weighted (WN) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits ( $\mathrm{R} \pm 2 \mathrm{SE}$ ), for the selected variables including fertility and mortality rates. The sampling errors for mortality rates are presented for the ten-year period preceding the survey. The DEFT is considered undefined when the standard error considering a simple random sample is zero (when the estimate is close to 0 or 1 ). In the case of the total fertility rate, the number of unweighted cases is not relevant, as there is no known unweighted value for woman-years of exposure to childbearing.

The confidence interval (e.g., as calculated for children ever born to women age 40-49) can be interpreted as follows: the overall average from the national sample is 2.5 and its standard error is 0.036 . Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate (i.e., $2.527 \pm 2 \times 0.036$ ). There is a high probability ( 95 percent) that the true average number of children ever born to all women aged 40 to 49 is between 2.454 and 2.599.

| Variable | Estimate | Base population |
| :---: | :---: | :---: |
| Urban residence | Proportion | All women |
| Literate | Proportion | All women |
| No education | Proportion | All women |
| Secondary education or higher | Proportion | All women |
| Never married | Proportion | All women |
| Currently married/in union | Proportion | All women |
| Married before age 20 | Proportion | Women age 20-49 |
| Currently pregnant | Proportion | All women |
| Children ever born | Mean | All women |
| Children surviving | Mean | All women |
| Children ever born to women age 40-49 | Mean | Women age 40-49 |
| Knows any contraceptive method | Proportion | Currently married women |
| Currently using any contraceptive method | Proportion | Currently married women |
| Currently using a modern method | Proportion | Currently married women |
| Currently using pill | Proportion | Currently married women |
| Currently using IUD | Proportion | Currently married women |
| Currently using female sterilization | Proportion | Currently married women |
| Currently using rhythm | Proportion | Currently married women |
| Obtained method from public sector source | Proportion | Current users of modern method |
| Want no more children | Proportion | Currently married women |
| Want to delay birth at least 2 years | Proportion | Currently married women |
| Ideal family size | Mean | All women |
| Mother received medical assistance at delivery | Proportion | Births occurring 1-59 months before interview |
| Child had diarrhea in the two weeks before survey | Proportion | Children age 0-59 months |
| Treated with oral rehydration salts (ORS) | Proportion | Children with diarrhea in two weeks before interview |
| Taken to a health provider | Proportion | Children with diarrhea in two weeks before interview |
| Vaccination card seen | Proportion | Children age 12-23 months |
| Received BCG | Proportion | Children age 12-23 months |
| Received DPT (3 doses) | Proportion | Children age 12-23 months |
| Received polio (3 doses) | Proportion | Children age 12-23 months |
| Received measles | Proportion | Children age 12-23 months |
| Fully immunized | Proportion | Children age 12-23 months |
| Height-for-age (below -2SD) | Proportion | Children age 0-59 months |
| Weight-for-height (below -2SD) | Proportion | Children age 0-59 months |
| Weight-for-age (below-2SD) | Proportion | Children age 0-59 months |
| Anemia in children | Proportion | Children age 6-59 months |
| Anemia in women | Proportion | All women |
| Body mass index (BMI) < 18.5 | Proportion | All women |
| Prevalence of hypertension | Proportion | All women |
| Has heard of HIV/AIDS | Proportion | All women |
| Knows about condoms | Proportion | All women |
| Knows about limiting partners | Proportion | All women |
| Had two or more sexual partners in past 12 months | Proportion | All women who had sex in the past 12 months |
| Had higher-risk sexual intercourse in the past 12 months ${ }^{1}$ | Proportion | All women who had sex in the past 12 months |
| Condom use at last higher-risk sexual intercourse (all) | Proportion | All women 15-49 who had higher-risk sex in the past 12 months |
| Abstinence among youth (never had sexual intercourse) | Proportion | All women 15-24 who never had intercourse |
| Sexual activity in past 12 months among never-married | Proportion | Never-married women |
| Accepting attitudes towards people with $\mathrm{HIV}^{2}$ | Proportion | All women who have heard of HIV/AIDS |
| Fertility | Rate | Births to all women in the 3 years preceding the survey ${ }^{3}$ |
| Perinatal mortality (0-4 years) | Ratio | Number of pregnancies of 7+ months |
| Neonatal mortality | Rate | Births in 10 years preceding the survey |
| Postneonatal mortality | Rate | Births in 10 years preceding the survey |
| Infant mortality | Rate | Births in 10 years preceding the survey |
| Child mortality | Rate | Births in 10 years preceding the survey |
| Under-five mortality | Rate | Births in 10 years preceding the survey |
| ${ }^{1}$ Sexual intercourse with a nonmarital, noncohabiting partner |  |  |
| ${ }^{2}$ Four accepting attitudes: willing to care for a family member with the AIDS virus in the respondent's home; would buy fresh vegetables from shopkeeper with AIDS; say that a female teacher with the AIDS virus and who is not sick should be allowed to keep teaching; and would not want to keep secret that a family member got infected with the AIDS virus. <br> ${ }^{3}$ Births occurring 1-35 months before interview |  |  |


| Variable | Estimate | Base population |
| :---: | :---: | :---: |
| Urban residence | Proportion | All men |
| Literate | Proportion | All men |
| No education | Proportion | All men |
| Secondary education or higher | Proportion | All men |
| Never married | Proportion | All men |
| Currently married/in union | Proportion | All men |
| Married before age 20 | Proportion | Men age 20-49 |
| Want no more children | Proportion | Currently married men |
| Want to delay birth at least 2 years | Proportion | Currently married men |
| Ideal family size | Mean | All men |
| Has heard of HIV/AIDS | Proportion | All men |
| Knows about condoms | Proportion | All men |
| Knows about limiting partners | Proportion | All men |
| Had two or more sexual partners in the past 12 months | Proportion | All men who had sex in the past 12 months |
| Had higher-risk intercourse in the past 12 months (15-59) ${ }^{1}$ | Proportion | All men age 15-49 who had sex in the past 12 months |
| Condom use at last higher-risk intercourse (15-49) | Proportion | All men age 15-49 who had higher-risk sex in the past 12 months |
| Abstinence among youth (never had sexual intercourse) | Proportion | All men age 15-24 who never had intercourse |
| Sexually active in the past 12 months among never-married | Proportion | Never-married men |
| Paid for sexual intercourse in the past 12 months | Proportion | All men |
| Accepting attitudes towards people with $\mathrm{HIV}^{2}$ | Proportion | All men who have heard of HIV/AIDS |

${ }^{1}$ Sexual intercourse with a nonmarital, noncohabiting partner
${ }^{2}$ Four accepting attitudes: willing to care for a family member with the AIDS virus in the respondent's home; would buy fresh vegetables from shopkeeper with AIDS; say that a female teacher with the AIDS virus and who is not sick should be allowed to keep teaching; and would not want to keep secret that a family member got infected with the AIDS virus.

Table B.2.1 Sampling errors for the national sample, Armenia 2005: Women

| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted ( N ) | Weighted (WN) |  |  | Value2SE (R-2SE) | $\begin{aligned} & \text { Value+ } \\ & 2 S E \\ & (\mathrm{R}+2 \mathrm{SE}) \end{aligned}$ |
| Urban residence | 0.639 | 0.013 | 6,566 | 6,566 | 2.217 | 0.021 | 0.612 | 0.665 |
| Literate | 0.995 | 0.001 | 6,566 | 6,566 | 1.575 | 0.001 | 0.992 | 0.997 |
| Secondary education or higher | 0.919 | 0.005 | 6,566 | 6,566 | 1.344 | 0.005 | 0.910 | 0.928 |
| Never married | 0.311 | 0.006 | 6,566 | 6,566 | 1.124 | 0.021 | 0.298 | 0.324 |
| Currently married/in union | 0.616 | 0.008 | 6,566 | 6,566 | 1.278 | 0.012 | 0.601 | 0.631 |
| Married before age 20 | 0.391 | 0.008 | 5,430 | 5,443 | 1.258 | 0.021 | 0.374 | 0.408 |
| Currently pregnant | 0.030 | 0.002 | 6,566 | 6,566 | 1.149 | 0.081 | 0.025 | 0.035 |
| Children ever born | 1.518 | 0.018 | 6,566 | 6,566 | 1.023 | 0.012 | 1.483 | 1.553 |
| Children surviving | 1.440 | 0.017 | 6,566 | 6,566 | 1.043 | 0.011 | 1.407 | 1.473 |
| Children ever born to women age 40-49 | 2.527 | 0.036 | 2,024 | 1,922 | 1.346 | 0.014 | 2.454 | 2.600 |
| Knows any contraceptive method | 0.989 | 0.002 | 4,112 | 4,044 | 1.310 | 0.002 | 0.985 | 0.993 |
| Ever using contraceptive method | 0.755 | 0.009 | 4,112 | 4,044 | 1.377 | 0.012 | 0.736 | 0.773 |
| Currently using any contraceptive method | 0.531 | 0.012 | 4,112 | 4,044 | 1.485 | 0.022 | 0.508 | 0.554 |
| Currently using pill | 0.008 | 0.002 | 4,112 | 4,044 | 1.123 | 0.191 | 0.005 | 0.012 |
| Currently using IUD | 0.094 | 0.007 | 4,112 | 4,044 | 1.438 | 0.070 | 0.081 | 0.107 |
| Currently using female sterilization | 0.006 | 0.002 | 4,112 | 4,044 | 1.414 | 0.292 | 0.002 | 0.009 |
| Currently using rhythm method | 0.038 | 0.005 | 4,112 | 4,044 | 1.566 | 0.123 | 0.029 | 0.047 |
| Obtained method from public sector source | 0.528 | 0.026 | 761 | 791 | 1.419 | 0.049 | 0.476 | 0.579 |
| Want no more children | 0.707 | 0.009 | 4,112 | 4,044 | 1.300 | 0.013 | 0.688 | 0.725 |
| Want to delay birth at least 2 years | 0.108 | 0.007 | 4,112 | 4,044 | 1.390 | 0.062 | 0.095 | 0.122 |
| Ideal family size | 2.559 | 0.012 | 6,493 | 6,470 | 1.075 | 0.005 | 2.535 | 2.584 |
| Mother received medical assistance at delivery | 0.978 | 0.006 | 1,430 | 1,512 | 1.495 | 0.007 | 0.965 | 0.991 |
| Child had diarrhea in two weeks before survey | 0.167 | 0.014 | 1,397 | 1,470 | 1.369 | 0.084 | 0.139 | 0.195 |
| Treated with oral rehydration salts (ORS) | 0.249 | 0.037 | 224 | 245 | 1.277 | 0.148 | 0.175 | 0.323 |
| Taken to a health provider | 0.318 | 0.045 | 224 | 245 | 1.444 | 0.142 | 0.228 | 0.409 |
| Vaccination card seen | 0.918 | 0.024 | 278 | 302 | 1.521 | 0.026 | 0.869 | 0.966 |
| Received BCG | 0.981 | 0.008 | 278 | 302 | 0.980 | 0.008 | 0.965 | 0.996 |
| Received DPT (3 doses) | 0.714 | 0.036 | 278 | 302 | 1.360 | 0.050 | 0.643 | 0.786 |
| Received polio (3 doses) | 0.769 | 0.041 | 278 | 302 | 1.645 | 0.053 | 0.688 | 0.850 |
| Received measles | 0.723 | 0.034 | 278 | 302 | 1.301 | 0.047 | 0.655 | 0.791 |
| Fully immunized | 0.597 | 0.037 | 278 | 302 | 1.288 | 0.062 | 0.523 | 0.670 |
| Height-for-age (below -2SD) | 0.130 | 0.019 | 1,254 | 1,293 | 1.862 | 0.146 | 0.092 | 0.167 |
| Weight-for-height (below-2SD) | 0.051 | 0.010 | 1,254 | 1,293 | 1.504 | 0.194 | 0.031 | 0.070 |
| Weight-for-age (below -2SD) | 0.040 | 0.007 | 1,254 | 1,293 | 1.228 | 0.178 | 0.026 | 0.055 |
| Anemia in children | 0.365 | 0.028 | 1,037 | 1,106 | 1.841 | 0.077 | 0.309 | 0.421 |
| Anemia in women | 0.246 | 0.010 | 6,134 | 6,080 | 1.783 | 0.040 | 0.226 | 0.265 |
| Body mass index (BMI) <18.5 | 0.052 | 0.004 | 6,083 | 6,016 | 1.409 | 0.078 | 0.044 | 0.060 |
| Prevalence of hypertension | 0.217 | 0.009 | 6,216 | 6,181 | 1.641 | 0.039 | 0.200 | 0.234 |
| Has heard of HIV/AIDS | 0.954 | 0.004 | 6,566 | 6,566 | 1.404 | 0.004 | 0.947 | 0.962 |
| Knows about condoms | 0.718 | 0.010 | 6,566 | 6,566 | 1.817 | 0.014 | 0.698 | 0.738 |
| Knows about limiting partners | 0.799 | 0.008 | 6,566 | 6,566 | 1.590 | 0.010 | 0.783 | 0.814 |
| Had $2+$ sexual partners in past 12 months | 0.001 | 0.001 | 3,961 | 3,931 | 1.459 | 1.001 | 0.000 | 0.002 |
| Had higher-risk intercourse in past 12 months | 0.014 | 0.002 | 3,961 | 3,931 | 1.265 | 0.170 | 0.009 | 0.019 |
| Accepting attitudes towards people with HIV | 0.014 | 0.002 | 6,245 | 6,267 | 1.548 | 0.165 | 0.009 | 0.019 |
| Total fertility rate (past 3 years) | 1.710 | 0.067 | na | 18,633 | 1.283 | 0.039 | 1.576 | 1.844 |
| Perinatal mortality (0-4 years) | 18.907 | 5.305 | 1,443 | 1,524 | 1.288 | 0.281 | 8.298 | 29.517 |
| Neonatal mortality (past 5 years) | 16.882 | 5.223 | 1,447 | 1,526 | 1.397 | 0.309 | 6.436 | 27.328 |
| Postneonatal mortality (past 5 years) | 8.676 | 3.876 | 1,448 | 1,526 | 1.593 | 0.447 | 0.923 | 16.429 |
| Infant mortality (past 5 years) | 25.558 | 6.148 | 1,448 | 1,526 | 1.387 | 0.241 | 13.262 | 37.853 |
| Child mortality (past 5 years) | 4.351 | 2.037 | 1,448 | 1,527 | 1.201 | 0.468 | 0.278 | 8.424 |
| Under-five mortality (past 5 years) | 29.798 | 6.292 | 1,449 | 1,527 | 1.344 | 0.211 | 17.214 | 42.381 |


| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted (N) | Weighted (WN) |  |  | Value2SE (R-2SE) | $\begin{gathered} \text { Value }+ \\ 2 S E \\ (R+2 S E) \end{gathered}$ |
| Urban residence | 0.631 | 0.017 | 1,447 | 1,447 | 1.318 | 0.027 | 0.598 | 0.664 |
| Literate | 0.995 | 0.002 | 1,447 | 1,447 | 1.308 | 0.002 | 0.990 | 1.000 |
| No education | 0.004 | 0.002 | 1,447 | 1,447 | 1.385 | 0.579 | 0.000 | 0.009 |
| Secondary education or higher | 0.995 | 0.002 | 1,447 | 1,447 | 1.308 | 0.002 | 0.990 | 1.000 |
| Never married | 0.425 | 0.014 | 1,447 | 1,447 | 1.069 | 0.033 | 0.397 | 0.453 |
| Currently married/in union | 0.563 | 0.014 | 1,447 | 1,447 | 1.049 | 0.024 | 0.536 | 0.590 |
| Married before age 20 | 0.029 | 0.007 | 913 | 918 | 1.189 | 0.228 | 0.016 | 0.042 |
| Want no more children | 0.624 | 0.023 | 815 | 815 | 1.355 | 0.037 | 0.578 | 0.670 |
| Want to delay birth at least 2 years | 0.118 | 0.017 | 815 | 815 | 1.475 | 0.141 | 0.085 | 0.152 |
| Ideal family size | 2.808 | 0.042 | 1,369 | 1,368 | 1.083 | 0.015 | 2.725 | 2.892 |
| Has heard of HIV/AIDS | 0.923 | 0.011 | 1,447 | 1,447 | 1.572 | 0.012 | 0.901 | 0.945 |
| Knows about condoms | 0.809 | 0.015 | 1,447 | 1,447 | 1.429 | 0.018 | 0.780 | 0.839 |
| Knows about limiting partners | 0.858 | 0.015 | 1,447 | 1,447 | 1.603 | 0.017 | 0.829 | 0.888 |
| Had 2+ sexual partners in the past 12 months | 0.124 | 0.015 | 1,021 | 1,058 | 1.468 | 0.122 | 0.094 | 0.155 |
| Higher-risk intercourse in past 12 months (15-49) | 0.276 | 0.018 | 1,021 | 1,058 | 1.253 | 0.064 | 0.241 | 0.311 |
| Condom use at past higher-risk intercourse (15-49) | 0.794 | 0.038 | 256 | 292 | 1.494 | 0.048 | 0.719 | 0.870 |
| Abstinence among youth (never intercourse) | 0.658 | 0.033 | 489 | 479 | 1.518 | 0.050 | 0.593 | 0.724 |
| Sexually active in past 12 months among never-married | 0.295 | 0.029 | 489 | 479 | 1.402 | 0.098 | 0.237 | 0.352 |
| Paid for sexual intercourse in the past 12 months | 0.034 | 0.006 | 1,447 | 1,447 | 1.340 | 0.188 | 0.021 | 0.047 |

Table B.3.1 Sampling errors for the urban sample, Armenia 2005: Women

| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted ( N ) | Weighted (WN) |  |  | Value2SE (R-2SE) | $\begin{gathered} \text { Value+ } \\ 2 S E \\ (R+2 S E) \end{gathered}$ |
| Urban residence | 1.000 | 0.000 | 4,592 | 4,194 | na | 0.000 | 1.000 | 1.000 |
| Literate | 0.996 | 0.001 | 4,592 | 4,194 | 1.681 | 0.001 | 0.993 | 0.999 |
| Secondary education or higher | 0.939 | 0.005 | 4,592 | 4,194 | 1.480 | 0.006 | 0.928 | 0.949 |
| Never married | 0.331 | 0.008 | 4,592 | 4,194 | 1.219 | 0.026 | 0.314 | 0.348 |
| Currently married/in union | 0.583 | 0.010 | 4,592 | 4,194 | 1.353 | 0.017 | 0.564 | 0.603 |
| Married before age 20 | 0.333 | 0.010 | 3,820 | 3,510 | 1.353 | 0.031 | 0.312 | 0.353 |
| Currently pregnant | 0.031 | 0.003 | 4,592 | 4,194 | 1.184 | 0.098 | 0.025 | 0.037 |
| Children ever born | 1.361 | 0.021 | 4,592 | 4,194 | 1.143 | 0.016 | 1.318 | 1.403 |
| Children surviving | 1.299 | 0.019 | 4,592 | 4,194 | 1.099 | 0.015 | 1.261 | 1.337 |
| Children ever born to women age 40-49 | 2.343 | 0.039 | 1,434 | 1,218 | 1.349 | 0.017 | 2.265 | 2.422 |
| Knows any contraceptive method | 0.996 | 0.001 | 2,784 | 2,447 | 0.976 | 0.001 | 0.994 | 0.999 |
| Ever using contraceptive method | 0.765 | 0.012 | 2,784 | 2,447 | 1.480 | 0.016 | 0.742 | 0.789 |
| Currently using any contraceptive method | 0.543 | 0.014 | 2,784 | 2,447 | 1.490 | 0.026 | 0.514 | 0.571 |
| Currently using pill | 0.010 | 0.002 | 2,784 | 2,447 | 1.180 | 0.225 | 0.005 | 0.014 |
| Currently using IUD | 0.098 | 0.009 | 2,784 | 2,447 | 1.612 | 0.093 | 0.079 | 0.116 |
| Currently using female sterilization | 0.007 | 0.002 | 2,784 | 2,447 | 1.599 | 0.367 | 0.002 | 0.012 |
| Currently using rhythm method | 0.047 | 0.007 | 2,784 | 2,447 | 1.706 | 0.146 | 0.033 | 0.060 |
| Obtained method from public sector source | 0.483 | 0.033 | 550 | 545 | 1.557 | 0.069 | 0.417 | 0.549 |
| Want no more children | 0.685 | 0.012 | 2,784 | 2,447 | 1.417 | 0.018 | 0.660 | 0.710 |
| Want to delay birth at least 2 years | 0.115 | 0.010 | 2,784 | 2,447 | 1.574 | 0.083 | 0.096 | 0.134 |
| Ideal family size | 2.529 | 0.015 | 4,535 | 4,117 | 1.140 | 0.006 | 2.499 | 2.559 |
| Mother received medical assistance at delivery | 0.987 | 0.007 | 958 | 930 | 1.711 | 0.007 | 0.972 | 1.000 |
| Child had diarrhea in two weeks before survey | 0.150 | 0.019 | 941 | 908 | 1.594 | 0.128 | 0.111 | 0.188 |
| Treated with oral rehydration salts (ORS) | 0.222 | 0.049 | 141 | 136 | 1.347 | 0.220 | 0.124 | 0.320 |
| Taken to a health provider | 0.359 | 0.065 | 141 | 136 | 1.565 | 0.182 | 0.229 | 0.489 |
| Vaccination card seen | 0.923 | 0.033 | 182 | 183 | 1.738 | 0.035 | 0.858 | 0.989 |
| Received BCG | 0.992 | 0.005 | 182 | 183 | 0.800 | 0.005 | 0.981 | 1.000 |
| Received DPT (3 doses) | 0.681 | 0.044 | 182 | 183 | 1.329 | 0.064 | 0.594 | 0.769 |
| Received polio (3 doses) | 0.776 | 0.057 | 182 | 183 | 1.936 | 0.074 | 0.662 | 0.891 |
| Received measles | 0.670 | 0.044 | 182 | 183 | 1.324 | 0.066 | 0.582 | 0.759 |
| Fully immunized | 0.557 | 0.047 | 182 | 183 | 1.344 | 0.085 | 0.462 | 0.652 |
| Height-for-age (below -2SD) | 0.140 | 0.029 | 826 | 752 | 2.158 | 0.205 | 0.083 | 0.198 |
| Weight-for-height (below -2SD) | 0.060 | 0.015 | 826 | 752 | 1.713 | 0.252 | 0.030 | 0.091 |
| Weight-for-age (below-2SD) | 0.038 | 0.007 | 826 | 752 | 0.978 | 0.183 | 0.024 | 0.052 |
| Anemia in children | 0.378 | 0.044 | 693 | 666 | 2.326 | 0.116 | 0.290 | 0.465 |
| Anemia in women | 0.269 | 0.014 | 4,289 | 3,851 | 2.020 | 0.051 | 0.242 | 0.297 |
| Body mass index (BMI) < 18.5 | 0.055 | 0.006 | 4,236 | 3,801 | 1.610 | 0.103 | 0.044 | 0.067 |
| Prevalence of hypertension | 0.211 | 0.011 | 4,347 | 3,932 | 1.760 | 0.052 | 0.189 | 0.233 |
| Has heard of HIV/AIDS | 0.976 | 0.002 | 4,592 | 4,194 | 1.091 | 0.003 | 0.971 | 0.981 |
| Knows about condoms | 0.762 | 0.013 | 4,592 | 4,194 | 2.005 | 0.017 | 0.737 | 0.787 |
| Knows about limiting partners | 0.852 | 0.007 | 4,592 | 4,194 | 1.415 | 0.009 | 0.837 | 0.867 |
| Had $2+$ sexual partners in past 12 months | 0.001 | 0.001 | 2,664 | 2,375 | 1.541 | 1.002 | 0.000 | 0.003 |
| Had higher-risk intercourse in past 12 months | 0.022 | 0.004 | 2,664 | 2,375 | 1.335 | 0.173 | 0.014 | 0.029 |
| Accepting attitudes towards people with HIV | 0.016 | 0.003 | 4,427 | 4,093 | 1.707 | 0.201 | 0.010 | 0.023 |
| Total fertility rate (past 3 years) | 1.646 | 0.083 | na | 11,942 | 1.373 | 0.050 | 1.480 | 1.812 |
| Perinatal mortality (0-4 years) | 17.268 | 7.294 | 966 | 935 | 1.495 | 0.422 | 2.681 | 31.856 |
| Neonatal mortality (past 10 years) | 17.912 | 4.468 | 1,947 | 1,805 | 1.339 | 0.249 | 8.976 | 26.849 |
| Postneonatal mortality (past 10 years) | 6.890 | 3.007 | 1,948 | 1,806 | 1.644 | 0.436 | 0.877 | 12.903 |
| Infant mortality (past 10 years) | 24.802 | 4.867 | 1,948 | 1,806 | 1.287 | 0.196 | 15.068 | 34.536 |
| Child mortality (past 10 years) | 1.689 | 1.432 | 1,949 | 1,808 | 1.693 | 0.848 | 0.000 | 4.554 |
| Under-five mortality (past 10 years) | 26.450 | 5.726 | 1,950 | 1,809 | 1.491 | 0.216 | 14.998 | 37.902 |


| Variable | Value (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted ( N ) | Weighted (WN) |  |  | $\begin{aligned} & \text { Value- } \\ & 2 S E \\ & \text { (R-2SE) } \end{aligned}$ | $\begin{aligned} & \text { Value+ } \\ & 2 S E \\ & (\mathrm{R}+2 \mathrm{SE}) \end{aligned}$ |
| Urban residence | 1.000 | 0.000 | 999 | 913 | na | 0.000 | 1.000 | 1.000 |
| Literate | 0.994 | 0.003 | 999 | 913 | 1.364 | 0.003 | 0.987 | 1.000 |
| No education | 0.004 | 0.003 | 999 | 913 | 1.480 | 0.704 | 0.000 | 0.011 |
| Secondary education or higher | 0.994 | 0.003 | 999 | 913 | 1.364 | 0.003 | 0.987 | 1.000 |
| Never married | 0.439 | 0.016 | 999 | 913 | 0.998 | 0.036 | 0.407 | 0.470 |
| Currently married/in union | 0.547 | 0.016 | 999 | 913 | 1.009 | 0.029 | 0.515 | 0.579 |
| Married before age 20 | 0.018 | 0.006 | 636 | 602 | 1.204 | 0.349 | 0.006 | 0.031 |
| Want no more children | 0.570 | 0.033 | 543 | 499 | 1.563 | 0.058 | 0.504 | 0.637 |
| Want to delay birth at least 2 years | 0.139 | 0.025 | 543 | 499 | 1.703 | 0.182 | 0.088 | 0.190 |
| Ideal family size | 2.748 | 0.061 | 948 | 870 | 1.355 | 0.022 | 2.626 | 2.869 |
| Has heard of HIV/AIDS | 0.928 | 0.015 | 999 | 913 | 1.827 | 0.016 | 0.898 | 0.958 |
| Knows about condoms | 0.809 | 0.019 | 999 | 913 | 1.533 | 0.024 | 0.771 | 0.847 |
| Knows about limiting partners | 0.876 | 0.018 | 999 | 913 | 1.731 | 0.021 | 0.840 | 0.912 |
| Had 2+ sexual partners in the past 12 months | 0.132 | 0.022 | 709 | 690 | 1.720 | 0.166 | 0.088 | 0.175 |
| Higher-risk intercourse in past 12 months (15-49) | 0.311 | 0.021 | 709 | 690 | 1.216 | 0.068 | 0.269 | 0.354 |
| Condom use at last higher-risk intercourse (15-49) | 0.804 | 0.042 | 199 | 215 | 1.486 | 0.052 | 0.720 | 0.888 |
| Abstinence among youth (never intercourse) | 0.610 | 0.042 | 340 | 291 | 1.583 | 0.069 | 0.526 | 0.693 |
| Sexuallyl active in past 12 months among never-married | 0.356 | 0.040 | 340 | 291 | 1.524 | 0.111 | 0.277 | 0.436 |
| Paid for sexual intercourse in the past 12 months | 0.035 | 0.009 | 999 | 913 | 1.500 | 0.250 | 0.018 | 0.052 |

Table B.4.1 Sampling errors for the rural sample, Armenia 2005: Women

| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted ( N ) | Weighted (WN) |  |  | $\begin{aligned} & \text { Value- } \\ & \text { 2SE } \\ & \text { (R-2SE) } \end{aligned}$ | $\begin{aligned} & \text { Value+ } \\ & 2 S E \\ & (R+2 S E) \end{aligned}$ |
| Urban residence | 0.000 | 0.000 | 1,974 | 2,372 | na | na | 0.000 | 0.000 |
| Literate | 0.991 | 0.003 | 1,974 | 2,372 | 1.443 | 0.003 | 0.985 | 0.997 |
| Secondary education or higher | 0.885 | 0.008 | 1,974 | 2,372 | 1.177 | 0.010 | 0.868 | 0.902 |
| Never married | 0.275 | 0.010 | 1,974 | 2,372 | 1.000 | 0.037 | 0.255 | 0.295 |
| Currently married/in union | 0.673 | 0.011 | 1,974 | 2,372 | 1.040 | 0.016 | 0.651 | 0.695 |
| Married before age 20 | 0.497 | 0.014 | 1,610 | 1,933 | 1.112 | 0.028 | 0.469 | 0.525 |
| Currently pregnant | 0.028 | 0.004 | 1,974 | 2,372 | 1.094 | 0.146 | 0.020 | 0.036 |
| Children ever born | 1.797 | 0.032 | 1,974 | 2,372 | 0.914 | 0.018 | 1.734 | 1.861 |
| Children surviving | 1.688 | 0.031 | 1,974 | 2,372 | 0.974 | 0.018 | 1.626 | 1.750 |
| Children ever born to women age 40-49 | 2.844 | 0.064 | 590 | 704 | 1.153 | 0.023 | 2.715 | 2.972 |
| Knows any contraceptive method | 0.977 | 0.005 | 1,328 | 1,597 | 1.273 | 0.005 | 0.967 | 0.988 |
| Ever using contraceptive method | 0.739 | 0.014 | 1,328 | 1,597 | 1.193 | 0.019 | 0.710 | 0.768 |
| Currently using any contraceptive method | 0.512 | 0.019 | 1,328 | 1,597 | 1.415 | 0.038 | 0.474 | 0.551 |
| Currently using pill | 0.006 | 0.002 | 1,328 | 1,597 | 1.027 | 0.358 | 0.002 | 0.011 |
| Currently using IUD | 0.089 | 0.009 | 1,328 | 1,597 | 1.155 | 0.101 | 0.071 | 0.107 |
| Currently using female sterilization | 0.004 | 0.002 | 1,328 | 1,597 | 1.012 | 0.439 | 0.000 | 0.007 |
| Currently using rhythm method | 0.025 | 0.005 | 1,328 | 1,597 | 1.237 | 0.214 | 0.014 | 0.035 |
| Obtained method from public sector source | 0.626 | 0.038 | 211 | 247 | 1.144 | 0.061 | 0.550 | 0.702 |
| Want no more children | 0.741 | 0.014 | 1,328 | 1,597 | 1.148 | 0.019 | 0.713 | 0.768 |
| Want to delay birth at least 2 years | 0.098 | 0.009 | 1,328 | 1,597 | 1.099 | 0.092 | 0.080 | 0.116 |
| Ideal family size | 2.613 | 0.022 | 1,958 | 2,353 | 0.979 | 0.008 | 2.570 | 2.656 |
| Mother received medical assistance at delivery | 0.964 | 0.012 | 472 | 582 | 1.245 | 0.012 | 0.940 | 0.987 |
| Child had diarrhea in two weeks before survey | 0.195 | 0.019 | 456 | 562 | 0.990 | 0.096 | 0.158 | 0.232 |
| Treated with oral rehydration salts (ORS) | 0.282 | 0.056 | 83 | 110 | 1.142 | 0.197 | 0.171 | 0.394 |
| Taken to a health provider | 0.268 | 0.058 | 83 | 110 | 1.190 | 0.216 | 0.152 | 0.384 |
| Vaccination card seen | 0.909 | 0.035 | 96 | 119 | 1.203 | 0.038 | 0.839 | 0.979 |
| Received BCG | 0.964 | 0.018 | 96 | 119 | 0.941 | 0.018 | 0.929 | 1.000 |
| Received DPT (3 doses) | 0.765 | 0.060 | 96 | 119 | 1.368 | 0.079 | 0.644 | 0.886 |
| Received polio (3 doses) | 0.756 | 0.053 | 96 | 119 | 1.191 | 0.070 | 0.650 | 0.863 |
| Received measles | 0.804 | 0.050 | 96 | 119 | 1.193 | 0.062 | 0.705 | 0.903 |
| Fully immunized | 0.659 | 0.056 | 96 | 119 | 1.151 | 0.085 | 0.546 | 0.771 |
| Height-for-age (below -2SD) | 0.115 | 0.021 | 428 | 541 | 1.273 | 0.178 | 0.074 | 0.156 |
| Weight-for-height (below-2SD) | 0.037 | 0.010 | 428 | 541 | 1.041 | 0.270 | 0.017 | 0.057 |
| Weight-for-age (below -2SD) | 0.043 | 0.014 | 428 | 541 | 1.378 | 0.326 | 0.015 | 0.071 |
| Anemia in children | 0.346 | 0.024 | 344 | 440 | 0.887 | 0.068 | 0.298 | 0.393 |
| Anemia in women | 0.205 | 0.011 | 1,845 | 2,229 | 1.154 | 0.053 | 0.183 | 0.226 |
| Body mass index (BMI) <18.5 | 0.046 | 0.005 | 1,847 | 2,215 | 1.006 | 0.107 | 0.036 | 0.055 |
| Prevalence of hypertension | 0.228 | 0.014 | 1,869 | 2,249 | 1.433 | 0.061 | 0.200 | 0.256 |
| Has heard of HIV/AIDS | 0.916 | 0.008 | 1,974 | 2,372 | 1.354 | 0.009 | 0.899 | 0.933 |
| Knows about condoms | 0.641 | 0.017 | 1,974 | 2,372 | 1.576 | 0.027 | 0.607 | 0.675 |
| Knows about limiting partners | 0.704 | 0.017 | 1,974 | 2,372 | 1.627 | 0.024 | 0.670 | 0.737 |
| Had $2+$ sexual partners in past 12 months | 0.000 | 0.000 | 1,297 | 1,555 | na | na | 0.000 | 0.000 |
| Had higher-risk intercourse in past 12 months | 0.002 | 0.001 | 1,297 | 1,555 | 0.893 | 0.608 | 0.000 | 0.004 |
| Accepting attitudes towards people with HIV | 0.010 | 0.003 | 1,818 | 2,174 | 1.082 | 0.253 | 0.005 | 0.015 |
| Total fertility rate (past 3 years) | 1.837 | 0.111 | na | 6,690 | 1.144 | 0.060 | 1.615 | 2.059 |
| Perinatal mortality (0-4 years) | 21.510 | 7.278 | 477 | 589 | 0.959 | 0.338 | 6.954 | 36.066 |
| Neonatal mortality (past 10 years) | 19.395 | 4.183 | 1,119 | 1,350 | 0.970 | 0.216 | 11.029 | 27.761 |
| Postneonatal mortality (past 10 years) | 12.068 | 3.307 | 1,119 | 1,350 | 1.070 | 0.274 | 5.454 | 18.682 |
| Infant mortality (past 10 years) | 31.464 | 4.870 | 1,119 | 1,350 | 0.918 | 0.155 | 21.723 | 41.204 |
| Child mortality (past 10 years) | 10.938 | 3.725 | 1,119 | 1,350 | 1.170 | 0.341 | 3.488 | 18.387 |
| Under-five mortality (past 10 years) | 42.057 | 5.312 | 1,119 | 1,350 | 0.882 | 0.126 | 31.433 | 52.681 |


| Variable | Value <br> (R) | Stand- <br> ard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted (N) | Weighted (WN) |  |  | $\begin{aligned} & \text { Value- } \\ & \text { 2SE } \\ & \text { (R-2SE) } \end{aligned}$ | $\begin{gathered} \text { Value }+ \\ 2 S E \\ (R+2 S E) \end{gathered}$ |
| Urban residence | 0.000 | 0.000 | 448 | 534 | na | na | 0.000 | 0.000 |
| Literate | 0.997 | 0.003 | 448 | 534 | 1.194 | 0.003 | 0.991 | 1.000 |
| No education | 0.003 | 0.003 | 448 | 534 | 1.194 | 1.006 | 0.000 | 0.009 |
| Secondary education or higher | 0.997 | 0.003 | 448 | 534 | 1.194 | 0.003 | 0.991 | 1.000 |
| Never married | 0.402 | 0.026 | 448 | 534 | 1.119 | 0.064 | 0.350 | 0.454 |
| Currently married/in union | 0.591 | 0.025 | 448 | 534 | 1.063 | 0.042 | 0.541 | 0.640 |
| Married before age 20 | 0.049 | 0.015 | 277 | 317 | 1.133 | 0.300 | 0.020 | 0.079 |
| Want no more children | 0.709 | 0.029 | 272 | 315 | 1.043 | 0.041 | 0.651 | 0.766 |
| Want to delay birth at least 2 years | 0.085 | 0.016 | 272 | 315 | 0.943 | 0.188 | 0.053 | 0.117 |
| Ideal family size | 2.914 | 0.045 | 421 | 499 | 0.616 | 0.016 | 2.823 | 3.005 |
| Has heard of HIV/AIDS | 0.915 | 0.015 | 448 | 534 | 1.173 | 0.017 | 0.884 | 0.946 |
| Knows about condoms | 0.810 | 0.023 | 448 | 534 | 1.246 | 0.029 | 0.763 | 0.856 |
| Knows about limiting partners | 0.828 | 0.025 | 448 | 534 | 1.426 | 0.031 | 0.777 | 0.878 |
| Had 2+ sexual partners in the past 12 months | 0.111 | 0.014 | 312 | 368 | 0.799 | 0.128 | 0.082 | 0.139 |
| Higher-risk intercourse in past 12 months (15-49) | 0.209 | 0.028 | 312 | 368 | 1.229 | 0.136 | 0.152 | 0.265 |
| Condom use at last higher-risk intercourse (15-49) | 0.767 | 0.080 | 57 | 77 | 1.420 | 0.105 | 0.606 | 0.927 |
| Abstinence among youth (never intercourse) | 0.734 | 0.051 | 149 | 188 | 1.400 | 0.069 | 0.632 | 0.835 |
| Sexuallyl active in past 12 months among never-married | 0.199 | 0.040 | 149 | 188 | 1.213 | 0.200 | 0.120 | 0.279 |
| Paid for sexual intercourse in the past 12 months | 0.032 | 0.009 | 448 | 534 | 1.049 | 0.272 | 0.015 | 0.050 |

Table B.5.1 Sampling errors for the Yerevan sample, Armenia 2005: Women

| Variable | Value <br> (R) | Stand- <br> ard <br> error <br> (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted ( N ) | Weighted (WN) |  |  | Value2SE <br> (R-2SE) | $\begin{gathered} \text { Value }+ \\ 2 S E \\ (\mathrm{R}+2 \mathrm{SE}) \end{gathered}$ |
| Urban residence | 1.000 | 0.000 | 1,141 | 2,468 | na | 0.000 | 1.000 | 1.000 |
| Literate | 0.997 | 0.002 | 1,141 | 2,468 | 1.443 | 0.002 | 0.992 | 1.000 |
| Secondary education or higher | 0.941 | 0.008 | 1,141 | 2,468 | 1.196 | 0.009 | 0.924 | 0.958 |
| Never married | 0.348 | 0.014 | 1,141 | 2,468 | 0.960 | 0.039 | 0.321 | 0.375 |
| Currently married/in union | 0.552 | 0.015 | 1,141 | 2,468 | 1.004 | 0.027 | 0.522 | 0.582 |
| Married before age 20 | 0.296 | 0.016 | 951 | 2,082 | 1.075 | 0.054 | 0.265 | 0.328 |
| Currently pregnant | 0.029 | 0.004 | 1,141 | 2,468 | 0.862 | 0.148 | 0.020 | 0.037 |
| Children ever born | 1.254 | 0.034 | 1,141 | 2,468 | 0.976 | 0.027 | 1.185 | 1.322 |
| Children surviving | 1.200 | 0.030 | 1,141 | 2,468 | 0.911 | 0.025 | 1.140 | 1.260 |
| Children ever born to women age 40-49 | 2.167 | 0.056 | 308 | 671 | 0.936 | 0.026 | 2.055 | 2.278 |
| Knows any contraceptive method | 0.998 | 0.002 | 636 | 1,362 | 0.990 | 0.002 | 0.995 | 1.000 |
| Ever using contraceptive method | 0.786 | 0.018 | 636 | 1,362 | 1.135 | 0.023 | 0.749 | 0.823 |
| Currently using any contraceptive method | 0.585 | 0.021 | 636 | 1,362 | 1.084 | 0.036 | 0.543 | 0.628 |
| Currently using pill | 0.011 | 0.004 | 636 | 1,362 | 0.861 | 0.327 | 0.004 | 0.018 |
| Currently using IUD | 0.105 | 0.014 | 636 | 1,362 | 1.164 | 0.135 | 0.077 | 0.133 |
| Currently using female sterilization | 0.009 | 0.004 | 636 | 1,362 | 1.137 | 0.472 | 0.001 | 0.018 |
| Currently using rhythm method | 0.058 | 0.011 | 636 | 1,362 | 1.223 | 0.195 | 0.036 | 0.081 |
| Obtained method from public sector source | 0.443 | 0.046 | 161 | 359 | 1.168 | 0.104 | 0.351 | 0.535 |
| Want no more children | 0.677 | 0.021 | 636 | 1,362 | 1.137 | 0.031 | 0.635 | 0.719 |
| Want to delay birth at least 2 years | 0.116 | 0.016 | 636 | 1,362 | 1.260 | 0.138 | 0.084 | 0.148 |
| Ideal family size | 2.514 | 0.023 | 1,117 | 2,413 | 0.874 | 0.009 | 2.469 | 2.560 |
| Mother received medical assistance at delivery | 0.982 | 0.012 | 258 | 584 | 1.172 | 0.012 | 0.958 | 1.000 |
| Had diarrhea in two weeks before survey | 0.150 | 0.029 | 252 | 566 | 1.205 | 0.190 | 0.093 | 0.207 |
| Treated with oral rehydration salts (ORS) | 0.148 | 0.067 | 38 | 85 | 1.066 | 0.455 | 0.013 | 0.283 |
| Taken to a health provider | 0.424 | 0.097 | 38 | 85 | 1.147 | 0.229 | 0.230 | 0.618 |
| Vaccination card seen | 0.921 | 0.051 | 48 | 112 | 1.375 | 0.056 | 0.818 | 1.000 |
| Received BCG | 1.000 | 0.000 | 48 | 112 | na | 0.000 | 1.000 | 1.000 |
| Received DPT (3 doses) | 0.620 | 0.066 | 48 | 112 | 0.981 | 0.106 | 0.488 | 0.752 |
| Received polio (3 doses) | 0.749 | 0.090 | 48 | 112 | 1.502 | 0.121 | 0.569 | 0.930 |
| Received measles | 0.593 | 0.066 | 48 | 112 | 0.963 | 0.111 | 0.461 | 0.724 |
| Fully immunized | 0.470 | 0.069 | 48 | 112 | 0.996 | 0.147 | 0.332 | 0.608 |
| Height-for-age (below -2SD) | 0.177 | 0.047 | 191 | 432 | 1.549 | 0.266 | 0.083 | 0.272 |
| Weight-for-height (below-2SD) | 0.048 | 0.020 | 191 | 432 | 1.190 | 0.417 | 0.008 | 0.088 |
| Weight-for-age (below -2SD) | 0.030 | 0.008 | 191 | 432 | 0.612 | 0.280 | 0.013 | 0.047 |
| Anemia in children | 0.447 | 0.069 | 173 | 403 | 1.797 | 0.154 | 0.309 | 0.585 |
| Anemia in women | 0.288 | 0.022 | 1,010 | 2,192 | 1.554 | 0.077 | 0.244 | 0.332 |
| Body mass index (BMI) <18.5 | 0.067 | 0.009 | 997 | 2,181 | 1.185 | 0.139 | 0.048 | 0.086 |
| Prevalence of hypertension | 0.171 | 0.017 | 1,038 | 2,265 | 1.494 | 0.102 | 0.136 | 0.206 |
| Has heard of HIV/AIDS | 0.991 | 0.002 | 1,141 | 2,468 | 0.813 | 0.002 | 0.987 | 0.996 |
| Knows about condoms | 0.783 | 0.020 | 1,141 | 2,468 | 1.655 | 0.026 | 0.743 | 0.824 |
| Knows about limiting partners | 0.899 | 0.010 | 1,141 | 2,468 | 1.083 | 0.011 | 0.879 | 0.918 |
| Had $2+$ sexual partners in past 12 months | 0.002 | 0.002 | 621 | 1,341 | 0.992 | 1.005 | 0.000 | 0.005 |
| Had higher-risk intercourse in past 12 months | 0.028 | 0.006 | 621 | 1,341 | 0.902 | 0.212 | 0.016 | 0.041 |
| Accepting attitudes towards people with HIV | 0.021 | 0.005 | 1,131 | 2,446 | 1.187 | 0.238 | 0.011 | 0.032 |
| Total fertility rate (past 3 years) | 1.708 | 0.123 | na | 7045 | 1.000 | 0.072 | 1.462 | 1.954 |
| Perinatal mortality (0-4 years) | 15.960 | 10.653 | 258 | 584 | 1.118 | 0.667 | 0.000 | 37.265 |
| Neonatal mortality (past 10 years) | 19.059 | 7.108 | 480 | 1,065 | 1.030 | 0.373 | 4.842 | 33.275 |
| Postneonatal mortality (past 10 years) | 4.913 | 4.930 | 480 | 1,065 | 1.564 | 1.003 | 0.000 | 14.774 |
| Infant mortality (past 10 years) | 23.972 | 7.654 | 480 | 1,065 | 1.017 | 0.319 | 8.663 | 39.281 |
| Child mortality (past 10 years) | 2.507 | 2.521 | 481 | 1,067 | 1.124 | 1.006 | 0.000 | 7.550 |
| Under-five mortality (past 10 years) | 26.420 | 9.270 | 481 | 1,067 | 1.186 | 0.351 | 7.879 | 44.960 |

na $=$ Not applicable

| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted (N) | Weighted (WN) |  |  | $\begin{aligned} & \text { Value- } \\ & 2 S E \\ & \text { (R-2SE) } \end{aligned}$ | $\begin{aligned} & \text { Value+ } \\ & 2 S E \\ & (\mathrm{R}+2 \mathrm{SE}) \end{aligned}$ |
| Urban residence | 1.000 | 0.000 | 262 | 547 | na | 0.000 | 1.000 | 1.000 |
| Literate | 0.996 | 0.004 | 262 | 547 | 1.023 | 0.004 | 0.988 | 1.000 |
| No education | 0.004 | 0.004 | 262 | 547 | 1.023 | 0.987 | 0.000 | 0.012 |
| Secondary education or higher | 0.996 | 0.004 | 262 | 547 | 1.023 | 0.004 | 0.988 | 1.000 |
| Never married | 0.461 | 0.023 | 262 | 547 | 0.734 | 0.049 | 0.416 | 0.506 |
| Currently married/in union | 0.526 | 0.023 | 262 | 547 | 0.756 | 0.044 | 0.480 | 0.573 |
| Married before age 20 | 0.017 | 0.010 | 179 | 367 | 0.995 | 0.572 | 0.000 | 0.036 |
| Want no more children | 0.505 | 0.053 | 137 | 288 | 1.243 | 0.106 | 0.398 | 0.611 |
| Want to delay birth at least 2 years | 0.174 | 0.043 | 137 | 288 | 1.316 | 0.246 | 0.088 | 0.259 |
| Ideal family size | 2.757 | 0.091 | 260 | 542 | 1.017 | 0.033 | 2.576 | 2.938 |
| Has heard of HIV/AIDS | 0.926 | 0.023 | 262 | 547 | 1.446 | 0.025 | 0.879 | 0.973 |
| Knows about condoms | 0.836 | 0.029 | 262 | 547 | 1.250 | 0.034 | 0.779 | 0.893 |
| Knows about limiting partners | 0.880 | 0.028 | 262 | 547 | 1.408 | 0.032 | 0.824 | 0.937 |
| Had $2+$ sexual partners in the past 12 months | 0.134 | 0.033 | 208 | 433 | 1.388 | 0.245 | 0.068 | 0.200 |
| Higher-risk intercourse in past 12 months (15-49) | 0.353 | 0.030 | 208 | 433 | 0.908 | 0.085 | 0.293 | 0.414 |
| Condom use at last higher-risk intercourse (15-49) | 0.832 | 0.054 | 75 | 153 | 1.254 | 0.065 | 0.723 | 0.941 |
| Abstinence among youth (never intercourse) | 0.531 | 0.067 | 79 | 169 | 1.192 | 0.127 | 0.396 | 0.666 |
| Sexuallyl active in past 12 months among never-married | 0.441 | 0.064 | 79 | 169 | 1.141 | 0.145 | 0.313 | 0.569 |
| Paid for sexual intercourse in the past 12 months | 0.030 | 0.013 | 262 | 547 | 1.216 | 0.429 | 0.004 | 0.056 |


| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted ( N ) | Weighted (WN) |  |  | $\begin{aligned} & \text { Value- } \\ & 2 S E \\ & (\mathrm{R}-2 \mathrm{SE}) \end{aligned}$ | $\begin{gathered} \text { Value }+ \\ 2 S E \\ (\mathrm{R}+2 \mathrm{SE}) \end{gathered}$ |
| Urban residence | 0.175 | 0.018 | 553 | 292 | 1.085 | 0.100 | 0.140 | 0.210 |
| Literate | 1.000 | 0.000 | 553 | 292 | 0.465 | 0.000 | 0.999 | 1.000 |
| Secondary education or higher | 0.931 | 0.010 | 553 | 292 | 0.948 | 0.011 | 0.910 | 0.951 |
| Never married | 0.293 | 0.016 | 553 | 292 | 0.823 | 0.054 | 0.261 | 0.325 |
| Currently married/in union | 0.671 | 0.015 | 553 | 292 | 0.758 | 0.023 | 0.641 | 0.701 |
| Married before age 20 | 0.443 | 0.032 | 460 | 236 | 1.373 | 0.072 | 0.379 | 0.506 |
| Currently pregnant | 0.026 | 0.009 | 553 | 292 | 1.333 | 0.348 | 0.008 | 0.044 |
| Children ever born | 1.847 | 0.081 | 553 | 292 | 1.175 | 0.044 | 1.685 | 2.009 |
| Children surviving | 1.740 | 0.097 | 553 | 292 | 1.549 | 0.056 | 1.546 | 1.934 |
| Children ever born to women age 40-49 | 2.969 | 0.056 | 181 | 88 | 0.706 | 0.019 | 2.857 | 3.081 |
| Knows any contraceptive method | 0.861 | 0.036 | 362 | 196 | 1.959 | 0.041 | 0.790 | 0.933 |
| Ever using contraceptive method | 0.644 | 0.048 | 362 | 196 | 1.895 | 0.074 | 0.548 | 0.739 |
| Currently using any contraceptive method | 0.536 | 0.047 | 362 | 196 | 1.787 | 0.088 | 0.442 | 0.630 |
| Currently using pill | 0.015 | 0.009 | 362 | 196 | 1.429 | 0.609 | 0.000 | 0.033 |
| Currently using IUD | 0.118 | 0.030 | 362 | 196 | 1.753 | 0.253 | 0.058 | 0.177 |
| Currently using female sterilization | 0.015 | 0.009 | 362 | 196 | 1.462 | 0.622 | 0.000 | 0.034 |
| Currently using rhythm method | 0.025 | 0.007 | 362 | 196 | 0.834 | 0.275 | 0.011 | 0.038 |
| Obtained method from public sector source | 0.608 | 0.038 | 82 | 43 | 0.709 | 0.063 | 0.531 | 0.685 |
| Want no more children | 0.730 | 0.020 | 362 | 196 | 0.853 | 0.027 | 0.690 | 0.770 |
| Want to delay birth at least 2 years | 0.146 | 0.012 | 362 | 196 | 0.668 | 0.085 | 0.121 | 0.171 |
| Ideal family size | 2.716 | 0.059 | 551 | 292 | 1.157 | 0.022 | 2.598 | 2.833 |
| Mother received medical assistance at delivery | 0.983 | 0.015 | 136 | 83 | 1.489 | 0.016 | 0.952 | 1.000 |
| Child had diarrhea in two weeks before survey | 0.196 | 0.035 | 135 | 82 | 1.134 | 0.181 | 0.125 | 0.267 |
| Treated with oral rehydration salts (ORS) | 0.258 | 0.078 | 24 | 16 | 0.986 | 0.304 | 0.101 | 0.415 |
| Taken to a health provider | 0.370 | 0.104 | 24 | 16 | 1.185 | 0.282 | 0.162 | 0.579 |
| Vaccination card seen | 0.932 | 0.052 | 28 | 23 | 1.357 | 0.056 | 0.828 | 1.000 |
| Received BCG | 1.000 | 0.000 | 28 | 23 | na | 0.000 | 1.000 | 1.000 |
| Received DPT (3 doses) | 0.866 | 0.086 | 28 | 23 | 1.658 | 0.099 | 0.695 | 1.000 |
| Received polio (3 doses) | 0.866 | 0.066 | 28 | 23 | 1.285 | 0.077 | 0.733 | 0.999 |
| Received measles | 0.950 | 0.051 | 28 | 23 | 1.541 | 0.053 | 0.849 | 1.000 |
| Fully immunized | 0.814 | 0.059 | 28 | 23 | 1.000 | 0.072 | 0.696 | 0.932 |
| Height-for-age (below -2SD) | 0.189 | 0.084 | 122 | 70 | 2.521 | 0.442 | 0.022 | 0.356 |
| Weight-for-height (below-2SD) | 0.001 | 0.001 | 122 | 70 | 0.434 | 1.011 | 0.000 | 0.004 |
| Weight-for-age (below -2SD) | 0.017 | 0.018 | 122 | 70 | 1.644 | 1.059 | 0.000 | 0.052 |
| Anemia in children | 0.265 | 0.046 | 93 | 43 | 0.874 | 0.175 | 0.172 | 0.358 |
| Anemia in women | 0.173 | 0.023 | 504 | 253 | 1.344 | 0.134 | 0.127 | 0.220 |
| Body mass index (BMI) <18.5 | 0.041 | 0.013 | 525 | 276 | 1.502 | 0.319 | 0.015 | 0.067 |
| Prevalence of hypertension | 0.231 | 0.026 | 535 | 281 | 1.428 | 0.113 | 0.179 | 0.283 |
| Has heard of HIV/AIDS | 0.872 | 0.028 | 553 | 292 | 1.961 | 0.032 | 0.816 | 0.927 |
| Knows about condoms | 0.586 | 0.032 | 553 | 292 | 1.519 | 0.054 | 0.522 | 0.649 |
| Knows about limiting partners | 0.622 | 0.034 | 553 | 292 | 1.639 | 0.054 | 0.555 | 0.690 |
| Had 2+ sexual partners in past 12 months | 0.000 | 0.000 | 345 | 190 | na | na | 0.000 | 0.000 |
| Had higher-risk intercourse in past 12 months | 0.000 | 0.000 | 345 | 190 | 0.398 | 1.002 | 0.000 | 0.001 |
| Accepting attitudes towards people with HIV | 0.001 | 0.001 | 506 | 255 | 0.582 | 0.720 | 0.000 | 0.003 |
| Total fertility rate (past 3 years) | 2.472 | 0.268 | na | 808 | 1.376 | 0.109 | 1.935 | 3.009 |
| Perinatal mortality (0-4 years) | 16.834 | 14.607 | 137 | 85 | 1.479 | 0.868 | 0.000 | 46.049 |
| Neonatal mortality (past 10 years) | 5.773 | 6.002 | 288 | 174 | 1.468 | 1.040 | 0.000 | 17.776 |
| Postneonatal mortality (past 10 years) | 10.732 | 8.029 | 288 | 174 | 1.668 | 0.748 | 0.000 | 26.790 |
| Infant mortality (past 10 years) | 16.505 | 9.065 | 288 | 174 | 1.483 | 0.549 | 0.000 | 34.635 |
| Child mortality (past 10 years) | 22.769 | 10.729 | 288 | 174 | 1.376 | 0.471 | 1.311 | 44.226 |
| Under-five mortality (past 10 years) | 38.898 | 14.280 | 288 | 174 | 1.305 | 0.367 | 10.339 | 67.457 |


| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted (N) | Weighted (WN) |  |  | Value2SE <br> (R-2SE) | $\begin{aligned} & \text { Value+ } \\ & 2 S E \\ & (\mathrm{R}+2 \mathrm{SE}) \end{aligned}$ |
| Urban residence | 0.180 | 0.023 | 142 | 71 | 0.716 | 0.129 | 0.134 | 0.227 |
| Literate | 1.000 | 0.000 | 142 | 71 | na | 0.000 | 1.000 | 1.000 |
| No education | 0.000 | 0.000 | 142 | 71 | na | na | 0.000 | 0.000 |
| Secondary education or higher | 1.000 | 0.000 | 142 | 71 | na | 0.000 | 1.000 | 1.000 |
| Never married | 0.323 | 0.048 | 142 | 71 | 1.209 | 0.147 | 0.228 | 0.419 |
| Currently married/in union | 0.674 | 0.047 | 142 | 71 | 1.194 | 0.070 | 0.580 | 0.768 |
| Married before age 20 | 0.031 | 0.019 | 89 | 49 | 1.016 | 0.606 | 0.000 | 0.068 |
| Want no more children | 0.806 | 0.065 | 81 | 48 | 1.470 | 0.081 | 0.676 | 0.936 |
| Want to delay birth at least 2 years | 0.101 | 0.022 | 81 | 48 | 0.642 | 0.214 | 0.058 | 0.144 |
| Ideal family size | 3.471 | 0.131 | 140 | 71 | 0.561 | 0.038 | 3.208 | 3.734 |
| Has heard of HIV/AIDS | 0.998 | 0.002 | 142 | 71 | 0.526 | 0.002 | 0.994 | 1.000 |
| Knows about condoms | 0.833 | 0.049 | 142 | 71 | 1.566 | 0.059 | 0.735 | 0.932 |
| Knows about limiting partners | 0.958 | 0.021 | 142 | 71 | 1.255 | 0.022 | 0.915 | 1.000 |
| Had 2+ sexual partners in the past 12 months | 0.014 | 0.008 | 99 | 53 | 0.642 | 0.542 | 0.000 | 0.029 |
| Higher-risk intercourse in past 12 months (15-49) | 0.125 | 0.022 | 99 | 53 | 0.658 | 0.176 | 0.081 | 0.169 |
| Condom use at last higher-risk intercourse (15-49) | 0.738 | 0.113 | 21 | 7 | 1.150 | 0.153 | 0.512 | 0.964 |
| Abstinence among youth (never intercourse) | 0.608 | 0.072 | 51 | 22 | 1.046 | 0.119 | 0.463 | 0.752 |
| Sexuallyl active in past 12 months among never-married | 0.264 | 0.059 | 51 | 22 | 0.949 | 0.224 | 0.146 | 0.383 |
| Paid for sexual intercourse in the past 12 months | 0.043 | 0.021 | 142 | 71 | 1.205 | 0.477 | 0.002 | 0.085 |

Table B.7.1 Sampling errors for the Ararat sample, Armenia 2005: Women

| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted (N) | Weighted (WN) |  |  | Value2SE (R-2SE) | $\begin{gathered} \text { Value }+ \\ 2 S E \\ (R+2 S E) \end{gathered}$ |
| Urban residence | 0.264 | 0.032 | 545 | 462 | 1.701 | 0.122 | 0.200 | 0.328 |
| Literate | 0.999 | 0.001 | 545 | 462 | 0.624 | 0.001 | 0.998 | 1.000 |
| Secondary education or higher | 0.898 | 0.021 | 545 | 462 | 1.646 | 0.024 | 0.855 | 0.940 |
| Never married | 0.271 | 0.018 | 545 | 462 | 0.961 | 0.068 | 0.234 | 0.307 |
| Currently married/in union | 0.664 | 0.021 | 545 | 462 | 1.033 | 0.031 | 0.623 | 0.706 |
| Married before age 20 | 0.427 | 0.026 | 459 | 396 | 1.126 | 0.061 | 0.375 | 0.479 |
| Currently pregnant | 0.025 | 0.006 | 545 | 462 | 0.863 | 0.233 | 0.013 | 0.036 |
| Children ever born | 1.713 | 0.041 | 545 | 462 | 0.682 | 0.024 | 1.630 | 1.795 |
| Children surviving | 1.641 | 0.046 | 545 | 462 | 0.799 | 0.028 | 1.548 | 1.733 |
| Children ever born to women age 40-49 | 2.816 | 0.131 | 173 | 135 | 1.400 | 0.047 | 2.553 | 3.078 |
| Knows any contraceptive method | 0.980 | 0.014 | 351 | 307 | 1.935 | 0.015 | 0.952 | 1.000 |
| Ever using contraceptive method | 0.631 | 0.032 | 351 | 307 | 1.224 | 0.050 | 0.568 | 0.694 |
| Currently using any contraceptive method | 0.411 | 0.050 | 351 | 307 | 1.892 | 0.121 | 0.311 | 0.510 |
| Currently using pill | 0.003 | 0.001 | 351 | 307 | 0.341 | 0.309 | 0.001 | 0.006 |
| Currently using IUD | 0.088 | 0.010 | 351 | 307 | 0.689 | 0.119 | 0.067 | 0.108 |
| Currently using female sterilization | 0.002 | 0.002 | 351 | 307 | 0.755 | 0.817 | 0.000 | 0.006 |
| Currently using rhythm method | 0.038 | 0.016 | 351 | 307 | 1.608 | 0.435 | 0.005 | 0.070 |
| Obtained method from public sector source | 0.682 | 0.037 | 48 | 44 | 0.540 | 0.054 | 0.609 | 0.756 |
| Want no more children | 0.649 | 0.052 | 351 | 307 | 2.019 | 0.079 | 0.546 | 0.752 |
| Want to delay birth at least 2 years | 0.108 | 0.025 | 351 | 307 | 1.535 | 0.236 | 0.057 | 0.158 |
| Ideal family size | 2.587 | 0.056 | 545 | 462 | 1.726 | 0.022 | 2.474 | 2.699 |
| Mother received medical assistance at delivery | 0.994 | 0.005 | 138 | 127 | 0.785 | 0.005 | 0.984 | 1.000 |
| Child had diarrhea in two weeks before survey | 0.131 | 0.031 | 133 | 122 | 1.113 | 0.238 | 0.069 | 0.193 |
| Treated with oral rehydration salts (ORS) | 0.930 | 0.045 | 14 | 16 | 0.767 | 0.048 | 0.841 | 1.000 |
| Taken to a health provider | 0.315 | 0.195 | 14 | 16 | 1.823 | 0.620 | 0.000 | 0.705 |
| Vaccination card seen | 0.872 | 0.099 | 28 | 26 | 1.645 | 0.114 | 0.674 | 1.000 |
| Received BCG | 0.989 | 0.012 | 28 | 26 | 0.621 | 0.012 | 0.965 | 1.000 |
| Received DPT (3 doses) | 0.823 | 0.116 | 28 | 26 | 1.680 | 0.140 | 0.592 | 1.000 |
| Received polio (3 doses) | 0.854 | 0.098 | 28 | 26 | 1.547 | 0.115 | 0.657 | 1.000 |
| Received measles | 0.811 | 0.119 | 28 | 26 | 1.682 | 0.147 | 0.573 | 1.000 |
| Fully immunized | 0.576 | 0.171 | 28 | 26 | 1.917 | 0.296 | 0.235 | 0.918 |
| Height-for-age (below -2SD) | 0.136 | 0.037 | 127 | 128 | 1.333 | 0.269 | 0.063 | 0.209 |
| Weight-for-height (below-2SD) | 0.038 | 0.025 | 127 | 128 | 1.570 | 0.657 | 0.000 | 0.088 |
| Weight-for-age (below -2SD) | 0.074 | 0.044 | 127 | 128 | 2.035 | 0.590 | 0.000 | 0.161 |
| Anemia in children | 0.306 | 0.050 | 103 | 107 | 1.172 | 0.164 | 0.205 | 0.406 |
| Anemia in women | 0.217 | 0.031 | 518 | 434 | 1.681 | 0.141 | 0.155 | 0.278 |
| Body mass index (BMI) < 18.5 | 0.062 | 0.010 | 506 | 429 | 0.926 | 0.160 | 0.042 | 0.082 |
| Prevalence of hypertension | 0.299 | 0.043 | 526 | 442 | 2.130 | 0.142 | 0.214 | 0.384 |
| Has heard of HIV/AIDS | 0.930 | 0.024 | 545 | 462 | 2.226 | 0.026 | 0.881 | 0.979 |
| Knows about condoms | 0.695 | 0.029 | 545 | 462 | 1.447 | 0.041 | 0.638 | 0.752 |
| Knows about limiting partners | 0.703 | 0.032 | 545 | 462 | 1.642 | 0.046 | 0.639 | 0.767 |
| Had 2+ sexual partners in past 12 months | 0.000 | 0.000 | 325 | 288 | na | na | 0.000 | 0.000 |
| Had higher-risk intercourse in past 12 months | 0.004 | 0.001 | 325 | 288 | 0.374 | 0.349 | 0.001 | 0.006 |
| Accepting attitudes towards people with HIV | 0.000 | 0.000 | 504 | 430 | na | na | 0.000 | 0.000 |
| Total fertility rate (past 3 years) | 2.008 | 0.187 | na | 1,319 | 1.101 | 0.093 | 1.634 | 2.383 |
| Perinatal mortality (0-4 years) | 10.530 | 6.829 | 141 | 128 | 0.829 | 0.649 | 0.000 | 24.187 |
| Neonatal mortality (past 10 years) | 20.075 | 10.435 | 268 | 260 | 1.213 | 0.520 | 0.000 | 40.944 |
| Postneonatal mortality (past 10 years) | 3.903 | 2.554 | 268 | 260 | 0.707 | 0.654 | 0.000 | 9.010 |
| Infant mortality (past 10 years) | 23.978 | 10.955 | 268 | 260 | 1.129 | 0.457 | 2.067 | 45.889 |
| Child mortality (past 10 years) | 4.527 | 4.157 | 268 | 260 | na | 0.918 | 0.000 | 12.841 |
| Under-five mortality (past 10 years) | 28.396 | 10.620 | 268 | 260 | 1.129 | 0.374 | 7.155 | 49.637 |


| Variable | Value (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted ( N ) | Weighted (WN) |  |  | $\begin{aligned} & \text { Value- } \\ & 2 S E \\ & \text { (R-2SE) } \end{aligned}$ | $\begin{gathered} \text { Value+ } \\ 2 S E \\ (R+2 S E) \end{gathered}$ |
| Urban residence | 0.206 | 0.039 | 108 | 110 | 1.003 | 0.190 | 0.128 | 0.284 |
| Literate | 0.985 | 0.016 | 108 | 110 | 1.325 | 0.016 | 0.953 | 1.000 |
| No education | 0.015 | 0.016 | 108 | 110 | 1.325 | 1.031 | 0.000 | 0.047 |
| Secondary education or higher | 0.985 | 0.016 | 108 | 110 | 1.325 | 0.016 | 0.953 | 1.000 |
| Never married | 0.455 | 0.061 | 108 | 110 | 1.269 | 0.134 | 0.333 | 0.577 |
| Currently married/in union | 0.545 | 0.061 | 108 | 110 | 1.269 | 0.112 | 0.423 | 0.667 |
| Married before age 20 | 0.078 | 0.051 | 58 | 55 | 1.423 | 0.646 | 0.000 | 0.180 |
| Want no more children | 0.636 | 0.036 | 61 | 60 | 0.580 | 0.057 | 0.564 | 0.708 |
| Want to delay birth at least 2 years | 0.039 | 0.038 | 61 | 60 | 1.505 | 0.960 | 0.000 | 0.115 |
| Ideal family size | 2.717 | 0.074 | 108 | 110 | 0.701 | 0.027 | 2.568 | 2.865 |
| Has heard of HIV/AIDS | 0.996 | 0.004 | 108 | 110 | 0.652 | 0.004 | 0.988 | 1.000 |
| Knows about condoms | 0.951 | 0.025 | 108 | 110 | 1.196 | 0.026 | 0.901 | 1.000 |
| Knows about limiting partners | 0.940 | 0.032 | 108 | 110 | 1.396 | 0.034 | 0.876 | 1.000 |
| Had 2+ sexual partners in the past 12 months | 0.059 | 0.014 | 77 | 79 | 0.535 | 0.244 | 0.030 | 0.088 |
| Higher-risk intercourse in past 12 months (15-49) | 0.264 | 0.073 | 77 | 79 | 1.450 | 0.278 | 0.117 | 0.410 |
| Condom use at last higher-risk intercourse (15-49) | 0.902 | 0.085 | 19 | 21 | 1.220 | 0.095 | 0.731 | 1.000 |
| Abstinence among youth (never intercourse) | 0.656 | 0.113 | 43 | 45 | 1.538 | 0.172 | 0.430 | 0.881 |
| Sexuallyl active in past 12 months among never-married | 0.307 | 0.103 | 43 | 45 | 1.446 | 0.335 | 0.101 | 0.513 |
| Paid for sexual intercourse in the past 12 months | 0.045 | 0.029 | 108 | 110 | 1.446 | 0.645 | 0.000 | 0.103 |

Table B.8.1 Sampling errors for the Armavir sample, Armenia 2005: Women

| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect <br> (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted ( N ) | Weighted (WN) |  |  | $\begin{aligned} & \text { Value- } \\ & 2 S E \\ & (\mathrm{R}-2 \mathrm{SE}) \end{aligned}$ | $\begin{aligned} & \text { Value+ } \\ & 2 S E \\ & (R+2 S E) \end{aligned}$ |
| Urban residence | 0.344 | 0.030 | 613 | 567 | 1.540 | 0.086 | 0.285 | 0.403 |
| Literate | 0.984 | 0.009 | 613 | 567 | 1.854 | 0.010 | 0.965 | 1.000 |
| Secondary education or higher | 0.874 | 0.018 | 613 | 567 | 1.350 | 0.021 | 0.837 | 0.910 |
| Never married | 0.270 | 0.029 | 613 | 567 | 1.616 | 0.107 | 0.212 | 0.328 |
| Currently married/in union | 0.673 | 0.032 | 613 | 567 | 1.671 | 0.047 | 0.609 | 0.736 |
| Married before age 20 | 0.476 | 0.018 | 497 | 453 | 0.813 | 0.038 | 0.439 | 0.512 |
| Currently pregnant | 0.029 | 0.011 | 613 | 567 | 1.667 | 0.392 | 0.006 | 0.051 |
| Children ever born | 1.738 | 0.092 | 613 | 567 | 1.555 | 0.053 | 1.555 | 1.921 |
| Children surviving | 1.654 | 0.089 | 613 | 567 | 1.624 | 0.054 | 1.475 | 1.832 |
| Children ever born to women age 40-49 | 2.682 | 0.119 | 206 | 179 | 1.443 | 0.044 | 2.445 | 2.920 |
| Knows any contraceptive method | 0.997 | 0.003 | 402 | 381 | 1.145 | 0.003 | 0.990 | 1.000 |
| Ever using contraceptive method | 0.794 | 0.026 | 402 | 381 | 1.267 | 0.032 | 0.743 | 0.846 |
| Currently using any contraceptive method | 0.578 | 0.029 | 402 | 381 | 1.179 | 0.050 | 0.519 | 0.636 |
| Currently using pill | 0.000 | 0.000 | 402 | 381 | na | na | 0.000 | 0.000 |
| Currently using IUD | 0.070 | 0.015 | 402 | 381 | 1.205 | 0.219 | 0.039 | 0.101 |
| Currently using female sterilization | 0.000 | 0.000 | 402 | 381 | na | na | 0.000 | 0.000 |
| Currently using rhythm method | 0.012 | 0.006 | 402 | 381 | 1.166 | 0.529 | 0.000 | 0.025 |
| Obtained method from public sector source | 0.605 | 0.068 | 57 | 48 | 1.037 | 0.112 | 0.469 | 0.741 |
| Want no more children | 0.773 | 0.026 | 402 | 381 | 1.246 | 0.034 | 0.721 | 0.825 |
| Want to delay birth at least 2 years | 0.092 | 0.016 | 402 | 381 | 1.126 | 0.176 | 0.060 | 0.125 |
| Ideal family size | 2.542 | 0.023 | 611 | 566 | 0.556 | 0.009 | 2.496 | 2.588 |
| Mother received medical assistance at delivery | 0.985 | 0.013 | 132 | 125 | 1.319 | 0.014 | 0.959 | 1.000 |
| Child had diarrhea in two weeks before survey | 0.257 | 0.052 | 131 | 124 | 1.395 | 0.201 | 0.153 | 0.361 |
| Treated with oral rehydration salts (ORS) | 0.236 | 0.090 | 31 | 32 | 1.255 | 0.382 | 0.056 | 0.416 |
| Taken to a health provider | 0.084 | 0.051 | 31 | 32 | 1.086 | 0.615 | 0.000 | 0.187 |
| Vaccination card seen | 0.980 | 0.020 | 23 | 23 | 0.720 | 0.021 | 0.940 | 1.000 |
| Received BCG | 0.943 | 0.049 | 23 | 23 | 1.052 | 0.052 | 0.844 | 1.000 |
| Received DPT (3 doses) | 0.809 | 0.098 | 23 | 23 | 1.230 | 0.121 | 0.613 | 1.000 |
| Received polio (3 doses) | 0.826 | 0.095 | 23 | 23 | 1.230 | 0.115 | 0.636 | 1.000 |
| Received measles | 0.809 | 0.098 | 23 | 23 | 1.230 | 0.121 | 0.613 | 1.000 |
| Fully immunized | 0.809 | 0.098 | 23 | 23 | 1.230 | 0.121 | 0.613 | 1.000 |
| Height-for-age (below -2SD) | 0.045 | 0.020 | 124 | 122 | 1.118 | 0.447 | 0.005 | 0.085 |
| Weight-for-height (below -2SD) | 0.016 | 0.015 | 124 | 122 | 1.370 | 0.947 | 0.000 | 0.045 |
| Weight-for-age (below-2SD) | 0.004 | 0.004 | 124 | 122 | 0.774 | 1.037 | 0.000 | 0.013 |
| Anemia in children | 0.436 | 0.041 | 93 | 95 | 0.820 | 0.093 | 0.355 | 0.517 |
| Anemia in women | 0.222 | 0.021 | 594 | 554 | 1.260 | 0.096 | 0.179 | 0.265 |
| Body mass index (BMI) <18.5 | 0.032 | 0.008 | 584 | 537 | 1.146 | 0.262 | 0.015 | 0.049 |
| Prevalence of hypertension | 0.140 | 0.022 | 595 | 551 | 1.515 | 0.154 | 0.097 | 0.183 |
| Has heard of HIV/AIDS | 0.924 | 0.015 | 613 | 567 | 1.399 | 0.016 | 0.895 | 0.954 |
| Knows about condoms | 0.725 | 0.046 | 613 | 567 | 2.547 | 0.063 | 0.633 | 0.817 |
| Knows about limiting partners | 0.768 | 0.045 | 613 | 567 | 2.643 | 0.059 | 0.678 | 0.858 |
| Had 2+ sexual partners in past 12 months | 0.000 | 0.000 | 377 | 361 | na | na | 0.000 | 0.000 |
| Had higher-risk intercourse in past 12 months | 0.007 | 0.003 | 377 | 361 | 0.818 | 0.517 | 0.000 | 0.013 |
| Accepting attitudes towards people with HIV | 0.003 | 0.002 | 572 | 524 | 0.727 | 0.583 | 0.000 | 0.006 |
| Total fertility rate (last 3 years) | 1.742 | 0.206 | na | 1,601 | 1.147 | 0.118 | 1.330 | 2.154 |
| Perinatal mortality (0-4 years) | 17.935 | 16.371 | 133 | 128 | 1.469 | 0.913 | 0.000 | 50.677 |
| Neonatal mortality (past 10 years) | 5.909 | 6.026 | 268 | 278 | 1.387 | 1.020 | 0.000 | 17.962 |
| Postneonatal mortality (past 10 years) | 7.898 | 8.057 | 268 | 278 | 1.616 | 1.020 | 0.000 | 24.013 |
| Infant mortality (past 10 years) | 13.807 | 9.387 | 268 | 278 | 1.443 | 0.680 | 0.000 | 32.581 |
| Child mortality (past 10 years) | 12.033 | 12.215 | 268 | 278 | 2.090 | 1.015 | 0.000 | 36.463 |
| Under-five mortality (past 10 years) | 25.674 | 12.884 | 268 | 278 | 1.575 | 0.502 | 0.000 | 51.442 |

na $=$ Not applicable

| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted (N) | Weighted (WN) |  |  | Value2SE <br> (R-2SE) | $\begin{gathered} \text { Value }+ \\ 2 S E \\ (R+2 S E) \end{gathered}$ |
| Urban residence | 0.310 | 0.044 | 146 | 139 | 1.138 | 0.141 | 0.223 | 0.398 |
| Literate | 1.000 | 0.000 | 146 | 139 | na | 0.000 | 1.000 | 1.000 |
| No education | 0.000 | 0.000 | 146 | 139 | na | na | 0.000 | 0.000 |
| Secondary education or higher | 1.000 | 0.000 | 146 | 139 | na | 0.000 | 1.000 | 1.000 |
| Never married | 0.402 | 0.052 | 146 | 139 | 1.275 | 0.129 | 0.298 | 0.506 |
| Currently married/in union | 0.576 | 0.045 | 146 | 139 | 1.088 | 0.078 | 0.486 | 0.665 |
| Married before age 20 | 0.073 | 0.031 | 87 | 85 | 1.108 | 0.426 | 0.011 | 0.135 |
| Want no more children | 0.640 | 0.078 | 82 | 80 | 1.459 | 0.122 | 0.485 | 0.796 |
| Want to delay birth at least 2 years | 0.082 | 0.041 | 82 | 80 | 1.338 | 0.499 | 0.000 | 0.163 |
| Ideal family size | 2.629 | 0.078 | 133 | 129 | 0.841 | 0.030 | 2.472 | 2.786 |
| Has heard of HIV/AIDS | 0.974 | 0.019 | 146 | 139 | 1.437 | 0.020 | 0.935 | 1.000 |
| Knows about condoms | 0.965 | 0.024 | 146 | 139 | 1.571 | 0.025 | 0.917 | 1.000 |
| Knows about limiting partners | 0.974 | 0.019 | 146 | 139 | 1.437 | 0.020 | 0.935 | 1.000 |
| Had $2+$ sexual partners in the past 12 months | 0.189 | 0.034 | 115 | 108 | 0.940 | 0.182 | 0.120 | 0.258 |
| Higher-risk intercourse in past 12 months (15-49) | 0.317 | 0.068 | 115 | 108 | 1.561 | 0.215 | 0.181 | 0.453 |
| Condom use at last higher-risk intercourse (15-49) | 0.744 | 0.075 | 42 | 34 | 1.102 | 0.101 | 0.594 | 0.894 |
| Abstinence among youth (never intercourse) | 0.564 | 0.114 | 51 | 48 | 1.620 | 0.201 | 0.337 | 0.791 |
| Sexuallyl active in past 12 months among never-married | 0.367 | 0.096 | 51 | 48 | 1.410 | 0.262 | 0.175 | 0.559 |
| Paid for sexual intercourse in the past 12 months | 0.041 | 0.014 | 146 | 139 | 0.830 | 0.334 | 0.014 | 0.068 |


| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted ( N ) | Weighted (WN) |  |  | $\begin{aligned} & \text { Value- } \\ & 2 S E \\ & (\mathrm{R}-2 \mathrm{SE}) \end{aligned}$ | $\begin{gathered} \text { Value+ } \\ 2 S E \\ (R+2 S E) \end{gathered}$ |
| Urban residence | 0.314 | 0.028 | 593 | 443 | 1.451 | 0.088 | 0.259 | 0.369 |
| Literate | 0.996 | 0.004 | 593 | 443 | 1.489 | 0.004 | 0.989 | 1.000 |
| Secondary education or higher | 0.880 | 0.012 | 593 | 443 | 0.923 | 0.014 | 0.855 | 0.904 |
| Never married | 0.270 | 0.025 | 593 | 443 | 1.378 | 0.093 | 0.219 | 0.320 |
| Currently married/in union | 0.684 | 0.022 | 593 | 443 | 1.177 | 0.033 | 0.639 | 0.729 |
| Married before age 20 | 0.553 | 0.027 | 483 | 359 | 1.191 | 0.049 | 0.499 | 0.607 |
| Currently pregnant | 0.021 | 0.005 | 593 | 443 | 0.926 | 0.258 | 0.010 | 0.032 |
| Children ever born | 1.836 | 0.055 | 593 | 443 | 0.845 | 0.030 | 1.726 | 1.945 |
| Children surviving | 1.707 | 0.053 | 593 | 443 | 0.889 | 0.031 | 1.602 | 1.812 |
| Children ever born to women age 40-49 | 2.814 | 0.070 | 184 | 134 | 0.635 | 0.025 | 2.674 | 2.955 |
| Knows any contraceptive method | 0.996 | 0.004 | 394 | 303 | 1.239 | 0.004 | 0.988 | 1.000 |
| Ever using contraceptive method | 0.720 | 0.024 | 394 | 303 | 1.058 | 0.033 | 0.672 | 0.768 |
| Currently using any contraceptive method | 0.410 | 0.036 | 394 | 303 | 1.440 | 0.087 | 0.339 | 0.482 |
| Currently using pill | 0.009 | 0.006 | 394 | 303 | 1.200 | 0.645 | 0.000 | 0.020 |
| Currently using IUD | 0.064 | 0.016 | 394 | 303 | 1.257 | 0.242 | 0.033 | 0.095 |
| Currently using female sterilization | 0.007 | 0.005 | 394 | 303 | 1.276 | 0.768 | 0.000 | 0.018 |
| Currently using rhythm method | 0.029 | 0.017 | 394 | 303 | 1.942 | 0.562 | 0.000 | 0.063 |
| Obtained method from public sector source | 0.486 | 0.121 | 68 | 48 | 1.974 | 0.248 | 0.245 | 0.727 |
| Want no more children | 0.773 | 0.027 | 394 | 303 | 1.300 | 0.036 | 0.718 | 0.828 |
| Want to delay birth at least 2 years | 0.097 | 0.022 | 394 | 303 | 1.498 | 0.230 | 0.052 | 0.142 |
| Ideal family size | 2.541 | 0.055 | 585 | 438 | 1.410 | 0.022 | 2.431 | 2.651 |
| Mother received medical assistance at delivery | 0.902 | 0.045 | 140 | 120 | 1.761 | 0.050 | 0.812 | 0.991 |
| Child had diarrhea in two weeks before survey | 0.213 | 0.036 | 137 | 117 | 0.962 | 0.167 | 0.142 | 0.284 |
| Treated with oral rehydration salts (ORS) | 0.040 | 0.030 | 24 | 25 | 0.888 | 0.761 | 0.000 | 0.100 |
| Taken to a health provider | 0.234 | 0.150 | 24 | 25 | 1.957 | 0.642 | 0.000 | 0.534 |
| Vaccination card seen | 0.697 | 0.101 | 27 | 20 | 1.110 | 0.145 | 0.495 | 0.898 |
| Received BCG | 0.940 | 0.055 | 27 | 20 | 1.203 | 0.059 | 0.830 | 1.000 |
| Received DPT (3 doses) | 0.467 | 0.129 | 27 | 20 | 1.283 | 0.277 | 0.208 | 0.725 |
| Received polio (3 doses) | 0.481 | 0.132 | 27 | 20 | 1.304 | 0.274 | 0.217 | 0.745 |
| Received measles | 0.560 | 0.131 | 27 | 20 | 1.281 | 0.234 | 0.298 | 0.822 |
| Fully immunized | 0.467 | 0.129 | 27 | 20 | 1.283 | 0.277 | 0.208 | 0.725 |
| Height-for-age (below -2SD) | 0.160 | 0.056 | 123 | 111 | 1.530 | 0.348 | 0.049 | 0.271 |
| Weight-for-height (below -2SD) | 0.014 | 0.012 | 123 | 111 | 1.241 | 0.820 | 0.000 | 0.038 |
| Weight-for-age (below -2SD) | 0.051 | 0.035 | 123 | 111 | 1.634 | 0.676 | 0.000 | 0.120 |
| Anemia in children | 0.625 | 0.068 | 100 | 93 | 1.524 | 0.109 | 0.489 | 0.762 |
| Anemia in women | 0.331 | 0.032 | 556 | 413 | 1.614 | 0.098 | 0.266 | 0.395 |
| Body mass index (BMI) < 18.5 | 0.043 | 0.009 | 544 | 405 | 1.002 | 0.204 | 0.025 | 0.060 |
| Prevalence of hypertension | 0.102 | 0.018 | 539 | 398 | 1.378 | 0.177 | 0.066 | 0.138 |
| Has heard of HIV/AIDS | 0.942 | 0.007 | 593 | 443 | 0.687 | 0.007 | 0.929 | 0.955 |
| Knows about condoms | 0.727 | 0.024 | 593 | 443 | 1.304 | 0.033 | 0.679 | 0.774 |
| Knows about limiting partners | 0.792 | 0.017 | 593 | 443 | 0.995 | 0.021 | 0.759 | 0.825 |
| Had 2+ sexual partners in past 12 months | 0.000 | 0.000 | 382 | 297 | na | na | 0.000 | 0.000 |
| Had higher-risk intercourse in past 12 months | 0.001 | 0.001 | 382 | 297 | 0.600 | 1.004 | 0.000 | 0.003 |
| Accepting attitudes towards people with HIV | 0.028 | 0.006 | 562 | 417 | 0.925 | 0.232 | 0.015 | 0.040 |
| Total fertility rate (past 3 years) | 2.075 | 0.298 | na | 1,245 | 1.320 | 0.144 | 1.479 | 2.671 |
| Perinatal mortality (0-4 years) | 12.354 | 12.135 | 140 | 120 | 1.389 | 0.982 | 0.000 | 36.624 |
| Neonatal mortality (past 10 years) | 26.638 | 9.366 | 306 | 259 | 1.035 | 0.352 | 7.907 | 45.369 |
| Postneonatal mortality (past 10 years) | 20.027 | 9.660 | 306 | 259 | 1.452 | 0.482 | 0.707 | 39.347 |
| Infant mortality (past 10 years) | 46.665 | 10.909 | 306 | 259 | 0.916 | 0.234 | 24.848 | 68.483 |
| Child mortality (past 10 years) | 0.000 | 0.000 | 306 | 259 | na | na | 0.000 | 0.000 |
| Under-five mortality (past 10 years) | 46.665 | 10.909 | 306 | 259 | 0.916 | 0.234 | 24.848 | 68.483 |


| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted (N) | Weighted (WN) |  |  | $\begin{aligned} & \text { Value- } \\ & 2 S E \\ & \text { (R-2SE) } \end{aligned}$ | $\begin{gathered} \text { Value }+ \\ 2 S E \\ (R+2 S E) \end{gathered}$ |
| Urban residence | 0.401 | 0.042 | 123 | 81 | 0.950 | 0.105 | 0.317 | 0.486 |
| Literate | 1.000 | 0.000 | 123 | 81 | na | 0.000 | 1.000 | 1.000 |
| No education | 0.000 | 0.000 | 123 | 81 | na | na | 0.000 | 0.000 |
| Secondary education or higher | 1.000 | 0.000 | 123 | 81 | na | 0.000 | 1.000 | 1.000 |
| Never married | 0.359 | 0.057 | 123 | 81 | 1.320 | 0.160 | 0.244 | 0.473 |
| Currently married/in union | 0.622 | 0.054 | 123 | 81 | 1.227 | 0.087 | 0.515 | 0.730 |
| Married before age 20 | 0.038 | 0.032 | 76 | 52 | 1.477 | 0.861 | 0.000 | 0.103 |
| Want no more children | 0.634 | 0.062 | 70 | 51 | 1.063 | 0.097 | 0.511 | 0.757 |
| Want to delay birth at least 2 years | 0.119 | 0.038 | 70 | 51 | 0.986 | 0.323 | 0.042 | 0.196 |
| Ideal family size | 2.629 | 0.158 | 123 | 81 | 1.493 | 0.060 | 2.313 | 2.946 |
| Has heard of HIV/AIDS | 0.902 | 0.042 | 123 | 81 | 1.553 | 0.046 | 0.818 | 0.986 |
| Knows about condoms | 0.857 | 0.059 | 123 | 81 | 1.848 | 0.068 | 0.739 | 0.974 |
| Knows about limiting partners | 0.834 | 0.059 | 123 | 81 | 1.749 | 0.071 | 0.717 | 0.952 |
| Had 2+ sexual partners in the past 12 months | 0.156 | 0.034 | 85 | 58 | 0.850 | 0.216 | 0.089 | 0.224 |
| Higher-risk intercourse in past 12 months (15-49) | 0.234 | 0.043 | 85 | 58 | 0.933 | 0.184 | 0.148 | 0.320 |
| Condom use at last higher-risk intercourse (15-49) | 0.704 | 0.177 | 24 | 14 | 1.857 | 0.251 | 0.350 | 1.000 |
| Abstinence among youth (never intercourse) | 0.708 | 0.082 | 42 | 25 | 1.157 | 0.116 | 0.543 | 0.872 |
| Sexuallyl active in past 12 months among never-married | 0.179 | 0.063 | 42 | 25 | 1.050 | 0.351 | 0.053 | 0.305 |
| Paid for sexual intercourse in the past 12 months | 0.044 | 0.024 | 123 | 81 | 1.281 | 0.540 | 0.000 | 0.092 |


| Table B.10.1 Sampling errors for the Lori sample, Armenia $2005: ~ W o m e n ~$ |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |


| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted ( N ) | Weighted (WN) |  |  | $\begin{aligned} & \text { Value- } \\ & \text { 2SE } \\ & \text { (R-2SE) } \end{aligned}$ | $\begin{gathered} \text { Value+ } \\ 2 S E \\ (R+2 S E) \end{gathered}$ |
| Urban residence | 0.535 | 0.090 | 56 | 87 | 1.333 | 0.167 | 0.356 | 0.715 |
| Literate | 0.980 | 0.020 | 56 | 87 | 1.056 | 0.021 | 0.939 | 1.000 |
| No education | 0.020 | 0.020 | 56 | 87 | 1.056 | 0.987 | 0.000 | 0.061 |
| Secondary education or higher | 0.980 | 0.020 | 56 | 87 | 1.056 | 0.021 | 0.939 | 1.000 |
| Never married | 0.375 | 0.080 | 56 | 87 | 1.219 | 0.212 | 0.216 | 0.534 |
| Currently married/in union | 0.613 | 0.079 | 56 | 87 | 1.202 | 0.129 | 0.455 | 0.771 |
| Married before age 20 | 0.032 | 0.032 | 37 | 53 | 1.096 | 1.008 | 0.000 | 0.096 |
| Want no more children | 0.770 | 0.097 | 37 | 54 | 1.388 | 0.126 | 0.576 | 0.965 |
| Want to delay birth at least 2 years | 0.000 | 0.000 | 37 | 54 | na | na | 0.000 | 0.000 |
| Ideal family size | 3.021 | 0.146 | 50 | 75 | 0.985 | 0.048 | 2.729 | 3.314 |
| Has heard of HIV/AIDS | 0.924 | 0.033 | 56 | 87 | 0.919 | 0.036 | 0.859 | 0.990 |
| Knows about condoms | 0.842 | 0.057 | 56 | 87 | 1.164 | 0.068 | 0.728 | 0.957 |
| Knows about limiting partners | 0.864 | 0.037 | 56 | 87 | 0.794 | 0.042 | 0.791 | 0.938 |
| Had 2+ sexual partners in the past 12 months | 0.054 | 0.038 | 40 | 57 | 1.041 | 0.699 | 0.000 | 0.129 |
| Higher-risk intercourse in past 12 months (15-49) | 0.091 | 0.050 | 40 | 57 | 1.076 | 0.545 | 0.000 | 0.190 |
| Condom use at last higher-risk intercourse (15-49) | 0.752 | 0.229 | 4 | 5 | 0.917 | 0.304 | 0.295 | 1.000 |
| Abstinence among youth (never intercourse) | 0.796 | 0.150 | 17 | 31 | 1.488 | 0.189 | 0.496 | 1.000 |
| Sexuallyl active in past 12 months among never-married | 0.090 | 0.071 | 17 | 31 | 0.998 | 0.793 | 0.000 | 0.233 |
| Paid for sexual intercourse in the past 12 months | 0.075 | 0.030 | 56 | 87 | 0.858 | 0.407 | 0.014 | 0.136 |

Table B.11.1 Sampling errors for the Kotayk sample, Armenia 2005: Women

| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted ( N ) | Weighted (WN) |  |  | $\begin{aligned} & \text { Value- } \\ & 2 S E \\ & (\mathrm{R}-2 \mathrm{SE}) \end{aligned}$ | $\begin{gathered} \text { Value+ } \\ 2 S E \\ (\mathrm{R}+2 \mathrm{SE}) \end{gathered}$ |
| Urban residence | 0.567 | 0.049 | 562 | 563 | 2.349 | 0.087 | 0.469 | 0.665 |
| Literate | 0.994 | 0.004 | 562 | 563 | 1.206 | 0.004 | 0.986 | 1.000 |
| Secondary education or higher | 0.904 | 0.016 | 562 | 563 | 1.258 | 0.017 | 0.872 | 0.935 |
| Never married | 0.298 | 0.011 | 562 | 563 | 0.574 | 0.037 | 0.276 | 0.320 |
| Currently married/in union | 0.634 | 0.018 | 562 | 563 | 0.877 | 0.028 | 0.598 | 0.669 |
| Married before age 20 | 0.462 | 0.021 | 460 | 458 | 0.915 | 0.046 | 0.420 | 0.505 |
| Currently pregnant | 0.036 | 0.006 | 562 | 563 | 0.782 | 0.172 | 0.023 | 0.048 |
| Children ever born | 1.588 | 0.050 | 562 | 563 | 0.798 | 0.031 | 1.489 | 1.688 |
| Children surviving | 1.495 | 0.042 | 562 | 563 | 0.743 | 0.028 | 1.412 | 1.579 |
| Children ever born to women age 40-49 | 2.756 | 0.150 | 165 | 165 | 1.483 | 0.054 | 2.456 | 3.055 |
| Knows any contraceptive method | 0.988 | 0.006 | 353 | 357 | 1.066 | 0.006 | 0.975 | 1.000 |
| Ever using contraceptive method | 0.779 | 0.026 | 353 | 357 | 1.157 | 0.033 | 0.728 | 0.830 |
| Currently using any contraceptive method | 0.489 | 0.032 | 353 | 357 | 1.192 | 0.065 | 0.425 | 0.552 |
| Currently using pill | 0.007 | 0.003 | 353 | 357 | 0.742 | 0.485 | 0.000 | 0.013 |
| Currently using IUD | 0.049 | 0.017 | 353 | 357 | 1.462 | 0.343 | 0.015 | 0.083 |
| Currently using female sterilization | 0.005 | 0.004 | 353 | 357 | 1.022 | 0.744 | 0.000 | 0.013 |
| Currently using rhythm method | 0.040 | 0.012 | 353 | 357 | 1.163 | 0.304 | 0.016 | 0.064 |
| Obtained method from public sector source | 0.476 | 0.096 | 42 | 40 | 1.228 | 0.201 | 0.284 | 0.667 |
| Want no more children | 0.683 | 0.019 | 353 | 357 | 0.776 | 0.028 | 0.645 | 0.722 |
| Want to delay birth at least 2 years | 0.122 | 0.021 | 353 | 357 | 1.208 | 0.173 | 0.080 | 0.164 |
| Ideal family size | 2.671 | 0.049 | 551 | 551 | 1.094 | 0.018 | 2.572 | 2.769 |
| Mother received medical assistance at delivery | 0.970 | 0.021 | 125 | 129 | 1.088 | 0.022 | 0.928 | 1.000 |
| Child had diarrhea in two weeks before survey | 0.242 | 0.047 | 120 | 123 | 1.187 | 0.193 | 0.149 | 0.336 |
| Treated with oral rehydration salts (ORS) | 0.218 | 0.087 | 28 | 30 | 1.129 | 0.397 | 0.045 | 0.392 |
| Taken to a health provider | 0.414 | 0.088 | 28 | 30 | 0.917 | 0.213 | 0.238 | 0.591 |
| Vaccination card seen | 0.883 | 0.054 | 27 | 28 | 0.871 | 0.061 | 0.775 | 0.990 |
| Received BCG | 0.974 | 0.025 | 27 | 28 | 0.832 | 0.026 | 0.923 | 1.000 |
| Received DPT (3 doses) | 0.720 | 0.107 | 27 | 28 | 1.209 | 0.148 | 0.506 | 0.933 |
| Received polio (3 doses) | 0.720 | 0.107 | 27 | 28 | 1.209 | 0.148 | 0.506 | 0.933 |
| Received measles | 0.835 | 0.088 | 27 | 28 | 1.220 | 0.105 | 0.660 | 1.000 |
| Fully immunized | 0.693 | 0.104 | 27 | 28 | 1.145 | 0.150 | 0.485 | 0.902 |
| Height-for-age (below -2SD) | 0.076 | 0.028 | 112 | 106 | 1.182 | 0.374 | 0.019 | 0.133 |
| Weight-for-height (below -2SD) | 0.021 | 0.014 | 112 | 106 | 1.068 | 0.683 | 0.000 | 0.049 |
| Weight-for-age (below -2SD) | 0.007 | 0.006 | 112 | 106 | 0.841 | 0.962 | 0.000 | 0.019 |
| Anemia in children | 0.312 | 0.061 | 85 | 81 | 1.246 | 0.196 | 0.190 | 0.435 |
| Anemia in women | 0.210 | 0.015 | 518 | 518 | 0.813 | 0.069 | 0.181 | 0.239 |
| Body mass index (BMI) < 18.5 | 0.045 | 0.012 | 510 | 508 | 1.278 | 0.261 | 0.022 | 0.069 |
| Prevalence of hypertension | 0.199 | 0.023 | 524 | 525 | 1.319 | 0.116 | 0.153 | 0.245 |
| Has heard of HIV/AIDS | 0.929 | 0.014 | 562 | 563 | 1.291 | 0.015 | 0.901 | 0.957 |
| Knows about condoms | 0.588 | 0.033 | 562 | 563 | 1.602 | 0.057 | 0.521 | 0.654 |
| Knows about limiting partners | 0.698 | 0.026 | 562 | 563 | 1.320 | 0.037 | 0.647 | 0.750 |
| Had $2+$ sexual partners in past 12 months | 0.000 | 0.000 | 351 | 357 | na | na | 0.000 | 0.000 |
| Had higher-risk intercourse in past 12 months | 0.022 | 0.009 | 351 | 357 | 1.123 | 0.397 | 0.005 | 0.040 |
| Accepting attitudes towards people with HIV | 0.019 | 0.007 | 524 | 523 | 1.226 | 0.382 | 0.005 | 0.034 |
| Total fertility rate (past 3 years) | 1.756 | 0.218 | na | 1608 | 1.185 | 0.124 | 1.320 | 2.193 |
| Perinatal mortality (0-4 years) | 33.553 | 16.931 | 126 | 129 | 0.858 | 0.505 | 0.000 | 67.414 |
| Neonatal mortality (past 10 years) | 37.963 | 12.637 | 277 | 281 | 0.962 | 0.333 | 12.689 | 63.237 |
| Postneonatal mortality (past 10 years) | 8.491 | 5.993 | 277 | 281 | 1.091 | 0.706 | 0.000 | 20.477 |
| Infant mortality (past 10 years) | 46.454 | 12.496 | 277 | 281 | 0.889 | 0.269 | 21.461 | 71.447 |
| Child mortality (past 10 years) | 5.445 | 5.479 | 277 | 281 | 1.190 | 1.006 | 0.000 | 16.404 |
| Under-five mortality (past 10 years) | 51.646 | 12.600 | 277 | 281 | 0.857 | 0.244 | 26.447 | 76.845 |

na $=$ Not applicable

| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted (N) | Weighted (WN) |  |  |  | $\begin{gathered} \text { Value+ } \\ 2 S E \\ (\mathrm{R}+2 \mathrm{SE}) \end{gathered}$ |
| Urban residence | 0.522 | 0.059 | 128 | 151 | 1.335 | 0.113 | 0.403 | 0.640 |
| Literate | 0.993 | 0.007 | 128 | 151 | 0.969 | 0.007 | 0.978 | 1.000 |
| No education | 0.000 | 0.000 | 128 | 151 | na | na | 0.000 | 0.000 |
| Secondary education or higher | 0.993 | 0.007 | 128 | 151 | 0.969 | 0.007 | 0.978 | 1.000 |
| Never married | 0.462 | 0.028 | 128 | 151 | 0.637 | 0.061 | 0.406 | 0.518 |
| Currently married/in union | 0.538 | 0.028 | 128 | 151 | 0.637 | 0.052 | 0.482 | 0.594 |
| Married before age 20 | 0.000 | 0.000 | 76 | 87 | na | na | 0.000 | 0.000 |
| Want no more children | 0.575 | 0.055 | 70 | 81 | 0.928 | 0.096 | 0.464 | 0.685 |
| Want to delay birth at least 2 years | 0.176 | 0.034 | 70 | 81 | 0.736 | 0.192 | 0.109 | 0.244 |
| Ideal family size | 3.065 | 0.105 | 105 | 125 | 0.774 | 0.034 | 2.854 | 3.275 |
| Has heard of HIV/AIDS | 0.979 | 0.014 | 128 | 151 | 1.067 | 0.014 | 0.952 | 1.000 |
| Knows about condoms | 0.832 | 0.049 | 128 | 151 | 1.478 | 0.059 | 0.734 | 0.930 |
| Knows about limiting partners | 0.832 | 0.061 | 128 | 151 | 1.851 | 0.074 | 0.709 | 0.954 |
| Had 2+ sexual partners in the past 12 months | 0.311 | 0.053 | 92 | 106 | 1.099 | 0.171 | 0.205 | 0.418 |
| Higher-risk intercourse in past 12 months (15-49) | 0.448 | 0.062 | 92 | 106 | 1.190 | 0.138 | 0.324 | 0.572 |
| Condom use at last higher-risk intercourse (15-49) | 0.745 | 0.101 | 41 | 48 | 1.461 | 0.135 | 0.544 | 0.946 |
| Abstinence among youth (never intercourse) | 0.642 | 0.052 | 47 | 57 | 0.740 | 0.081 | 0.538 | 0.747 |
| Sexuallyl active in past 12 months among never-married | 0.306 | 0.041 | 47 | 57 | 0.605 | 0.134 | 0.224 | 0.389 |
| Paid for sexual intercourse in the past 12 months | 0.047 | 0.018 | 128 | 151 | 0.970 | 0.386 | 0.011 | 0.084 |

Table B.12.1 Sampling errors for the Shirak sample, Armenia 2005: Women

| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted ( N ) | Weighted (WN) |  |  | $\begin{aligned} & \text { Value- } \\ & 2 S E \\ & \text { (R-2SE) } \end{aligned}$ | $\begin{gathered} \text { Value+ } \\ 2 S E \\ (R+2 S E) \end{gathered}$ |
| Urban residence | 0.495 | 0.028 | 583 | 563 | 1.327 | 0.056 | 0.440 | 0.550 |
| Literate | 0.991 | 0.004 | 583 | 563 | 1.011 | 0.004 | 0.983 | 0.999 |
| Secondary education or higher | 0.904 | 0.011 | 583 | 563 | 0.943 | 0.013 | 0.881 | 0.927 |
| Never married | 0.316 | 0.011 | 583 | 563 | 0.591 | 0.036 | 0.294 | 0.339 |
| Currently married/in union | 0.635 | 0.015 | 583 | 563 | 0.762 | 0.024 | 0.604 | 0.665 |
| Married before age 20 | 0.392 | 0.027 | 465 | 447 | 1.206 | 0.070 | 0.337 | 0.446 |
| Currently pregnant | 0.039 | 0.008 | 583 | 563 | 1.011 | 0.207 | 0.023 | 0.056 |
| Children ever born | 1.549 | 0.047 | 583 | 563 | 0.800 | 0.031 | 1.454 | 1.644 |
| Children surviving | 1.468 | 0.047 | 583 | 563 | 0.867 | 0.032 | 1.373 | 1.563 |
| Children ever born to women age 40-49 | 2.664 | 0.109 | 166 | 160 | 1.153 | 0.041 | 2.445 | 2.882 |
| Knows any contraceptive method | 0.994 | 0.000 | 367 | 357 | 0.072 | 0.000 | 0.994 | 0.995 |
| Ever using contraceptive method | 0.644 | 0.025 | 367 | 357 | 1.015 | 0.039 | 0.593 | 0.695 |
| Currently using any contraceptive method | 0.417 | 0.030 | 367 | 357 | 1.163 | 0.072 | 0.357 | 0.477 |
| Currently using pill | 0.005 | 0.004 | 367 | 357 | 1.018 | 0.735 | 0.000 | 0.013 |
| Currently using IUD | 0.107 | 0.019 | 367 | 357 | 1.188 | 0.179 | 0.069 | 0.146 |
| Currently using female sterilization | 0.003 | 0.003 | 367 | 357 | 1.123 | 0.991 | 0.000 | 0.010 |
| Currently using rhythm method | 0.015 | 0.006 | 367 | 357 | 0.958 | 0.401 | 0.003 | 0.028 |
| Obtained method from public sector source | 0.681 | 0.074 | 61 | 59 | 1.229 | 0.109 | 0.533 | 0.829 |
| Want no more children | 0.714 | 0.015 | 367 | 357 | 0.648 | 0.021 | 0.683 | 0.744 |
| Want to delay birth at least 2 years | 0.066 | 0.012 | 367 | 357 | 0.928 | 0.182 | 0.042 | 0.091 |
| Ideal family size | 2.549 | 0.022 | 566 | 548 | 0.548 | 0.009 | 2.505 | 2.593 |
| Mother received medical assistance at delivery | 0.978 | 0.017 | 93 | 90 | 1.124 | 0.017 | 0.944 | 1.000 |
| Child had diarrhea in two weeks before survey | 0.078 | 0.050 | 91 | 88 | 1.539 | 0.641 | 0.000 | 0.177 |
| Treated with oral rehydration salts (ORS) | 0.182 | 0.061 | 6 | 7 | 0.405 | 0.335 | 0.060 | 0.303 |
| Taken to a health provider | 0.000 | 0.000 | 6 | 7 | na | na | 0.000 | 0.000 |
| Vaccination card seen | 1.000 | 0.000 | 22 | 22 | na | 0.000 | 1.000 | 1.000 |
| Received BCG | 1.000 | 0.000 | 22 | 22 | na | 0.000 | 1.000 | 1.000 |
| Received DPT (3 doses) | 0.917 | 0.069 | 22 | 22 | 1.201 | 0.075 | 0.779 | 1.000 |
| Received polio (3 doses) | 0.970 | 0.030 | 22 | 22 | 0.834 | 0.031 | 0.910 | 1.000 |
| Received measles | 0.970 | 0.030 | 22 | 22 | 0.834 | 0.031 | 0.910 | 1.000 |
| Fully immunized | 0.917 | 0.069 | 22 | 22 | 1.201 | 0.075 | 0.779 | 1.000 |
| Height-for-age (below -2SD) | 0.111 | 0.048 | 77 | 78 | 1.236 | 0.430 | 0.015 | 0.206 |
| Weight-for-height (below-2SD) | 0.326 | 0.084 | 77 | 78 | 1.457 | 0.257 | 0.159 | 0.493 |
| Weight-for-age (below -2SD) | 0.176 | 0.034 | 77 | 78 | 0.793 | 0.192 | 0.108 | 0.244 |
| Anemia in children | 0.179 | 0.052 | 73 | 74 | 1.108 | 0.288 | 0.076 | 0.282 |
| Anemia in women | 0.265 | 0.033 | 566 | 547 | 1.764 | 0.123 | 0.200 | 0.331 |
| Body mass index (BMI) <18.5 | 0.034 | 0.012 | 553 | 535 | 1.546 | 0.352 | 0.010 | 0.057 |
| Prevalence of hypertension | 0.319 | 0.020 | 569 | 550 | 1.014 | 0.062 | 0.280 | 0.359 |
| Has heard of HIV/AIDS | 0.903 | 0.016 | 583 | 563 | 1.330 | 0.018 | 0.870 | 0.936 |
| Knows about condoms | 0.736 | 0.022 | 583 | 563 | 1.187 | 0.029 | 0.692 | 0.779 |
| Knows about limiting partners | 0.808 | 0.024 | 583 | 563 | 1.474 | 0.030 | 0.759 | 0.856 |
| Had 2+ sexual partners in past 12 months | 0.000 | 0.000 | 351 | 341 | na | na | 0.000 | 0.000 |
| Had higher-risk intercourse in past 12 months | 0.008 | 0.008 | 351 | 341 | 1.680 | 1.007 | 0.000 | 0.024 |
| Accepting attitudes towards people with HIV | 0.000 | 0.000 | 529 | 509 | na | na | 0.000 | 0.000 |
| Total fertility rate (past 3 years) | 1.170 | 0.172 | na | 1,575 | 1.151 | 0.147 | 0.827 | 1.514 |
| Perinatal mortality (0-4 years) | 45.377 | 30.155 | 97 | 95 | 1.046 | 0.665 | 0.000 | 105.687 |
| Neonatal mortality (past 10 years) | 3.573 | 3.593 | 242 | 231 | 0.932 | 1.005 | 0.000 | 10.758 |
| Postneonatal mortality (past 10 years) | 14.637 | 8.183 | 243 | 232 | 1.081 | 0.559 | 0.000 | 31.003 |
| Infant mortality (past 10 years) | 18.210 | 8.688 | 243 | 232 | 1.033 | 0.477 | 0.835 | 35.585 |
| Child mortality (past 10 years) | 14.075 | 10.042 | 242 | 231 | 1.087 | 0.713 | 0.000 | 34.159 |
| Under-five mortality (past 10 years) | 32.029 | 11.513 | 243 | 232 | 0.980 | 0.359 | 9.003 | 55.055 |

Table B.12.2 Sampling errors for the Shirak sample, Armenia 2005: Men

| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted (N) | Weighted (WN) |  |  | Value2SE (R-2SE) | $\begin{gathered} \text { Value+ } \\ 2 S E \\ (R+2 S E) \end{gathered}$ |
| Urban residence | 0.642 | 0.036 | 112 | 98 | 0.799 | 0.057 | 0.569 | 0.715 |
| Literate | 1.000 | 0.000 | 112 | 98 | na | 0.000 | 1.000 | 1.000 |
| No education | 0.000 | 0.000 | 112 | 98 | na | na | 0.000 | 0.000 |
| Secondary education or higher | 1.000 | 0.000 | 112 | 98 | na | 0.000 | 1.000 | 1.000 |
| Never married | 0.416 | 0.048 | 112 | 98 | 1.030 | 0.116 | 0.319 | 0.512 |
| Currently married/in union | 0.559 | 0.045 | 112 | 98 | 0.948 | 0.080 | 0.470 | 0.649 |
| Married before age 20 | 0.015 | 0.014 | 70 | 61 | 0.977 | 0.965 | 0.000 | 0.043 |
| Want no more children | 0.751 | 0.050 | 63 | 55 | 0.911 | 0.067 | 0.651 | 0.851 |
| Want to delay birth at least 2 years | 0.086 | 0.034 | 63 | 55 | 0.965 | 0.399 | 0.017 | 0.155 |
| Ideal family size | 2.312 | 0.071 | 84 | 74 | 0.861 | 0.031 | 2.171 | 2.453 |
| Has heard of HIV/AIDS | 0.794 | 0.039 | 112 | 98 | 1.007 | 0.049 | 0.716 | 0.871 |
| Knows about condoms | 0.311 | 0.043 | 112 | 98 | 0.984 | 0.139 | 0.225 | 0.398 |
| Knows about limiting partners | 0.668 | 0.040 | 112 | 98 | 0.893 | 0.060 | 0.588 | 0.748 |
| Had 2+ sexual partners in the past 12 months | 0.000 | 0.000 | 63 | 55 | na | na | 0.000 | 0.000 |
| Condom use at last higher-risk intercourse (15-49) | 0.000 | 0.000 | 0 | 0 | na | na | 0.000 | 0.000 |
| Abstinence among youth (never intercourse) | 1.000 | 0.000 | 39 | 34 | na | 0.000 | 1.000 | 1.000 |
| Sexuallyl active in past 12 months among never-married | 0.000 | 0.000 | 39 | 34 | na | na | 0.000 | 0.000 |
| Paid for sexual intercourse in the past 12 months | 0.000 | 0.000 | 112 | 98 | na | na | 0.000 | 0.000 |
| na $=$ Not applicable |  |  |  |  |  |  |  |  |

## Table B.13.1 Sampling errors for the Syunik sample, Armenia 2005: Women

| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted ( N ) | Weighted (WN) |  |  | Value2SE <br> (R-2SE) | $\begin{aligned} & \text { Value+ } \\ & 2 S E \\ & (\mathrm{R}+2 \mathrm{SE}) \end{aligned}$ |
| Urban residence | 0.634 | 0.033 | 537 | 281 | 1.601 | 0.053 | 0.567 | 0.701 |
| Literate | 0.991 | 0.004 | 537 | 281 | 0.884 | 0.004 | 0.983 | 0.998 |
| Secondary education or higher | 0.933 | 0.009 | 537 | 281 | 0.822 | 0.010 | 0.915 | 0.951 |
| Never married | 0.272 | 0.022 | 537 | 281 | 1.155 | 0.082 | 0.227 | 0.316 |
| Currently married/in union | 0.673 | 0.024 | 537 | 281 | 1.168 | 0.035 | 0.625 | 0.720 |
| Married before age 20 | 0.379 | 0.026 | 449 | 235 | 1.146 | 0.069 | 0.327 | 0.432 |
| Currently pregnant | 0.027 | 0.007 | 537 | 281 | 0.931 | 0.240 | 0.014 | 0.040 |
| Children ever born | 1.676 | 0.059 | 537 | 281 | 0.986 | 0.035 | 1.558 | 1.795 |
| Children surviving | 1.597 | 0.062 | 537 | 281 | 1.100 | 0.039 | 1.473 | 1.721 |
| Children ever born to women age 40-49 | 2.725 | 0.091 | 185 | 98 | 1.045 | 0.033 | 2.543 | 2.907 |
| Knows any contraceptive method | 1.000 | 0.000 | 359 | 189 | na | 0.000 | 1.000 | 1.000 |
| Ever using contraceptive method | 0.823 | 0.017 | 359 | 189 | 0.830 | 0.020 | 0.789 | 0.856 |
| Currently using any contraceptive method | 0.614 | 0.029 | 359 | 189 | 1.113 | 0.047 | 0.557 | 0.672 |
| Currently using pill | 0.005 | 0.004 | 359 | 189 | 0.980 | 0.704 | 0.000 | 0.013 |
| Currently using IUD | 0.119 | 0.026 | 359 | 189 | 1.499 | 0.216 | 0.068 | 0.170 |
| Currently using female sterilization | 0.009 | 0.005 | 359 | 189 | 0.989 | 0.563 | 0.000 | 0.018 |
| Currently using rhythm method | 0.021 | 0.009 | 359 | 189 | 1.127 | 0.408 | 0.004 | 0.038 |
| Obtained method from public sector source | 0.851 | 0.063 | 53 | 30 | 1.270 | 0.074 | 0.726 | 0.977 |
| Want no more children | 0.680 | 0.026 | 359 | 189 | 1.054 | 0.038 | 0.628 | 0.732 |
| Want to delay birth at least 2 years | 0.146 | 0.016 | 359 | 189 | 0.837 | 0.107 | 0.115 | 0.178 |
| Ideal family size | 2.753 | 0.044 | 537 | 281 | 1.143 | 0.016 | 2.665 | 2.841 |
| Mother received medical assistance at delivery | 0.981 | 0.013 | 119 | 63 | 1.047 | 0.013 | 0.955 | 1.000 |
| Child had diarrhea in two weeks before survey | 0.153 | 0.040 | 117 | 62 | 1.095 | 0.261 | 0.073 | 0.232 |
| Treated with oral rehydration salts (ORS) | 0.504 | 0.152 | 18 | 9 | 1.156 | 0.301 | 0.201 | 0.807 |
| Taken to a health provider | 0.101 | 0.078 | 18 | 9 | 1.081 | 0.768 | 0.000 | 0.257 |
| Vaccination card seen | 0.918 | 0.057 | 20 | 11 | 0.952 | 0.062 | 0.803 | 1.000 |
| Received BCG | 0.898 | 0.062 | 20 | 11 | 0.938 | 0.069 | 0.773 | 1.000 |
| Received DPT (3 doses) | 0.643 | 0.100 | 20 | 11 | 0.951 | 0.155 | 0.443 | 0.842 |
| Received polio (3 doses) | 0.693 | 0.082 | 20 | 11 | 0.816 | 0.119 | 0.528 | 0.858 |
| Received measles | 0.359 | 0.089 | 20 | 11 | 0.848 | 0.248 | 0.181 | 0.537 |
| Fully immunized | 0.307 | 0.096 | 20 | 11 | 0.953 | 0.314 | 0.114 | 0.499 |
| Height-for-age (below -2SD) | 0.072 | 0.024 | 115 | 63 | 1.044 | 0.335 | 0.024 | 0.121 |
| Weight-for-height (below -2SD) | 0.007 | 0.007 | 115 | 63 | 0.929 | 1.044 | 0.000 | 0.021 |
| Weight-for-age (below-2SD) | 0.019 | 0.012 | 115 | 63 | 0.974 | 0.634 | 0.000 | 0.044 |
| Anemia in children | 0.248 | 0.049 | 97 | 53 | 1.079 | 0.198 | 0.150 | 0.347 |
| Anemia in women | 0.206 | 0.020 | 531 | 277 | 1.146 | 0.098 | 0.166 | 0.246 |
| Body mass index (BMI) <18.5 | 0.057 | 0.013 | 515 | 269 | 1.271 | 0.229 | 0.031 | 0.083 |
| Prevalence of hypertension | 0.177 | 0.019 | 530 | 277 | 1.166 | 0.109 | 0.138 | 0.216 |
| Has heard of HIV/AIDS | 0.967 | 0.007 | 537 | 281 | 0.956 | 0.008 | 0.952 | 0.982 |
| Knows about condoms | 0.844 | 0.019 | 537 | 281 | 1.240 | 0.023 | 0.805 | 0.883 |
| Knows about limiting partners | 0.884 | 0.016 | 537 | 281 | 1.163 | 0.018 | 0.852 | 0.916 |
| Had 2+ sexual partners in past 12 months | 0.000 | 0.000 | 351 | 184 | na | na | 0.000 | 0.000 |
| Had higher-risk intercourse in past 12 months | 0.000 | 0.000 | 351 | 184 | na | na | 0.000 | 0.000 |
| Accepting attitudes towards people with HIV | 0.000 | 0.000 | 521 | 271 | na | na | 0.000 | 0.000 |
| Total fertility rate (past 3 years) | 1.792 | 0.196 | na | 793 | 1.024 | 0.109 | 1.399 | 2.184 |
| Perinatal mortality (0-4 years) | 19.186 | 12.775 | 119 | 63 | 1.047 | 0.666 | 0.000 | 44.736 |
| Neonatal mortality (past 10 years) | 22.955 | 10.123 | 265 | 140 | 0.970 | 0.441 | 2.709 | 43.200 |
| Postneonatal mortality (past 10 years) | 3.418 | 3.437 | 265 | 140 | 0.968 | 1.006 | 0.000 | 10.292 |
| Infant mortality (past 10 years) | 26.372 | 10.580 | 265 | 140 | 0.964 | 0.401 | 5.213 | 47.532 |
| Child mortality (past 10 years) | 5.126 | 3.841 | 265 | 140 | 0.976 | 0.749 | 0.000 | 12.809 |
| Under-five mortality (past 10 years) | 31.363 | 10.851 | 265 | 140 | 0.950 | 0.346 | 9.662 | 53.064 |

na $=$ Not applicable

Table B.13.2 Sampling errors for the Syunik sample, Armenia 2005: Men

| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted (N) | Weighted (WN) |  |  | $\begin{aligned} & \text { Value- } \\ & \text { 2SE } \\ & \text { (R-2SE) } \end{aligned}$ | $\begin{gathered} \text { Value+ } \\ 2 S E \\ (R+2 S E) \end{gathered}$ |
| Urban residence | 0.554 | 0.050 | 139 | 67 | 1.172 | 0.090 | 0.454 | 0.653 |
| Literate | 0.994 | 0.006 | 139 | 67 | 0.911 | 0.006 | 0.982 | 1.000 |
| No education | 0.000 | 0.000 | 139 | 67 | na | na | 0.000 | 0.000 |
| Secondary education or higher | 0.994 | 0.006 | 139 | 67 | 0.911 | 0.006 | 0.982 | 1.000 |
| Never married | 0.414 | 0.051 | 139 | 67 | 1.220 | 0.124 | 0.312 | 0.516 |
| Currently married/in union | 0.572 | 0.050 | 139 | 67 | 1.184 | 0.087 | 0.472 | 0.672 |
| Married before age 20 | 0.046 | 0.021 | 95 | 46 | 0.976 | 0.460 | 0.004 | 0.088 |
| Want no more children | 0.761 | 0.050 | 79 | 38 | 1.044 | 0.066 | 0.660 | 0.862 |
| Want to delay birth at least 2 years | 0.093 | 0.041 | 79 | 38 | 1.254 | 0.444 | 0.010 | 0.175 |
| Ideal family size | 2.652 | 0.103 | 139 | 67 | 0.917 | 0.039 | 2.446 | 2.858 |
| Has heard of HIV/AIDS | 0.698 | 0.075 | 139 | 67 | 1.930 | 0.108 | 0.547 | 0.849 |
| Knows about condoms | 0.571 | 0.073 | 139 | 67 | 1.738 | 0.128 | 0.424 | 0.717 |
| Knows about limiting partners | 0.608 | 0.090 | 139 | 67 | 2.172 | 0.148 | 0.427 | 0.788 |
| Had $2+$ sexual partners in the past 12 months | 0.000 | 0.000 | 90 | 44 | na | na | 0.000 | 0.000 |
| Higher-risk intercourse in past 12 months (15-49) | 0.100 | 0.039 | 90 | 44 | 1.233 | 0.393 | 0.021 | 0.178 |
| Condom use at last higher-risk intercourse (15-49) | 0.414 | 0.164 | 9 | 4 | 0.941 | 0.396 | 0.086 | 0.741 |
| Abstinence among youth (never intercourse) | 0.900 | 0.052 | 41 | 20 | 1.091 | 0.057 | 0.797 | 1.000 |
| Sexuallyl active in past 12 months among never-married | 0.077 | 0.046 | 41 | 20 | 1.095 | 0.598 | 0.000 | 0.170 |
| Paid for sexual intercourse in the past 12 months | 0.020 | 0.015 | 139 | 67 | 1.270 | 0.763 | 0.000 | 0.050 |
| $\mathrm{na}=$ Not applicable |  |  |  |  |  |  |  |  |

Table B.14.1 Sampling errors for the Vayots Dzor, Armenia 2005: Women

| Variable | Value <br> (R) | Stand- <br> ard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted ( N ) | $\begin{aligned} & \text { Weight- } \\ & \text { ed } \\ & (W N) \end{aligned}$ |  |  | $\begin{aligned} & \text { Value- } \\ & 2 S E \\ & \text { (R-2SE) } \end{aligned}$ | $\begin{aligned} & \text { Value }+ \\ & 2 S E \\ & (R+2 S E) \end{aligned}$ |
| Urban residence | 0.369 | 0.031 | 407 | 107 | 1.313 | 0.085 | 0.306 | 0.432 |
| Literate | 0.995 | 0.005 | 407 | 107 | 1.432 | 0.005 | 0.985 | 1.000 |
| Secondary education or higher | 0.941 | 0.010 | 407 | 107 | 0.887 | 0.011 | 0.921 | 0.962 |
| Never married | 0.333 | 0.009 | 407 | 107 | 0.403 | 0.028 | 0.314 | 0.352 |
| Currently married/in union | 0.607 | 0.020 | 407 | 107 | 0.826 | 0.033 | 0.567 | 0.647 |
| Married before age 20 | 0.402 | 0.034 | 338 | 88 | 1.290 | 0.086 | 0.334 | 0.471 |
| Currently pregnant | 0.029 | 0.007 | 407 | 107 | 0.869 | 0.249 | 0.015 | 0.043 |
| Children ever born | 1.647 | 0.069 | 407 | 107 | 0.918 | 0.042 | 1.510 | 1.785 |
| Children surviving | 1.538 | 0.058 | 407 | 107 | 0.841 | 0.038 | 1.422 | 1.654 |
| Children ever born to women age 40-49 | 2.815 | 0.071 | 131 | 31 | 0.630 | 0.025 | 2.672 | 2.958 |
| Knows any contraceptive method | 0.988 | 0.009 | 239 | 65 | 1.267 | 0.009 | 0.970 | 1.000 |
| Ever using contraceptive method | 0.796 | 0.038 | 239 | 65 | 1.473 | 0.048 | 0.719 | 0.873 |
| Currently using any contraceptive method | 0.669 | 0.068 | 239 | 65 | 2.240 | 0.102 | 0.532 | 0.806 |
| Currently using pill | 0.012 | 0.008 | 239 | 65 | 1.134 | 0.659 | 0.000 | 0.028 |
| Currently using IUD | 0.028 | 0.012 | 239 | 65 | 1.100 | 0.419 | 0.005 | 0.052 |
| Currently using female sterilization | 0.000 | 0.000 | 239 | 65 | na | na | 0.000 | 0.000 |
| Currently using rhythm method | 0.050 | 0.020 | 239 | 65 | 1.394 | 0.396 | 0.010 | 0.089 |
| Obtained method from public sector source | 0.173 | 0.057 | 54 | 12 | 1.094 | 0.329 | 0.059 | 0.286 |
| Want no more children | 0.665 | 0.043 | 239 | 65 | 1.415 | 0.065 | 0.578 | 0.751 |
| Want to delay birth at least 2 years | 0.134 | 0.025 | 239 | 65 | 1.129 | 0.186 | 0.084 | 0.184 |
| Ideal family size | 2.542 | 0.052 | 406 | 106 | 0.934 | 0.021 | 2.437 | 2.646 |
| Mother received medical assistance at delivery | 1.000 | 0.000 | 68 | 19 | na | 0.000 | 1.000 | 1.000 |
| Child had diarrhea in two weeks before survey | 0.124 | 0.034 | 67 | 19 | 0.898 | 0.272 | 0.057 | 0.191 |
| Treated with oral rehydration salts (ORS) | 0.545 | 0.202 | 10 | 2 | 1.207 | 0.370 | 0.142 | 0.949 |
| Taken to a health provider | 0.447 | 0.183 | 10 | 2 | 1.094 | 0.409 | 0.082 | 0.812 |
| Vaccination card seen | 0.978 | 0.023 | 14 | 4 | 0.628 | 0.023 | 0.933 | 1.000 |
| Received BCG | 1.000 | 0.000 | 14 | 4 | na | 0.000 | 1.000 | 1.000 |
| Received DPT (3 doses) | 0.665 | 0.219 | 14 | 4 | 1.881 | 0.329 | 0.227 | 1.000 |
| Received polio (3 doses) | 0.548 | 0.177 | 14 | 4 | 1.447 | 0.324 | 0.194 | 0.903 |
| Received measles | 0.592 | 0.109 | 14 | 4 | 0.898 | 0.184 | 0.375 | 0.810 |
| Fully immunized | 0.382 | 0.157 | 14 | 4 | 1.311 | 0.411 | 0.068 | 0.696 |
| Height-for-age (below -2SD) | 0.069 | 0.040 | 53 | 16 | 1.179 | 0.575 | 0.000 | 0.148 |
| Weight-for-height (below-2SD) | 0.242 | 0.082 | 53 | 16 | 1.354 | 0.337 | 0.079 | 0.405 |
| Weight-for-age (below-2SD) | 0.113 | 0.066 | 53 | 16 | 1.288 | 0.589 | 0.000 | 0.246 |
| Anemia in children | 0.069 | 0.037 | 35 | 10 | 0.933 | 0.539 | 0.000 | 0.143 |
| Anemia in women | 0.178 | 0.028 | 320 | 81 | 1.292 | 0.158 | 0.122 | 0.235 |
| Body mass index (BMI) < 18.5 | 0.034 | 0.007 | 362 | 96 | 0.701 | 0.195 | 0.021 | 0.048 |
| Prevalence of hypertension | 0.378 | 0.030 | 360 | 93 | 1.153 | 0.078 | 0.319 | 0.437 |
| Has heard of HIV/AIDS | 0.988 | 0.007 | 407 | 107 | 1.303 | 0.007 | 0.973 | 1.000 |
| Knows about condoms | 0.856 | 0.014 | 407 | 107 | 0.816 | 0.017 | 0.828 | 0.885 |
| Knows about limiting partners | 0.892 | 0.009 | 407 | 107 | 0.593 | 0.010 | 0.874 | 0.911 |
| Had 2+ sexual partners in past 12 months | 0.000 | 0.000 | 231 | 62 | na | na | 0.000 | 0.000 |
| Had higher-risk intercourse in past 12 months | 0.008 | 0.004 | 231 | 62 | 0.607 | 0.447 | 0.001 | 0.015 |
| Accepting attitudes towards people with HIV | 0.000 | 0.000 | 404 | 105 | na | na | 0.000 | 0.000 |
| Total fertility rate (past 3 years) | 0.918 | 0.191 | na | 303 | 1.445 | 0.208 | 0.535 | 1.300 |
| Perinatal mortality (0-4 years) | 10.241 | 10.052 | 68 | 19 | 0.856 | 0.982 | 0.000 | 30.346 |
| Neonatal mortality (past 10 years) | 25.832 | 15.601 | 147 | 45 | 1.294 | 0.604 | 0.000 | 57.035 |
| Postneonatal mortality (past 10 years) | 10.606 | 10.868 | 147 | 45 | 1.414 | 1.025 | 0.000 | 32.341 |
| Infant mortality (past 10 years) | 36.438 | 24.122 | 147 | 45 | 1.715 | 0.662 | 0.000 | 84.682 |
| Child mortality (past 10 years) | 1.984 | 2.037 | 148 | 45 | 0.677 | 1.027 | 0.000 | 6.058 |
| Under-five mortality (past 10 years) | 38.350 | 24.028 | 148 | 45 | 1.676 | 0.627 | 0.000 | 86.406 |


| Variable | Value (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted ( N ) | Weighted (WN) |  |  | $\begin{aligned} & \text { Value- } \\ & 2 S E \\ & \text { (R-2SE) } \end{aligned}$ | $\begin{aligned} & \text { Value+ } \\ & 2 S E \\ & (\mathrm{R}+2 \mathrm{SE}) \end{aligned}$ |
| Urban residence | 0.280 | 0.040 | 106 | 31 | 0.914 | 0.143 | 0.200 | 0.361 |
| Literate | 1.000 | 0.000 | 106 | 31 | na | 0.000 | 1.000 | 1.000 |
| No education | 0.000 | 0.000 | 106 | 31 | na | na | 0.000 | 0.000 |
| Secondary education or higher | 1.000 | 0.000 | 106 | 31 | na | 0.000 | 1.000 | 1.000 |
| Never married | 0.383 | 0.036 | 106 | 31 | 0.751 | 0.093 | 0.311 | 0.454 |
| Currently married/in union | 0.602 | 0.034 | 106 | 31 | 0.709 | 0.056 | 0.534 | 0.670 |
| Married before age 20 | 0.036 | 0.028 | 61 | 19 | 1.147 | 0.768 | 0.000 | 0.091 |
| Want no more children | 0.777 | 0.065 | 58 | 19 | 1.186 | 0.084 | 0.646 | 0.907 |
| Want to delay birth at least 2 years | 0.018 | 0.012 | 58 | 19 | 0.707 | 0.700 | 0.000 | 0.042 |
| Ideal family size | 2.826 | 0.089 | 103 | 29 | 0.904 | 0.031 | 2.649 | 3.004 |
| Has heard of HIV/AIDS | 0.896 | 0.049 | 106 | 31 | 1.649 | 0.055 | 0.798 | 0.994 |
| Knows about condoms | 0.686 | 0.048 | 106 | 31 | 1.067 | 0.070 | 0.590 | 0.783 |
| Knows about limiting partners | 0.712 | 0.035 | 106 | 31 | 0.790 | 0.049 | 0.642 | 0.782 |
| Had 2+ sexual partners in the past 12 months | 0.021 | 0.021 | 65 | 21 | 1.198 | 1.026 | 0.000 | 0.064 |
| Higher-risk intercourse in past 12 months (15-49) | 0.109 | 0.042 | 65 | 21 | 1.089 | 0.389 | 0.024 | 0.194 |
| Condom use at last higher-risk intercourse (15-49) | 0.533 | 0.223 | 9 | 2 | 1.266 | 0.419 | 0.086 | 0.980 |
| Abstinence among youth (never intercourse) | 0.820 | 0.065 | 43 | 11 | 1.102 | 0.080 | 0.689 | 0.950 |
| Sexuallyl active in past 12 months among never-married | 0.167 | 0.066 | 43 | 11 | 1.141 | 0.394 | 0.035 | 0.298 |
| Paid for sexual intercourse in the past 12 months | 0.014 | 0.014 | 106 | 31 | 1.225 | 1.006 | 0.000 | 0.042 |


| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted ( N ) | Weighted (WN) |  |  | Value2SE <br> (R-2SE) | $\begin{aligned} & \text { Value+ } \\ & 2 S E \\ & (\mathrm{R}+2 \mathrm{SE}) \end{aligned}$ |
| Urban residence | 0.383 | 0.035 | 568 | 285 | 1.707 | 0.091 | 0.313 | 0.453 |
| Literate | 0.988 | 0.012 | 568 | 285 | 2.665 | 0.013 | 0.963 | 1.000 |
| Secondary education or higher | 0.885 | 0.026 | 568 | 285 | 1.944 | 0.029 | 0.833 | 0.937 |
| Never married | 0.273 | 0.016 | 568 | 285 | 0.866 | 0.059 | 0.240 | 0.305 |
| Currently married/in union | 0.647 | 0.021 | 568 | 285 | 1.037 | 0.032 | 0.605 | 0.689 |
| Married before age 20 | 0.432 | 0.023 | 485 | 248 | 1.020 | 0.053 | 0.386 | 0.478 |
| Currently pregnant | 0.016 | 0.007 | 568 | 285 | 1.412 | 0.471 | 0.001 | 0.030 |
| Children ever born | 1.707 | 0.061 | 568 | 285 | 1.041 | 0.036 | 1.584 | 1.829 |
| Children surviving | 1.635 | 0.052 | 568 | 285 | 0.952 | 0.032 | 1.532 | 1.739 |
| Children ever born to women age 40-49 | 2.493 | 0.162 | 178 | 88 | 1.582 | 0.065 | 2.169 | 2.817 |
| Knows any contraceptive method | 0.999 | 0.001 | 352 | 184 | 0.670 | 0.001 | 0.996 | 1.000 |
| Ever using contraceptive method | 0.842 | 0.023 | 352 | 184 | 1.184 | 0.027 | 0.796 | 0.888 |
| Currently using any contraceptive method | 0.622 | 0.050 | 352 | 184 | 1.927 | 0.080 | 0.522 | 0.721 |
| Currently using pill | 0.008 | 0.005 | 352 | 184 | 1.139 | 0.680 | 0.000 | 0.019 |
| Currently using IUD | 0.075 | 0.019 | 352 | 184 | 1.378 | 0.259 | 0.036 | 0.113 |
| Currently using female sterilization | 0.000 | 0.000 | 352 | 184 | na | na | 0.000 | 0.000 |
| Currently using rhythm method | 0.046 | 0.011 | 352 | 184 | 1.012 | 0.246 | 0.023 | 0.069 |
| Obtained method from public sector source | 0.435 | 0.126 | 70 | 32 | 2.107 | 0.289 | 0.184 | 0.687 |
| Want no more children | 0.788 | 0.024 | 352 | 184 | 1.088 | 0.030 | 0.741 | 0.836 |
| Want to delay birth at least 2 years | 0.092 | 0.016 | 352 | 184 | 1.038 | 0.174 | 0.060 | 0.124 |
| Ideal family size | 2.653 | 0.063 | 566 | 284 | 1.788 | 0.024 | 2.527 | 2.779 |
| Mother received medical assistance at delivery | 1.000 | 0.000 | 137 | 75 | na | 0.000 | 1.000 | 1.000 |
| Child had diarrhea in two weeks before survey | 0.182 | 0.019 | 133 | 73 | 0.587 | 0.104 | 0.144 | 0.220 |
| Treated with oral rehydration salts (ORS) | 0.139 | 0.073 | 23 | 13 | 1.079 | 0.523 | 0.000 | 0.284 |
| Taken to a health provider | 0.260 | 0.062 | 23 | 13 | 0.683 | 0.239 | 0.136 | 0.385 |
| Vaccination card seen | 0.974 | 0.028 | 23 | 9 | 0.723 | 0.028 | 0.918 | 1.000 |
| Received BCG | 1.000 | 0.000 | 23 | 9 | na | 0.000 | 1.000 | 1.000 |
| Received DPT (3 doses) | 0.612 | 0.089 | 23 | 9 | 0.759 | 0.145 | 0.435 | 0.789 |
| Received polio (3 doses) | 0.700 | 0.087 | 23 | 9 | 0.789 | 0.124 | 0.527 | 0.873 |
| Received measles | 0.610 | 0.088 | 23 | 9 | 0.758 | 0.145 | 0.433 | 0.787 |
| Fully immunized | 0.457 | 0.109 | 23 | 9 | 0.913 | 0.238 | 0.239 | 0.675 |
| Height-for-age (below -2SD) | 0.092 | 0.017 | 130 | 74 | 0.681 | 0.184 | 0.058 | 0.126 |
| Weight-for-height (below -2SD) | 0.003 | 0.004 | 130 | 74 | 0.701 | 1.028 | 0.000 | 0.011 |
| Weight-for-age (below-2SD) | 0.041 | 0.022 | 130 | 74 | 1.318 | 0.545 | 0.000 | 0.086 |
| Anemia in children | 0.196 | 0.040 | 119 | 70 | 1.154 | 0.202 | 0.117 | 0.276 |
| Anemia in women | 0.141 | 0.011 | 560 | 283 | 0.753 | 0.078 | 0.119 | 0.164 |
| Body mass index (BMI) < 18.5 | 0.047 | 0.016 | 551 | 278 | 1.760 | 0.337 | 0.015 | 0.079 |
| Prevalence of hypertension | 0.288 | 0.020 | 545 | 275 | 1.020 | 0.069 | 0.248 | 0.328 |
| Has heard of HIV/AIDS | 0.946 | 0.007 | 568 | 285 | 0.711 | 0.007 | 0.933 | 0.960 |
| Knows about condoms | 0.547 | 0.020 | 568 | 285 | 0.954 | 0.036 | 0.507 | 0.587 |
| Knows about limiting partners | 0.621 | 0.030 | 568 | 285 | 1.482 | 0.049 | 0.560 | 0.681 |
| Had 2+ sexual partners in past 12 months | 0.000 | 0.000 | 344 | 181 | na | na | 0.000 | 0.000 |
| Had higher-risk intercourse in past 12 months | 0.007 | 0.003 | 344 | 181 | 0.704 | 0.444 | 0.001 | 0.014 |
| Accepting attitudes towards people with HIV | 0.016 | 0.005 | 545 | 269 | 0.883 | 0.300 | 0.006 | 0.025 |
| Total fertility rate (past 3 years) | 1.616 | 0.191 | na | 813 | 0.992 | 0.118 | 1.233 | 1.998 |
| Perinatal mortality (0-4 years) | 8.021 | 5.461 | 138 | 76 | 0.760 | 0.681 | 0.000 | 18.943 |
| Neonatal mortality (past 10 years) | 30.466 | 10.524 | 306 | 171 | 1.189 | 0.345 | 9.419 | 51.513 |
| Postneonatal mortality (past 10 years) | 9.206 | 5.136 | 306 | 171 | 1.015 | 0.558 | 0.000 | 19.478 |
| Infant mortality (past 10 years) | 39.671 | 11.264 | 306 | 171 | 1.129 | 0.284 | 17.144 | 62.198 |
| Child mortality (past 10 years) | 5.492 | 5.596 | 306 | 171 | 1.438 | 1.019 | 0.000 | 16.684 |
| Under-five mortality (past 10 years) | 44.945 | 13.766 | 306 | 171 | 1.171 | 0.306 | 17.413 | 72.478 |

na $=$ Not applicable

Table B.15.2 Sampling errors for the Tavush sample, Armenia 2005: Men

| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence intervals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unweighted (N) | $\begin{aligned} & \text { Weight- } \\ & \text { ed } \\ & (W N) \end{aligned}$ |  |  | $\begin{aligned} & \text { Value- } \\ & 2 S E \\ & \text { (R-2SE) } \end{aligned}$ | $\begin{gathered} \text { Value+ } \\ 2 S E \\ (\mathrm{R}+2 \mathrm{SE}) \end{gathered}$ |
| Urban residence | 0.324 | 0.031 | 125 | 64 | 0.737 | 0.096 | 0.262 | 0.386 |
| Literate | 1.000 | 0.000 | 125 | 64 | na | 0.000 | 1.000 | 1.000 |
| No education | 0.000 | 0.000 | 125 | 64 | na | na | 0.000 | 0.000 |
| Secondary education or higher | 1.000 | 0.000 | 125 | 64 | na | 0.000 | 1.000 | 1.000 |
| Never married | 0.345 | 0.044 | 125 | 64 | 1.041 | 0.129 | 0.256 | 0.434 |
| Currently married/in union | 0.651 | 0.044 | 125 | 64 | 1.027 | 0.067 | 0.563 | 0.739 |
| Married before age 20 | 0.025 | 0.020 | 85 | 45 | 1.163 | 0.794 | 0.000 | 0.064 |
| Want no more children | 0.721 | 0.062 | 77 | 42 | 1.207 | 0.086 | 0.597 | 0.846 |
| Want to delay birth at least 2 years | 0.088 | 0.027 | 77 | 42 | 0.844 | 0.311 | 0.033 | 0.143 |
| Ideal family size | 3.243 | 0.132 | 124 | 64 | 0.930 | 0.041 | 2.979 | 3.507 |
| Has heard of HIV/AIDS | 0.919 | 0.041 | 125 | 64 | 1.656 | 0.044 | 0.838 | 1.000 |
| Knows about condoms | 0.883 | 0.025 | 125 | 64 | 0.865 | 0.028 | 0.834 | 0.933 |
| Knows about limiting partners | 0.873 | 0.016 | 125 | 64 | 0.543 | 0.019 | 0.841 | 0.906 |
| Had 2+ sexual partners in the past 12 months | 0.045 | 0.032 | 87 | 45 | 1.440 | 0.717 | 0.000 | 0.109 |
| Higher-risk intercourse in past 12 months (15-49) | 0.095 | 0.037 | 87 | 45 | 1.176 | 0.391 | 0.021 | 0.170 |
| Condom use at last higher-risk intercourse (15-49) | 0.826 | 0.086 | 12 | 4 | 0.757 | 0.105 | 0.653 | 0.999 |
| Abstinence among youth (never intercourse) . | 0.916 | 0.030 | 36 | 17 | 0.637 | 0.033 | 0.856 | 0.976 |
| Sexuallyl active in past 12 months among never-married | 0.071 | 0.026 | 36 | 17 | 0.603 | 0.369 | 0.019 | 0.123 |
| Paid for sexual intercourse in the past 12 months | 0.000 | 0.000 | 125 | 64 | na | na | 0.000 | 0.000 |

## DATA QUALITY TABLES

Appendix

| Table C. 1 Household age distribution |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Single-year age distribution of the de facto household population by sex (weighted), Armenia 2005 |  |  |  |  |  |  |  |  |  |
| Age | Women |  | Men |  | Age | Women |  | Men |  |
|  | Number | Percent | Number | Percent |  | Number | Percent | Number | Percent |
| 0 | 173 | 1.6 | 165 | 1.2 | 36 | 109 | 1.0 | 143 | 1.1 |
| 1 | 183 | 1.6 | 127 | 1.0 | 37 | 115 | 1.0 | 144 | 1.1 |
| 2 | 176 | 1.6 | 143 | 1.1 | 38 | 103 | 0.9 | 175 | 1.3 |
| 3 | 160 | 1.4 | 124 | 0.9 | 39 | 146 | 1.3 | 168 | 1.3 |
| 4 | 140 | 1.3 | 121 | 0.9 | 40 | 145 | 1.3 | 196 | 1.5 |
| 5 | 150 | 1.4 | 105 | 0.8 | 41 | 135 | 1.2 | 174 | 1.3 |
| 6 | 161 | 1.4 | 150 | 1.1 | 42 | 151 | 1.4 | 190 | 1.4 |
| 7 | 192 | 1.7 | 151 | 1.1 | 43 | 175 | 1.6 | 232 | 1.7 |
| 8 | 206 | 1.8 | 179 | 1.3 | 44 | 159 | 1.4 | 212 | 1.6 |
| 9 | 166 | 1.5 | 175 | 1.3 | 45 | 178 | 1.6 | 229 | 1.7 |
| 10 | 212 | 1.9 | 181 | 1.4 | 46 | 142 | 1.3 | 233 | 1.8 |
| 11 | 207 | 1.9 | 190 | 1.4 | 47 | 162 | 1.5 | 211 | 1.6 |
| 12 | 228 | 2.0 | 198 | 1.5 | 48 | 139 | 1.2 | 182 | 1.4 |
| 13 | 237 | 2.1 | 234 | 1.8 | 49 | 153 | 1.4 | 140 | 1.1 |
| 14 | 236 | 2.1 | 269 | 2.0 | 50 | 176 | 1.6 | 282 | 2.1 |
| 15 | 279 | 2.5 | 252 | 1.9 | 51 | 120 | 1.1 | 142 | 1.1 |
| 16 | 248 | 2.2 | 252 | 1.9 | 52 | 122 | 1.1 | 201 | 1.5 |
| 17 | 254 | 2.3 | 228 | 1.7 | 53 | 133 | 1.2 | 209 | 1.6 |
| 18 | 143 | 1.3 | 203 | 1.5 | 54 | 125 | 1.1 | 151 | 1.1 |
| 19 | 107 | 1.0 | 258 | 1.9 | 55 | 136 | 1.2 | 172 | 1.3 |
| 20 | 187 | 1.7 | 263 | 2.0 | 56 | 99 | 0.9 | 140 | 1.0 |
| 21 | 207 | 1.9 | 263 | 2.0 | 57 | 91 | 0.8 | 110 | 0.8 |
| 22 | 205 | 1.8 | 232 | 1.7 | 58 | 102 | 0.9 | 115 | 0.9 |
| 23 | 203 | 1.8 | 210 | 1.6 | 59 | 63 | 0.6 | 109 | 0.8 |
| 24 | 167 | 1.5 | 203 | 1.5 | 60 | 68 | 0.6 | 96 | 0.7 |
| 25 | 173 | 1.6 | 190 | 1.4 | 61 | 44 | 0.4 | 48 | 0.4 |
| 26 | 152 | 1.4 | 198 | 1.5 | 62 | 51 | 0.5 | 47 | 0.4 |
| 27 | 170 | 1.5 | 220 | 1.7 | 63 | 71 | 0.6 | 66 | 0.5 |
| 28 | 149 | 1.3 | 196 | 1.5 | 64 | 76 | 0.7 | 100 | 0.8 |
| 29 | 146 | 1.3 | 154 | 1.2 | 65 | 139 | 1.2 | 173 | 1.3 |
| 30 | 122 | 1.1 | 165 | 1.2 | 66 | 106 | 1.0 | 110 | 0.8 |
| 31 | 120 | 1.1 | 137 | 1.0 | 67 | 90 | 0.8 | 156 | 1.2 |
| 32 | 118 | 1.1 | 159 | 1.2 | 68 | 94 | 0.8 | 110 | 0.8 |
| 33 | 128 | 1.1 | 153 | 1.2 | 69 | 71 | 0.6 | 115 | 0.9 |
| 34 | 114 | 1.0 | 158 | 1.2 | 70+ | 787 | 7.1 | 1,270 | 9.5 |
| 35 | 137 | 1.2 | 147 | 1.1 | Don't |  |  |  |  |
|  |  |  |  |  | know/missing | 0 | 0.0 | 2 | 0.0 |
|  |  |  |  |  | Total | 11,134 | 100.0 | 13,304 | 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 percentage of eligible women who were interviewed (weighted), by five-year age groups, Armenia 2005

| Age group | Household population of women age 10-54 | Interviewed women age 15-49 |  | Percentage of eligible women interviewed |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Number | Percent |  |
| 10-14 | 1,072 | na | na | na |
| 15-19 | 1,192 | 1,148 | 17.3 | 96.3 |
| 20-24 | 1,171 | 1,132 | 17.1 | 96.7 |
| 25-29 | 958 | 942 | 14.2 | 98.3 |
| 30-34 | 772 | 749 | 11.3 | 97.0 |
| 25-39 | 777 | 728 | 11.0 | 93.7 |
| 40-44 | 1,005 | 979 | 14.8 | 97.4 |
| 45-49 | 994 | 955 | 14.4 | 96.1 |
| 50-54 | 985 | na | na | na |
| 15-49 | 6,869 | 6,633 | 100.0 | 96.6 |

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.2.2 Age distribution of eligible and interviewed men

De facto household population of men age 10-54, interviewed men age 15-49, and percentage of eligible men who were interviewed (weighted), by five-year age groups, Armenia 2005

| Age group | Householdpopulation ofmen age$10-54$ | Interviewed men age 15-49 |  | Percentage of eligible men interviewed |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Number | Percent |  |
| 10-14 | 344 | na | na | na |
| 15-19 | 305 | 288 | 20.0 | 94.3 |
| 20-24 | 270 | 232 | 16.2 | 86.2 |
| 25-29 | 219 | 203 | 14.1 | 92.4 |
| 30-34 | 177 | 156 | 10.8 | 87.9 |
| 25-39 | 175 | 155 | 10.8 | 88.3 |
| 40-44 | 229 | 190 | 13.2 | 82.9 |
| 45-49 | 252 | 214 | 14.9 | 84.9 |
| 50-54 | 197 | na | na | na |
| 15-49 | 1,628 | 1,438 | 100.0 | 88.3 |

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 men and interviewed men are household weights. Age is based on the household schedule.
na $=$ Not applicable

| Table C. 3 Completeness of reporting |  |  |  |
| :---: | :---: | :---: | :---: |
| Percentage of cases missing information on selected demographic and health data (weighted), Armenia 2005 |  |  |  |
| Subject | Reference group | Percentage with missing information | Number of cases |
| Birth date | Births in the 15 years preceding the survey |  |  |
| Month only |  | 0.0 | 5,177 |
| Month and year |  | 0.0 | 5,177 |
| Age at death | Dead children born in the 15 years preceding the survey | 1.0 | 201 |
| Age/date at first union ${ }^{1}$ | Ever-married women age 15-49 | 0.1 | 4,523 |
| Respondent's education | All women age 15-49 | 0.1 | 6,566 |
| Diarrhea in past 2 weeks | Living children age 0-59 months | 0.7 | 1,470 |
| Anthropometry ${ }^{2}$ |  |  |  |
| Children | Living children age 0-59 months |  |  |
| Height |  | 7.7 | 1,501 |
| Weight |  | 8.1 | 1,501 |
| Height or weight |  | 8.2 | 1,501 |
| Women | All women age 15-49 |  |  |
| Height |  | 6.8 | 6,869 |
| Weight |  | 7.1 | 6,869 |
| Height or weight |  | 7.2 | 6,869 |
| Anemia ${ }^{2}$ |  |  |  |
| Children | Living children age 6-59 months | 17.1 | 1,333 |
| Women | All women age 15-49 | 9.6 | 6,869 |
| ${ }^{1}$ Both year and age missing <br> ${ }^{2}$ Information taken from Household Questionnaire |  |  |  |

## 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), Armenia 2005

| Calendar year | Number of births |  |  | Percentage with complete birth date |  |  | Sex ratio at birth |  |  | Calendar year ratio |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | L | D | T | L | D | T | L | D | T | L | D | T |
| 2005 | 256 | 11 | 267 | 100.0 | 100.0 | 100.0 | 98.6 | 36.6 | 94.8 | na | na | na |
| 2004 | 241 | 4 | 245 | 100.0 | 100.0 | 100.0 | 157.8 | 48.3 | 154.5 | na | na | na |
| 2003 | 286 | 6 | 292 | 100.0 | 100.0 | 100.0 | 131.4 | 251.1 | 133.0 | 103.2 | 106.6 | 103.2 |
| 2002 | 314 | 7 | 321 | 100.0 | 100.0 | 100.0 | 118.2 | 404.5 | 121.0 | 96.7 | 77.2 | 96.1 |
| 2001 | 364 | 12 | 376 | 100.0 | 100.0 | 100.0 | 113.9 | 180.1 | 115.5 | 109.0 | 87.6 | 108.1 |
| 2000 | 353 | 21 | 374 | 100.0 | 100.0 | 100.0 | 111.9 | 128.7 | 112.8 | 98.9 | 133.5 | 100.3 |
| 1999 | 351 | 19 | 370 | 99.7 | 100.0 | 99.7 | 100.2 | 102.1 | 100.3 | 100.6 | 91.8 | 100.1 |
| 1998 | 345 | 20 | 366 | 100.0 | 100.0 | 100.0 | 114.0 | 122.3 | 114.4 | 95.8 | 101.8 | 96.2 |
| 1997 | 369 | 21 | 391 | 100.0 | 100.0 | 100.0 | 123.3 | 169.2 | 125.4 | 96.7 | 104.8 | 97.1 |
| 1996 | 419 | 20 | 439 | 100.0 | 100.0 | 100.0 | 108.2 | 71.5 | 106.1 | 106.5 | 84.6 | 105.3 |
| 2001-2005 | 1,461 | 41 | 1,501 | 100.0 | 100.0 | 100.0 | 121.3 | 119.2 | 121.3 | na | na | na |
| 1996-2000 | 1,838 | 102 | 1,939 | 99.9 | 100.0 | 99.9 | 111.2 | 114.7 | 111.4 | na | na | na |
| 1991-1996 | 2,098 | 116 | 2,214 | 99.7 | 98.1 | 99.7 | 104.5 | 202.5 | 108.1 | na | na | na |
| 1986-1990 | 1,873 | 135 | 2,007 | 99.9 | 100.0 | 99.9 | 102.6 | 122.5 | 103.8 | na | na | na |
| < 1986 | 1,013 | 94 | 1,106 | 99.9 | 98.3 | 99.8 | 106.4 | 193.1 | 111.7 | na | na | na |
| All | 8,282 | 487 | 8,769 | 99.9 | 99.2 | 99.9 | 108.6 | 147.4 | 110.4 | na | na | na |

[^15]
## 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 preceding the survey (weighted), Armenia 2005

| Age at death (days) | Number of years preceding the survey |  |  |  | $\begin{aligned} & \text { Total } \\ & 0-19 \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0-4 | 5-9 | 10-14 | 15-19 |  |
| $<1$ | 6 | 9 | 3 | 16 | 33 |
| 1 | 0 | 7 | 8 | 14 | 29 |
| 2 | 4 | 5 | 3 | 1 | 14 |
| 3 | 1 | 2 | 6 | 6 | 15 |
| 4 | 2 | 2 | 3 | 0 | 7 |
| 5 | 3 | 1 | 6 | 4 | 13 |
| 6 | 0 | 0 | 2 | 0 | 2 |
| 7 | 3 | 2 | 0 | 2 | 7 |
| 8 | 1 | 0 | 0 | 0 | 1 |
| 10 | 2 | 2 | 0 | 3 | 8 |
| 11 | 0 | 0 | 0 | 1 | 1 |
| 12 | 1 | 0 | 0 | 0 | 1 |
| 14 | 2 | 0 | 1 | 0 | 3 |
| 15 | 0 | 0 | 2 | 1 | 2 |
| 20 | 0 | 0 | 0 | 3 | 3 |
| 25 | 0 | 0 | 3 | 2 | 6 |
| 27 | 0 | 0 | 1 | 0 | 1 |
| 28 | 0 | 1 | 0 | 0 | 1 |
| 30 | 0 | 0 | 1 | 0 | 1 |
| $31+$ | 0 | 0 | 1 | 1 | 2 |
| Total 0-30 | 26 | 31 | 38 | 52 | 147 |
| Percent early neonatal ${ }^{1}$ | 64.4 | 81.4 | 77.9 | 78.5 | 76.5 |

[^16]
## 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 preceding the survey, Armenia 2005

|  | Number of years preceding the survey |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Age at death <br> (months) | $0-4$ | $5-9$ | $10-14$ | $15-19$ | Total <br> 0 |
|  |  |  | -19 |  |  |
| $<1^{\text {a }}$ | 26 | 31 | 38 | 52 | 147 |
| 1 | 3 | 2 | 10 | 2 | 16 |
| 2 | 1 | 1 | 2 | 5 | 8 |
| 3 | 1 | 5 | 12 | 2 | 21 |
| 4 | 1 | 2 | 6 | 4 | 12 |
| 5 | 0 | 2 | 2 | 1 | 5 |
| 6 | 6 | 1 | 6 | 4 | 17 |
| 7 | 0 | 0 | 3 | 5 | 8 |
| 8 | 1 | 0 | 5 | 5 | 11 |
| 10 | 0 | 0 | 1 | 2 | 3 |
| 11 | 0 | 1 | 0 | 1 | 2 |
| 12 | 0 | 4 | 1 | 0 | 5 |
| 13 | 0 | 1 | 0 | 0 | 1 |
| 16 | 0 | 2 | 0 | 0 | 2 |
| 18 | 1 | 0 | 0 | 2 | 4 |
| 20 | 0 | 0 | 1 | 0 | 1 |
| 1 Year | 2 | 0 | 1 | 3 | 6 |
| Total 0-11 | 38 | 45 | 84 | 84 | 252 |
| Percent neonatal | 66.8 | 69.5 | 45.1 | 62.4 | 58.5 |

${ }^{a}$ Includes deaths under one month reported in days
${ }^{1}$ Under one month/under one year

# PERSONS INVOLVED IN THE 2005 ARMENIA DEMOGRAPHIC AND HEALTH SURVEY 

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Kaghzvantsyan Armenuhi, Interviewer
Khachatryan Varuzhan, Interviewer
Davtyan Hasmik, Medical technician

## Syunik

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Grigoryan Anna, Interviewer
Navasardyan Silva, Interviewer
Hakobyan Anzhela, Interviewer
Grigoryan Anna, Interviewer
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Melikyan Aghavni, Interviewer
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Eseybekyan Raisa
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Abrahamyan Andranik

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Hayrapetyan Artak
Martirosyan Serine Melikyan Ashot
Poghosyan Lusine
Nikoghosyan Anush
Manukyan Anush
Khanamiryan Gayane
Hakobyan Narek
Pepanyan Levon
Ghavalyan Vahe
Davtyan Alina
Harutyunyan Armenak

Malkhasyan Armine Aghayan Davi
Hambardzumyan Artur Mehrabyan Anna
Achinyan Lyudmila Poghosyan Marat
Tarverdyan Ishkhan
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Ekdibaryan Lusine

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REPUBLIC OF ARMENIA
NATIONAL STATISTICAL SERVICE
MINISTRY OF HEALTH




HOUSEHOLD SCHEDULE
Now we would like some information about the people who usually live in your household or who are staying with you now.

| $\begin{aligned} & \text { LINE } \\ & \text { NO. } \end{aligned}$ | USUAL RESIDENTS AND VISITORS | RELATIONSHIP TO HEAD OF household | SEX | RESIDENCE |  | AGE | ELIGIBILITY |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. | What is the relationship of (NAME) to the head of the household?* | Is <br> (NAME) <br> male or <br> female? | Does <br> (NAME) usually live here? | Did <br> (NAME) <br> stay here last night? | How old is (NAME) in completed years? | CIRCLE <br> LINE <br> NUMBER <br> OF ALL <br> WOMEN <br> AGE <br> 15-49 | CIRCLE <br> LINE <br> NUMBER <br> OF ALL <br> MEN <br> AGE 15-49 | CIRCLE <br> LINE <br> NUMBER <br> OF ALL <br> CHILDREN <br> UNDER <br> AGE 6 |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (8A) | (9) |
|  |  |  | M F | YES NO | YES NO | IN YEARS |  |  |  |
| 01 |  |  | 12 | 12 | 12 |  | 01 | 01 | 01 |
| 02 |  |  | 12 | 12 | 12 |  | 02 | 02 | 02 |
| 03 |  |  | 12 | 12 | 12 |  | 03 | 03 | 03 |
| 04 |  |  | 12 | 12 | 12 |  | 04 | 04 | 04 |
| 05 |  |  | 12 | 12 | 12 |  | 05 | 05 | 05 |
| 06 |  |  | 12 | 12 | 12 |  | 06 | 06 | 06 |
| 07 |  |  | 12 | 12 | 12 |  | 07 | 07 | 07 |
| 08 |  |  | 12 | 12 | 12 |  | 08 | 08 | 08 |
| 09 |  |  | 12 | 12 | 12 |  | 09 | 09 | 09 |
| 10 |  |  | 12 | 12 | 12 |  | 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
11 = OTHER RELATIVE
12 = ADOPTED/FOSTER/STEPCHILD
13 = NOT RELATED
07 = PARENT-IN-LAW
$08=$ BROTHER OR SISTER



TICK HERE IF CONTINUATION SHEET USED
Just to make sure that I have a complete household listing:

1) $\quad$| Are there any other persons such as small children or infants that we have |
| :--- | :--- |
| not listed? |
2) | Are there any other people who may not be members of your family, |
| :--- |
| such as domestic servants, lodgers or friends who usually live here? |

| Are there any guests or temporary visitors staying here, or anyone else who |
| :--- | :--- |
| slept here last night, who have not been listed? |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES |  | SKIP |
| :---: | :---: | :---: | :---: | :---: |
| 21 | What is the main source of drinking water for members of your household? | PIPED WATER <br> PIPED INTO DWELLING <br> PIPED TO YARD/PLOT <br> PUBLIC TAP/STANDPIPE <br> DUG WELL <br> PROTECTED WELL <br> UNPROTECTED WELL <br> WATER FROM SPRING <br> RAINWATER <br> TANKER TRUCK <br> SURFACE WATER (RIVER/DAM/ <br> LAKE/POND/STREAM/CANAL) <br> IRRICATION WATER <br> BOTTLED WATER <br> OTHER | $\begin{aligned} & 11- \\ & 12 \\ & 13- \\ & 31 \\ & 32 \\ & 31 \\ & 41- \\ & 51- \\ & 61- \\ & 81 \\ & 82 \\ & 91 \end{aligned}$ | $\rightarrow 26$ <br> $\rightarrow 24$ <br> $\longrightarrow 23$ <br> $\rightarrow \quad 26$ <br> $\rightarrow 24$ <br> 23 |
| 22 | What is the main source of water used by your household for other purposes such as handwashing? | PIPED WATER <br> PIPED INTO DWELLING <br> PIPED TO YARD/PLOT <br> PUBLIC TAP/STANDPIPE <br> DUG WELL <br> PROTECTED WELL <br> UNPROTECTED WELL <br> WATER FROM SPRING <br> RAINWATER <br> TANKER TRUCK <br> SURFACE WATER (RIVER/DAM/ <br> LAKE/POND/STREAM/CANAL/ <br> IRRIGATION WATER <br> BOTTLED WATER <br> OTHER $\qquad$ | $\begin{aligned} & 11 \\ & 12 \\ & 13 \\ & 31 \\ & 32 \\ & 41 \\ & 51 \\ & 61 \\ & 81 \\ & 82 \\ & 91 \\ & 96 \end{aligned}$ | $\longrightarrow 26$ $\rightarrow 26$ |
| 23 | Where is that water source located? | IN OWN YARD/PLOT ELSEWHERE | $\begin{aligned} & 1 \\ & 2 \end{aligned}$ | $\longrightarrow 26$ |
| 24 | How long does it take to go there, get water, and come back? | MINUTES <br> ON PREMISES DON'T KNOW | $\begin{aligned} & \\ & \hline \\ & \hline \\ & 996 \\ & 998 \end{aligned}$ | $\rightarrow 26$ |
| 25 | Who usually goes to this source to fetch the water for your household? | ADULT WOMAN <br> ADULT MAN <br> FEMALE CHILD <br> UNDER 15 YEARS OLD <br> MALE CHILD <br> UNDER 15 YEARS OLD <br> OTHER | $\begin{array}{r} 1 \\ 2 \\ \\ . \quad 3 \\ . \quad 4 \\ \hline \end{array}$ |  |
| 26 | Do you treat your water in any way to make it safer to drink? | YES <br> NO <br> DON'T KNOW | $\begin{aligned} & 1 \\ & 2 \\ & 8 \end{aligned}$ | $\longrightarrow 28$ |
| 27 | What do you usually do to the water to make it safer to drink? <br> Anything else? <br> RECORD ALL MENTIONED. | BOIL <br> STRAIN THROUGH A CLOTH USE WATER FILTER LET IT STAND AND SETTLE OTHER $\qquad$ (SPECIFY) DON'T KNOW $\qquad$ | $A$ $C$ $D$ $F$ $X$ $Z$ |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 28 | What kind of toilet facility do members of your household usually use? |  | $\longrightarrow 31$ |
| 29 | Do you share this toilet facility with other households? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . | $\rightarrow 31$ |
| 30 | How many households use this toilet facility? |  |  |
| 31 | Does your household have: <br> Electricity? <br> A radio? <br> A black and white television? <br> A color television? <br> A washing machine? <br> A vacuum cleaner? <br> A computer? <br> A mobile telephone? <br> A non-mobile telephone? <br> A refrigerator? <br> A camera? |  |  |
| 32 | What type of fuel does your household mainly use for cooking? |  | $\rightarrow \rightarrow 34$ |
| 33 | In this household, is food cooked on a stove or an open fire? PROBE FOR TYPE. |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 34 | Is the cooking usually done in the house, in a separate building, or outdoors? |  | $\square \rightarrow 36$ |
| 35 | Do you have a separate room which is used as a kitchen? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . |  |
| 36 | MAIN MATERIAL OF THE FLOOR. RECORD OBSERVATION. |  |  |
| 40 | How many rooms in this household are used for sleeping? | ROOMS |  |
| 41 | Does any member of this household own: <br> A watch? <br> A bicycle? <br> A motorcycle or motor scooter? <br> An animal-drawn cart? <br> A car or truck? <br> A boat with a motor? |    <br> WATCH  YES NO |  |
| 42 | Does any member of this household own any land that can be used for agriculture? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . | $\longrightarrow 44$ |
| 43 | How many hectares of agricultural land do members of this household own? |  |  |
| 44 | Does this household own any livestock, herds, or farm animals? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . | $\longrightarrow 46$ |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 45 | How many of the following animals does this household own? <br> Cattle, i.e. cows, bulls and etc.? <br> Horses, donkeys, or mules? <br> Goats? <br> Sheep? <br> Fowl? <br> Pigs? <br> Rabbits? <br> IF NONE, ENTER '00'. <br> IF MORE THAN 95, ENTER '95'. <br> IF UNKNOWN, ENTER '98'. | CATTLE HORSES/DONKEYS/MULES GOATS SHEEP <br> FOWL <br> PIGS <br> RABBITS |  |
| 46 | Does any member of this household have a bank account, irrespective of amount, opened since 1991? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . |  |
| 46A | During the last year, did you or any members of your household go on a vacation of at least one week? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . 2 |  |
| 46B | If you consider your current income, are you and your household able to make ends meet with: great difficulty, some difficulty, a little difficulty, fairly easily, easily, or very easily? |  |  |
| 46C | Has your household had problems paying the bill for electricity or gas during the last 12 months? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8 |  |
| 46D | During the last 12 months, have you or your household been forced to borrow money from friends or relatives to make ends meet? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8 |  |
| 46E | If you were in a situation where you had to get 30,000 drams in one week, would you manage to do that? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8 | 49 |
| 46F | How? <br> RECORD ALL MENTIONED. |  |  |
| 49 | ASK RESPONDENT FOR A TEASPOONFUL OF COOKING SALT. TEST SALT FOR IODINE. <br> RECORD PPM (PARTS PER MILLION) |  |  |

CHECK COLUMNS (8) AND (9): RECORD THE LINE NUMBER, NAME AND AGE OF ALL MEN AND WOMEN AGE 15-49 AND ALL CHILDREN UNDER AGE 6.

| MEN 15-49 |  |  |  | WEIGHT AND HEIGHT MEASUREMENT OF MEN 15-49 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LINE NO. <br> FROM COL. (8) | NAME <br> FROM COL. (2) | AGE <br> FROM COL. (7) | What is (NAME'S) date of birth? | WEIGHT (KILOGRAMS) | HEIGHT (CENTIMETERS) | MEASURED <br> LYING DOWN OR STANDING UP | RESULT <br> 1 MEASURED <br> 2 NOT PRESENT <br> 3 REFUSED <br> 6 OTHER |
| (50) | (51) | (52) | (53) | (54) | (55) | (56) | (57) |
|  |  | YEARS |  |  |  |  |  |
| $1$ |  |  |  |  |  |  |  |
| $\Gamma$ |  |  |  |  |  |  |  |


| WOMEN 15-49 |  |  |  | WEIGHT AND HEIGHT MEASUREMENT OF WOMEN 15-49 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LINE NO. <br> FROM COL. (8) | NAME <br> FROM <br> COL. (2) | AGE FROM COL. (7) | What is (NAME'S) date of birth? | WEIGHT (KILOGRAMS) | HEIGHT (CENTIMETERS) | MEASURED <br> LYING DOWN OR STANDING UP | RESULT <br> 1 MEASURED <br> 2 NOT PRESENT <br> 3 REFUSED <br> 6 OTHER |
| (50) | (51) | (52) | (53) | (54) | (55) | (56) | (57) |
| $1$ |  | YEARS |  |  |  |  |  |
|  |  | $1$ |  |  |  |  |  |
|  |  |  |  |  |  |  |  |



TICK HERE IF CONTINUATION SHEET USED


* COPY MONTH AND YEAR FROM 215 IN THE MOTHER'S BIRTH HISTORY AND ASK DAY. FOR CHILDREN NOT INCLUDED IN ANY BIRTH HISTORY, ASK DAY, MONTH, AND YEAR.
* CONSENT STATEMENT

As part of this survey, we are studying anemia among women and children. 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 request that you (and all children born in 2000 or later) participate in the anemia testing part of this survey and give a few drops of blood from a finger. The test uses disposable sterile instruments that are clean and completely safe. The blood will be analyzed with new equipment As another part of this survey, we are measuring blood pressure among women and men. This will be will be an easy test. The results of boththe anemia and blood pressure tests will be given to you immediately. The results will be kept confidential.

May I now ask that you (and NAME OF CHILD[REN]) participate in the anemia test. Also I will ask you participate in the blood pressure measurement. However, if you decide not to have the tests done, it is your right and we will respect your decision. Now please tell me if you agree to have the tests done.

| HEMOGLOBIN MEASUREMENT OF WOMEN 15-49 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| CHECK COLUMN (52): | LINE NO. OF PARENT/ RESPONSIBLE ADULT. RECORD '00' IF NOT LISTED IN HOUSEHOLD SCHEDULE | READ CONSENT STATEMENT TO WOMAN/PARENT/RESPONSIBLE ADULT* <br> CIRCLE CODE (AND SIGN)** | HEMOGLOBIN LEVEL (G/DL) | CURRENTLY PREGNANT | RESULT <br> 1 MEASURED <br> 2 NOT PRESENT <br> 3 REFUSED <br> 6 OTHER |
| (58) | (59) | (60) | (61) | (62) | (63) |
| AGE 15-17 AGE 18-49 <br> 1 <br> GO TO 60 لـ |  | GRANTED REFUSED <br> 1 NEXT LINE |   | YES NO/DK <br> 12 |  |
| 1 GOTO 60 - |  | 1 <br> SIGN $\qquad$ NEXT LINE | $1$ | 12 | $\square$ |
| 1 $\text { GO TO } 60 \text { لــ }$ |  | 1 <br> SIGN <br> NEXT LINE | $\square \square$ | 12 | $\square$ |


| HEMOGLOBIN MEASUREMENT OF CHILDREN BORN IN 2000 OR LATER |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| CHECK COLUMN (53): BORN IN MONTH OF INTERVIEW OR PREVIOUS 5 MONTHS OTHER | LINE NO. OF PARENT/ RESPONSIBLE ADULT. RECORD '00' IF NOT LISTED IN HOUSEHOLD SCHEDULE | READ CONSENT STATEMENT TO PARENT/RESPONSIBLE ADULT* CIRCLE CODE (AND SIGN) | HEMOGLOBIN LEVEL (G/DL) | RESULT <br> 1 MEASURED <br> 2 NOT PRESENT <br> 3 REFUSED <br> 6 OTHER |
|  |  | GRANTED REFUSED <br> 1 NEXT LINE |  |  |
| $\stackrel{1}{\square}$ NEXT CHILD ${ }^{2}$ | $\square$ |  |  | $\square$ |
| $\stackrel{1}{\square}$ NEXT CHILD ${ }^{2}$ |  | 1 <br> SIGN $\qquad$ NEXT LINE |  | $\square$ |
| $\stackrel{1}{\square}$ NEXT CHILD ${ }^{2}$ |  | 1 <br> SIGN $\qquad$ NEXT LINE | $1$ | $\square$ |
| $\stackrel{1}{4} \text { NEXT CHILD }{ }^{2}$ |  | 1 <br> SIGN $\qquad$ NEXT LINE | $1$ | $\square$ |
| $1 \quad 2$ <br> NEXT CHILD |  | 1 <br> SIGN $\qquad$ NEXT LINE | $1 .$ | $\square$ |

** For women age 15-17, circle code '1' (granted) only if both the respondent and the parents/responsible adult agree that the minor can be treated.

Note: In countries where some enumeration areas are higher than 1,000 meters, altitude information should be collected on a separate form for each enumeration area higher than 1,000 meters so that the anemia estimates can be adjusted appropriately.

| 64 | CHECK 61 AND 62: <br> NUMBER OF PERSONS WITH HE <br> ONE OR MORE <br> GIVE EACH WOMAN/PARENT/RE RESULT OF HEMOGLOBIN MEA CONTINUE WITH 65.** | OBIN LEVEL <br> SIBLE ADULT <br> MENT AND | NONE <br> AN/PARENT/RES OGLOBIN MEASU |  |
| :---: | :---: | :---: | :---: | :---: |
| 65 | We detected a low level of hemoglobin in (your blood/the blood of NAME OF CHILD(REN)). This indicates that (you/NAME OF CHILD(REN)) have developed severe anemia, which is a serious health problem. We would like to inform the doctor at$\qquad$ about (your condition/the condition of NAME OF CHILD(REN)). This will assist you in obtaining appropriate treatment for the condition. Do you agree that the information about the level of hemoglobin in (your blood/the blood of NAME OF CHILD(REN)) may be given to the doctor? |  |  |  |
|  | OF PERSON WITH HEMOGLOBIN ELOW THE CUTOFF POINT | NAME OF PA | AGREE |  |
| WOMEN AGE 18-49 |  |  |  |  |
|  |  |  | $\begin{aligned} & \text { YES } \\ & \text { NO } \end{aligned}$ | 1 2 |
|  |  |  | $\begin{aligned} & \text { YES } \\ & \text { NO } \end{aligned}$ | 1 2 |
|  |  |  | $\begin{aligned} & \text { YES } \\ & \text { NO } \end{aligned}$ | 1 2 |
|  |  |  | $\begin{aligned} & \text { YES } \\ & \text { NO } \end{aligned}$ | 1 2 |
| WOMEN AGE 15-17 AND CHILDREN |  |  |  |  |
|  |  |  | $\begin{aligned} & \text { YES . . . . . . } \\ & \text { NO . . . . } \end{aligned}$ | 1 2 |
|  |  |  | $\begin{aligned} & \text { YES } \\ & \text { NO } \end{aligned}$ | $\begin{aligned} & 1 \\ & 2 \end{aligned}$ |
|  |  |  | $\begin{aligned} & \text { YES . . . . . . . } \\ & \text { NO . . . . . . } \end{aligned}$ | $\begin{aligned} & 1 \\ & 2 \end{aligned}$ |
|  |  |  | $\begin{aligned} & \text { YES } \\ & \text { NO } \end{aligned}$ |  |
|  |  |  | $\begin{aligned} & \text { YES } \\ & \text { NO } \end{aligned}$ |  |
|  |  |  | $\begin{aligned} & \text { YES . . . . . . } \\ & \text { NO . . . . . } \end{aligned}$ |  |
|  |  |  | $\begin{aligned} & \text { YES . . . . . . } \\ & \text { NO . . . . . } \end{aligned}$ |  |
|  |  |  | $\begin{aligned} & \text { YES . . . . . . . } \\ & \text { NO . . . . . . } \end{aligned}$ |  |
|  |  |  | $\begin{aligned} & \text { YES . . . . . . . . } \\ & \text { NO . . . . . . . } \end{aligned}$ |  |

* The cutoff point is $9 \mathrm{~g} / \mathrm{dl}$ for pregnant women and $7 \mathrm{~g} / \mathrm{dl}$ for children and for women who are not pregnant (or who don't know if they are pregnant).
** If more than one woman or child is below the cutoff point, read the statement in Q .65 to each woman who is below the cutoff point and to each parent/responsible adult of a child who is below the cutoff point.

Republic of Armenia
National Statistical Service
Ministry of Health



## INFORMED CONSENT

Hello. My name is $\qquad$ and I am working with RA NSS and RA MOH. We are conducting a national survey about the health of women and children. We would very much appreciate your participation in this survey. I would like to ask you about your health (and the health of your children). This information will help the government to plan health services. The interview will take some time. Whatever information you provide will be kept strictly confidential and will not be shown to other persons.

Participation in this survey is voluntary and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate in this survey since your views are important.

At this time, do you want to ask me anything about the survey?
May I begin the interview now?

| Signature of interviewer: |  |  | Date: |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
| RESPONDENT AGREES TO BE INTERVIEWED | 1 | RESPONDENT DOES NOT AGREE TO BE INTERVIEWED |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES |  | SKIP |
| :---: | :---: | :---: | :---: | :---: |
| 101 | RECORD THE TIME. | HOUR <br> MINUTES |  |  |
| 102 | How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? <br> IF LESS THAN ONE YEAR, RECORD 'OO' YEARS. | YEARS <br> ALWAYS <br> VISITOR |   <br> $\ldots$ 95 <br> $\ldots$ 96 | $\xrightarrow{\longrightarrow} 104$ |
| 103 | Just before you moved here, did you live in a city, in a town, or in the countryside? | CITY <br> TOWN <br> COUNTRYSIDE | $\begin{array}{ll} \ldots \ldots & 1 \\ \ldots \ldots & 2 \\ \ldots \ldots . & 3 \end{array}$ |  |
| 104 | In what month and year were you born? | MONTH <br> DON'T KNOW MONTH <br> YEAR $\square$ <br> DON'T KNOW YEAR |   <br>   <br> . . . . 98$\|$ |  |
| 105 | How old were you at your last birthday? <br> COMPARE AND CORRECT 104 AND/OR 105 IF INCONSISTENT. | AGE IN COMPLETED YEARS |  |  |
| 106 | Have you ever attended school? | YES <br> NO | $\begin{array}{ll} \ldots & 1 \\ \ldots . . . & 2 \end{array}$ | $\longrightarrow 113$ |
| 107 | What is the highest level of school you attended: primary/secondary, secondary special, or higher? | PRIMARY/SECONDARY (1-10) SECONDARY SPECIAL HIGHER | $\begin{array}{ccc}  & \ldots & 1 \\ \ldots . . & 2 \\ \ldots . . & 3 \end{array}$ |  |
| 108 | What is the highest (grade/form/year) you completed at that level? | GRADE |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 113 | Do you read a newspaper or magazine almost every day, at least once a week, less than once a week or not at all? |  |  |
| 114 | Do you listen to the radio almost every day, at least once a week, less than once a week or not at all? |  |  |
| 115 | Do you watch television almost every day, at least once a week, less than once a week or not at all? |  |  |
| 116 | Now I would like to talk about the term "Quality of life," the definition of which is an individual's perception of their position in life in the context of their goals, expectations and physical health. <br> How would you rate your quality of life? |  |  |
| 117 | How satisfied are you with your health? |  |  |
| 118 | Do you have enough energy for everyday life? |  |  |
| 119 | How satisfied are you with your ability to perform your daily living activities? |  |  |
| 120 | Have you enough money to meet your needs? |  |  |
| 121 | How satisfied are you with the conditions of your living space? | VERY DISSATISFIED $\ldots \ldots \ldots \ldots . .$. 1 <br> DISSATISFIED . . . . . . . . . . . . . . . . . . 2 <br> NEITHER SATISFIED NOR  <br> DISSATISFIED . . . . . . . . . . . . . . . 3 <br> SATISFIED . . . . . . . . . . . . . . . . . . . . . 4 <br> VERY SATISFIED . . . . . . . . . . 5 |  |

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 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 | $\longrightarrow 206$ |
| 202 | Do you have any sons or daughters to whom you have given birth who are now living with you? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 | $\longrightarrow 204$ |
| 203 | How many sons live with you? <br> And how many daughters live with you? <br> IF NONE, RECORD '00'. | SONS AT HOME <br> 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 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 | $\longrightarrow 206$ |
| 205 | How many sons do not live with you? <br> How many daughters do not live with you? <br> IF NONE, RECORD '00'. | SONS ELSEWHERE DAUGHTERS ELSEWHERE. |  |
| 206 | Have you ever given birth to a boy or girl who was born alive but later died? <br> IF NO, PROBE: Any baby who cried or showed signs of life but did not survive? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 | $\longrightarrow 208$ |
| 207 | How many boys have died? <br> And how many girls have died? <br> IF NONE, RECORD '00'. | BOYS DEAD <br> GIRLS DEAD |  |
| 207A | Were there any other children who were born alive, but who died within a few minutes, hours, or days? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 | $\longrightarrow 208$ |
| 207B | CORRECT 207 AND THEN CONTINUE WITH QUESTION 208. |  |  |
| 208 | SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'. | TOTAL |  |
| 209 | CHECK 208: <br> Just to make sure that I have this right: you have had in TOTAL $\qquad$ live births during your life. Is that correct? <br> PROBE AND <br> YES <br> CORRECT <br> 201-208 AS <br> NECESSARY. |  |  |
| 209A | Women sometimes have pregnancies which do not result in a live born child. That is, a pregnancy can be ended early by an induced abortion, a spontaneous miscarriage, or a stillbirth. <br> In total, how many abortions have you had? | TOTAL ABORTIONS |  |
| 209B | How many miscarriages? | TOTAL MISCARRIAGES . . . . . . |  |
| 209C | How many stillbirths? | TOTAL STILLBIRTHS ........ |  |
| 209D | SUM ANSWERS TO 208, 209A, 209B, AND 209C, AND ENTER TOTAL. IF NO PREGNANCIES, RECORD '00'. | TOTAL |  |
| 210 | CHECK 209D: <br> ONE OR MORE <br> NO PREGNANCIES PREGNANCIES $\square$ |  | $\longrightarrow 226$ |


| 211 Now I want to talk to you about each of your pregnancies, including those which ended in a live birth, an abortion, a miscarriage, or a stillbirth. Starting with your last pregnancy, please tell me the following information. <br> RECORD ALL PREGNANCIES. RECORD TWINS AND TRIPLETS ON SEPARATE LINES. <br> (IF THERE ARE MORE THAN 14 PREGNANCIES, USE AN ADDITIONAL QUESTIONNAIRE). |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 212 <br> Did your (last/ next-to-last/etc) pregnancy end in a live birth, an abortion, a miscarriage, or a stillbirth? | 213 <br> In what year was child bor pregnan | 214 <br> Were there any other pregnancies between this and the pregnancy we were just talking about? |  | 214A <br> CHECK 212: <br> RECORD SAME RESPONSE. | $215$ <br> Was this a single or a multiple birth? | 216 <br> What name was given to this child? | 217 <br> Is (NAME) <br> a boy or a girl? | $218$ <br> Is (NAME) still alive? | 219 <br> IF ALIVE: <br> How old was (NAME) at his/her last birthday? <br> RECORD AGE IN COMPLETED YEARS. | 220 <br> IF ALIVE: <br> Is (NAME) <br> living with you? | 221 <br> if ALIVE: <br> RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD). | 222 <br> IF DEAD: <br> How old was when he/she <br> IF '1 YR', PROB How many mo was (NAME)? RECORD DA LESS THAN MONTH; MON LESS THAN YEARS; OR | (NAME) died? <br> OBE: <br> onths olc YS IF 1 NTHS IF TWO YEARS. |
| 01 <br> LIVE BIRTH . . . 1 <br> ABORTION... 2 <br> MISCARRIAGE . . 3 <br> STILLBIRTH ... 4 | MONTH <br> YR |  |  | LIVE BIRTH . . . 1  <br> ABORTION . . 2  <br> MISCARRIAGE . . 3  <br> STILLBIRTH . . 4 4 <br>    <br> NEXT PREGNANCY   | $\begin{array}{ll}\text { SINGLE .... } & 1 \\ \text { MULTIPLE ... } & 2\end{array}$ | (NAME) | $\begin{aligned} & \text { BOY . . . } 1 \\ & \text { GIRL . . } 2 \end{aligned}$ | $\begin{array}{r} \text { YES . . . } 1 \\ \text { NO . . . } 2 \\ \downarrow \\ \downarrow 222 \end{array}$ | AGE IN YEARS | $\begin{array}{cc} \text { YES .... } & 1 \\ \text { NO .... } & 2 \end{array}$ |  | DAYS ... 1 <br> MONTH . . 2 <br> YEARS . . 3 |  |
| $\begin{array}{ll} 02 \\ & \\ \text { LIVE BIRTH . . . } & 1 \\ \text { ABORTION . . } & 2 \\ \text { MISCARRIAGE . . } \\ \text { STILLBIRTH . . } & 4 \end{array}$ | MONTH <br> YR | YES <br> NO |  | LIVE BIRTH . . . 1 <br> ABORTION . . 2 <br> MISCARRIAGE . . 3 <br> STILLBIRTH . . 4 <br>  4 <br> NEXT PREGNANCY $\boxed{ }$ | $\begin{array}{ll}\text { SINGLE .... } & 1 \\ \text { MULTIPLE ... } & 2\end{array}$ | (NAME) | $\begin{aligned} & \text { BOY ... } 1 \\ & \text { GIRL.. } 2 \end{aligned}$ | $\begin{array}{r} \text { YES . . . } 1 \\ \text { NO . . . } 2 \\ \downarrow \\ \downarrow 22 \end{array}$ | AGE IN YEARS | $\begin{array}{cc} \text { YES .... } & 1 \\ \text { NO .... } & 2 \end{array}$ |  | DAYS ... 1 <br> MONTH . . 2 <br> YEARS . . 3 |  |
|   <br> 03  <br>   <br>   <br> LIVE BIRTH . . . 1 <br> ABORTION ... 2 <br> MISCARRIAGE . 3  <br> STILLBIRTH . . 4 | MONTH <br> YR | YES <br> NO |  | LIVE BIRTH . . . 1 <br> ABORTION . . 2 <br> MISCARRIAGE . . 3 <br> STILLBIRTH . . 4 <br>  4 <br> NEXT PREGNANCY  | $\begin{array}{ll}\text { SINGLE .... } & 1 \\ \text { MULTIPLE ... } & 2\end{array}$ | (NAME) | $\begin{aligned} & \text { BOY . . . } 1 \\ & \text { GIRL . . } 2 \end{aligned}$ | $\begin{array}{r} \text { YES } \ldots .1 \\ \text { NO } \ldots .2 \\ \downarrow \\ \downarrow 22 \end{array}$ | AGE IN YEARS | $\begin{array}{cc} \text { YES .... } & 1 \\ \text { NO .... } & 2 \end{array}$ |  | DAYS ... 1 <br> MONTH . . 2 <br> YEARS . . 3 |  |
| 04 <br> LIVE BIRTH . . . 1 <br> ABORTION... 2 <br> MISCARRIAGE . . 3 <br> STILLBIRTH... 4 | MONTH <br> YR | YES <br> NO |  | LIVE BIRTH . . . 1 <br> ABORTION . . 2 <br> MISCARRIAGE . . 3 <br> STILLBIRTH . . 4 <br>   <br> NEXT PREGNANCY $\boxed{ }$ | $\begin{array}{ll}\text { SINGLE .... } & 1 \\ \text { MULTIPLE ... } & 2\end{array}$ | (NAME) | $\begin{aligned} & \text { BOY ... } 1 \\ & \text { GIRL.. } 2 \end{aligned}$ | $\begin{array}{r} \text { YES . . . } 1 \\ \text { NO . . . } 2 \\ \downarrow \\ \downarrow 22 \end{array}$ | AGE IN YEARS | $\begin{array}{ll} \text { YES .... } & 1 \\ \text { NO .... } & 2 \end{array}$ |  | DAYS ... 1 <br> MONTH . . 2 <br> YEARS . . 3 |  |
| $\begin{array}{ll} 05 \\ & \\ \text { LIVE BIRTH . . . } & 1 \\ \text { ABORTION . . } & 2 \\ \text { MISCARRIAGE . . } \\ \text { STILLBIRTH . . } & 4 \end{array}$ | MONTH <br> YR | YES <br> NO |  | LIVE BIRTH . . . 1 <br> ABORTION . . 2 <br> MISCARRIAGE . . 3 <br> STILLBIRTH . . 4 <br>   <br> NEXT PREGNANCY  | $\begin{array}{ll}\text { SINGLE .... } & 1 \\ \text { MULTIPLE ... } & 2\end{array}$ | (NAME) | $\begin{aligned} & \text { BOY ... } 1 \\ & \text { GIRL.. } 2 \end{aligned}$ | $\begin{array}{r} \text { YES . . . } 1 \\ \text { NO . . . } 2 \\ \downarrow \\ \downarrow 22 \end{array}$ | AGE IN YEARS | $\begin{array}{cc} \text { YES .... } & 1 \\ \text { NO .... } & 2 \end{array}$ |  | DAYS ... 1 <br> MONTH . . 2 <br> YEARS . . 3 |  |




| NO. | QUESTIONS AND FILTERS | CODING CATEGORIE | SKIP |
| :---: | :---: | :---: | :---: |
| 225 | FOR EACH PREGNANCY THAT ENDED IN JANUARY 2000 OR LA PREGNANCY OUTCOME IN THE MONTH THE PREGNANCY EN $\begin{aligned} & \text { 'B' FOR LIVE BIRTH, } \\ & \text { 'D' FOR INDUCED ABORTION, } \\ & \text { 'V' FOR MISCARRIAGE, } \\ & \text { 'S' FOR STILLBIRTH, } \end{aligned}$ <br> THEN ASK THE NUMBER OF MONTHS EACH PREGNANCY LAS PRECEDING MONTHS OF THE CALENDAR ACCORDING TO TH (NOTE: THE NUMBER OF 'P's MUST BE ONE LESS THAN THE PREGNANCY LASTED.) FINALLY, FOR EACH BIRTH, WRITE TH OF THE 'B' CODE. | , ENTER THE CODE OF THE <br> RECORD "P" IN EACH OF THE JRATION OF PREGNANCY. <br> BER OF MONTHS THAT THE AME OF THE CHILD TO THE LEF |  |
| 226 | Are you pregnant now? | YES <br> NO <br> UNSURE | $\rightarrow 229$ |
| 227 | How many months pregnant are you? <br> RECORD NUMBER OF COMPLETED MONTHS. ENTER 'P's IN COLUMN 1 OF CALENDAR, BEGINNING WITH THE MONTH OF INTERVIEW AND FOR THE TOTAL NUMBER OF COMPLETED MONTHS. | MONTHS |  |
| 228 | At the time you became pregnant did you want to become pregnant then, did you want to wait until later, or did you not want to have any (more) children at all? | THEN <br> LATER <br> NOT AT ALL |  |
| 229 | When did your last menstrual period start? <br> (DATE, IF GIVEN) | DAYS AGO ............. 1 <br> WEEKS AGO ........... 2 <br> MONTHS AGO ......... 3 <br> YEARS AGO ........... 4 <br> IN MENOPAUSE/ <br> HAS HAD HYSTERECTOMY <br> BEFORE LAST BIRTH <br> NEVER MENSTRUATED |  |
| 230 | From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant if she has sexual relations? | YES <br> NO <br> DON'T KNOW | $\xrightarrow{\longrightarrow} 301$ |
| 231 | 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 <br> BEGINS <br> DURING HER PERIOD <br> RIGHT AFTER HER <br> PERIOD HAS ENDED ...... <br> HALFWAY BETWEEN <br> TWO PERIODS <br> OTHER $\qquad$ |  |




| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES |  | SKIP |
| :---: | :---: | :---: | :---: | :---: |
| 314 | How many (pill cycles/condoms) did you get the last time? | NUMBER OF CYCLES/PACKAGES DON'T KNOW |  |  |
| 315 | The last time you obtained (CURRENT METHOD IN 311), how much did you officially pay in total, including the cost of the method and any consultation you may have had? | COST <br> FREE DON'T KNOW |  |  |
| 315A | How much did you pay in additional expenses the last time you obtained (CURRENT METHOD IN 311)? | COST <br> NOTHING DON'T KNOW |  | $\rightarrow 319 \mathrm{~A}$ |
| 316 | In what facility did the sterilization take place? <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. | PUBLIC SECTOR HOSPITAL CHILDREN'S HOSPITAL MATERNITY HOSPITAL POLICLINIC . . . . . . . . . ABULATORY WOMEN'S HEALTH CO MEDICAL DIAGNOSTIC OTHER PUBLIC <br> PRIVATE SECTOR HOSPITAL CHILDREN'S HOSPITAL MATERNITY HOSPITAL POLICLINIC ABULATORY WOMEN'S HEALTH CO MEDICAL DIAGNOSTIC OTHER PRIVATE |  |  |
| 317 | CHECK 311/311A: | YES <br> NO DON'T KNOW | $\begin{array}{ll} \ldots \ldots . & 1 \\ \ldots \ldots . & 2 \\ \ldots . . . & 8 \end{array}$ |  |
| 318 | How much did you pay in total for the sterilization, including any consultation you may have had? |  |   |  |
| $\begin{aligned} & 319 \\ & 319 \mathrm{~A} \end{aligned}$ | In what month and year was the sterilization performed? <br> In what month and year did you start using (CURRENT METHOD) continuously? <br> PROBE: For how long have you been using (CURRENT METHOD) now without stopping? | MONTH <br> YEAR |   <br>   <br>   |  |
| 320 | CHECK 319/319A, 213 AND 226: <br> ANY BIRTH OR PREGNANCY TERMINATION AFTER MONTH AND YEAR OF START OF USE OF CONTRACEPTION IN 319/319A <br> GO BACK TO 319/319A, PROBE AND RECORD MONTH AND YEAR USE OF CURRENT METHOD (MUST BE AFTER LAST BIRTH OR P | YES <br> AT START OF CONTINUO EGNANCY TERMINATION | NO |  |



| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 324 | You obtained (CURRENT METHOD) from (SOURCE OF METHOD FROM CALENDAR) in (DATE). At that time, were you told about side effects or problems you might have with the method? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . | $\rightarrow 326$ |
| 325 | Were you ever told by a health or family planning worker about side effects or problems you might have with the method? |  | $\rightarrow 327$ |
| 326 | Were you told what to do if you experienced side effects or problems? |  |  |
| 327 | CHECK 324: |  | $\rightarrow 329$ |
| 328 | 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 |  |
| 329 | CHECK 311/311A: <br> CIRCLE METHOD CODE: <br> IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST. |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 330 | Where did you obtain (CURRENT METHOD) the last time? <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. |  |  |
| 330A | When you obtained the (CURRENT METHOD) the last time, how did you get there? |  | $\begin{array}{\|l} \longrightarrow 330 \mathrm{C} \\ \\ \longrightarrow 330 \mathrm{C} \\ \longrightarrow 330 \mathrm{C} \\ \longrightarrow 330 \mathrm{C} \end{array}$ |
| 330B | Altogether, how much was paid for transportation, round-trip, to go to the (PLACE FROM Q330) the last time you obtained the (METHOD)? |  |  |
| 330 C | How long did it take you to go to the (PLACE FROM Q330) when you last obtained the (METHOD)? | MINUTES <br> DON'T KNOW <br> 998 | $\left[\rightarrow^{\square} 333\right.$ |
| 330D | Please tell me whether each of the following reasons was a factor at all in your decision to use (TRADTIONAL METHOD FROM Q329) instead of a modern method? <br> a. Difficult to find/not available <br> b. Cost of these modern methods <br> c. Little knowledge of modern methods <br> d. Fear of or experience with side effects <br> e. Husband/partner choice <br> f. Religious beliefs <br> g. Doctor's recommendation <br> h. Another person's advice |  |  |
| 331 | Do you know of a place where you can obtain a modern method of family planning? | $\begin{aligned} & \text { YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . } 1 \\ & \text { NO . . . . . . . . . . . . . . . . . . . . . } \end{aligned}$ | $\longrightarrow 333$ |
| 332 | Where is that? <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. | PUBLIC SECTOR <br> HOSPITAL ......................... B <br> CHILDREN'S HOSPITAL . . . . . . . . . . . C <br> MATERNITY HOSPITAL . . . . . . . . . . . D <br> POLICLINIC . . . . . . . . . . . . . . . . . . . . . . E <br> ABULATORY ........................ F <br> WOMEN'S HEALTH CONSULT CTR. G <br> MEDICAL DIAGNOSTIC CENTER ... H <br> FAP |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
|  | (NAME OF PLACE) <br> Any other place? <br> RECORD ALL PLACES MENTIONED. |  |  |
| 333 | In the last 12 months, did you talk with any health worker about family planning? | $\begin{aligned} & \text { YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . } 1 \\ & \text { NO . . . . . . . . . . . . . . . . . . . . } \end{aligned}$ |  |
| 334 | In the last 12 months, have you visited a health facility for care for yourself (or your children)? |  | $\rightarrow 401$ |
| 335 | Did any staff member at the health facility speak to you about family planning methods? |  |  |

SECTION 4. PREGNANCY, POSTNATAL CARE AND CHILDREN'S NUTRITION

| 401 | CHECK 224: <br> ONE OR MORE BIRTHS <br> IN 2000 OR LATER |  |  |  | $\rightarrow 550$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 402 | ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 2000 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. <br> (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES). <br> Now I would like to ask you some questions about the health of all your children born in the last five years. (We will talk about each separately.) |  |  |  |  |
| 403 | LINE NUMBER FROM 212 | LAST BIRTH <br> LINE NUMBER . . . $\square$ | NEXT-TO-LAST BIRTH <br> LINE NUMBER ... | SECOND-FROM- <br> LINE <br> NUMBER ... | TT BIRTH |
| 404 | FROM 216 AND 218 | NAME $\qquad$ <br> LIVING DEAD | NAME $\qquad$ <br> LIVING $\square$ DEAD | NAME $\qquad$ <br> LIVING $\square$ | AD $\square$ |
| 405 | At the time you became pregnant with (NAME), did you want to become pregnant then, did you want to wait until later, or did you not want to have any (more) children at all? |  |  | THEN <br> (SKIP TO <br> LATER $\qquad$ <br> NOT AT ALL (SKIP TO |  |
| 406 | How much longer would you have liked to wait? | MONTHS YEARS $\square$ | MONTHS YEARS $\square$ DON'T KNOW $\qquad$ 998 | MONTHS 1 <br> YEARS 2 <br> DON'T KNOW |  |
| 407 | Did you see anyone for antenatal care for this pregnancy? <br> IF YES: Whom did you see? Anyone else? <br> PROBE FOR THE TYPE OF <br> PERSON AND RECORD ALL PERSONS SEEN. | HEALTH PROFESSIONAL DOCTOR ......... A <br> NURSE/MIDWIFE . . B <br> FELDSHER ...... C <br> FAMILY NURSE . . . D <br> OTHER PERSON <br> RELATIVE/FRIEND E OTHER ........... X <br> (SKIP TO 421) |  |  |  |


| NO. | QUESTIONS AND FILTERS | LAST BIRTH <br> NAME $\qquad$ | NEXT-TO-LAST BIRTH <br> NAME $\qquad$ | SECOND-FROM-LAST BIRTH <br> NAME $\qquad$ |
| :---: | :---: | :---: | :---: | :---: |
| 408 | Where did you receive antenatal care for this pregnancy? <br> CIRCLE ALL MENTIONED. <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. |  |  |  |
| 408A | Did you or a family member pay anything for this pregnancy's antenatal care? | YES $\ldots \ldots \ldots \ldots$ 1 <br> NO $\ldots \ldots \ldots \ldots$ 2 <br> DON'T KNOW .................. 8 |  |  |
| 409 | How many months pregnant were you when you first received antenatal care for this pregnancy? | WEEKS <br> 1 $\square$ <br> MONTHS 2 $\square$ <br> DON'T KNOW $\qquad$ 998 |  |  |
| 410 | How many times did you receive antenatal care during this pregnancy? | NUMBER OF TIMES $\square$ <br> DON'T KNOW $\qquad$ |  |  |
| 411 | As part of your antenatal care during this pregnancy, were any of the following done at least once? <br> Were you weighed? <br> Was your blood pressure measured? <br> Did you give a urine sample? Did you give a blood sample? |   YES NO <br>     <br> WEIGHT $\ldots$ 1 2  <br>     <br> BP $\ldots \ldots$ 1 2  <br> URINE $\ldots \ldots$ 1 2  <br> BLOOD $\ldots .$. 1 2  |  |  |
| 412 | During (any of) your antenatal care visit(s), were you told about the signs of pregnancy complications? |  |  |  |
| 413 | Were you told where to go if you had any of these complications? |  |  |  |
| 421 | During this pregnancy, were you given or did you buy any iron tablets? |  |  |  |
| 421A | Where did you obtain the iron | PUBLIC SECTOR |  |  |

AppendixE| 311

| NO. | QUESTIONS AND FILTERS | LAST BIRTH <br> NAME $\qquad$ | NEXT-TO-LAST BIRTH <br> NAME $\qquad$ | SECOND-FROM-LAST BIRTH <br> NAME $\qquad$ |
| :---: | :---: | :---: | :---: | :---: |
|  | tablets? <br> RECORD ALL MENTIONED. |  |  |  |
| 421B | At any time during this pregnancy, did you pay for iron tablets? | YES $\ldots \ldots \ldots \ldots$ 1 <br> NO $\ldots \ldots \ldots \ldots$ 2 <br> DON'T KNOW ................... 8 |  |  |


| NO. | QUESTIONS AND FILTERS | LAST BIRTH <br> NAME $\qquad$ | NEXT-TO-LAST BIRTH <br> NAME $\qquad$ | SECOND-FROM-LAST BIRTH <br> NAME $\qquad$ |
| :---: | :---: | :---: | :---: | :---: |
| 422 | During the whole pregnancy, for how many days did you take the tablets? <br> IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS. | NUMBER <br> OF DAYSDON'T KNOW . . . 998 |  |  |
| 423 | During this pregnancy, did you have difficulty with your vision during daylight? |  |  |  |
| 424 | During this pregnancy, did you suffer from night blindness [USE LOCAL TERM]? | YES $\ldots \ldots \ldots \ldots$ $\ldots$ <br> NO . ................... 2 <br> DON'T KNOW ..... 8 |  |  |
| 429 | When (NAME) was born, was he/she very large, larger than average, average, smaller than average, or very small? | VERY LARGE $\ldots .$. 1 <br> LARGER THAN   <br> AVERAGE $\ldots .$. 2 <br> AVERAGE $\ldots . . .$. 3  <br> SMALLER THAN   <br> AVERAGE $\ldots .$.  <br> VERY SMALL $\ldots .$. 4 <br> DON'T KNOW $\ldots . .$. 8 |  | VERY LARGE ....... 1 <br> LARGER THAN <br> AVERAGE ....... 2 <br> AVERAGE ......... 3 <br> SMALLER THAN <br> AVERAGE ....... 4 <br> VERY SMALL ....... 5 <br> DON'T KNOW ....... 8 |
| 430 | Was (NAME) weighed at birth? | YES $\ldots \ldots \ldots \ldots .$. 1 <br> NO $\ldots \ldots \ldots \ldots$ 2 <br> (SKIP TO 431A) <br> DON'T KNOW $\ldots \ldots$ 8 |  | YES $\ldots \ldots \ldots \ldots$ 1 <br> NO $\ldots \ldots \ldots \ldots$ 2 <br> $\ldots$ <br> $($ SKIP TO 431A) <br> DON'T KNOW $\ldots \ldots$ 8 |
| 431 | How much did (NAME) weigh? <br> RECORD WEIGHT IN KILOGRAMS FROM HEALTH CARD, IF AVAILABLE. | KG FROM CARD <br> 1 $\square$ $\square$ <br> KG FROM RECALL <br> 2 $\square$ $\square$ DON'T KNOW .. 99.998 | KG FROM CARD <br> 1 $\square$ $\square$ <br> kG from recall <br> 2 $\square$ $\square$ DON'T KNOW .. 99.998 | KG FROM CARD <br> 1 $\square$ <br> KG FROM RECALL <br> 2 $\square$ $\square$ DON'T KNOW $\qquad$ |
| 431A | Does (NAME) have a birth certificate? <br> IF NO, PROBE: Has (NAME)'s birth ever been registered with the civil authority? | CERTIFICATE ...... 1 <br> REGISTRATION $\ldots$. 2 <br> NEITHER .......... 3 <br> (SKIP TO 431C) - <br> DON'T KNOW . . . . . 8 |  | CERTIFICATE ...... 1 <br> REGISTRATION $\ldots$. 2 <br> NEITHER .......... 3 <br> (SKIP TO 431C) 1 <br> DON'T KNOW . . . . . 8 |
| 431B | In order to receive the birth certificate/registration for (NAME) was anything paid? | YES $\ldots \ldots \ldots \ldots$ 1 <br> NO ....................... 2 <br> DON'T KNOW ...... 8 | YES $\ldots \ldots \ldots . . . .$. 1 <br> NO .................... 2 <br> DON'T KNOW ...... 8 | YES $\ldots \ldots \ldots \ldots .$. 1 <br> NO . ................... 2 <br> DON'T KNOW ...... 8 |
| 431C | Did you receive your birth benefit for (NAME)? | YES $\ldots \ldots \ldots \ldots \ldots$ 1 <br> NO . .................... 2 <br> DON'T KNOW ...... 8 | YES $\ldots \ldots \ldots \ldots \ldots$ 1 <br> NO $\ldots \ldots \ldots \ldots$ 2 <br> DON'T KNOW .................. 8 | YES $\ldots \ldots \ldots \ldots \ldots$ 1 <br> NO . .................... 2 <br> DON'T KNOW ...... 8 |
| 432 | Who assisted with the delivery of (NAME)? <br> Anyone else? <br> PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS ASSISTING. <br> IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY. |  | HEALTH PROFESSIONAL DOCTOR ......... A NURSE/MIDWIFE . . B FELDSHER ...... C FAMILY NURSE . . . D OTHER PERSON RELATIVE/FRIEND E OTHER ............ X (SPECIFY) NO ONE ............ Y | HEALTH PROFESSIONAL DOCTOR ......... A <br> NURSE/MIDWIFE . . B <br> FELDSHER ...... C <br> FAMILY NURSE . . . D <br> OTHER PERSON <br> RELATIVE/FRIEND E OTHER ........... X <br> (SPECIFY) <br> NO ONE ........... Y |


| NO. | QUESTIONS AND FILTERS | LAST BIR <br> NAME $\qquad$ | NEXT-TO-LAST BIRTH <br> NAME $\qquad$ | SECOND-FROM-LAST BIRTH <br> NAME $\qquad$ |
| :---: | :---: | :---: | :---: | :---: |
| 433 | Where did you give birth to (NAME)? <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. | HOME <br> (SKIP TO <br> PUBLIC SECTO <br> HOSPITAL <br> CHILDREN'S <br> MATERNITY <br> POLICLINIC <br> ABULATORY <br> WOMEN'S H CONSULT <br> MEDICAL DIA <br> CENTER. <br> FAP $\qquad$ <br> OTHER PUB <br> (SPEC <br> PRIVATE SECT <br> HOSPITAL <br> CHILDREN'S HOSPITAL <br> MATERNITY HOSPITAL <br> POLICLINIC <br> ABULATORY <br> WOMEN'S HEA CONSULT <br> MEDICAL DIA CENTER FAP $\qquad$ <br> OTHER PRIV <br> OTHER .... <br> (SPECIFY) <br> (SKIP TO <br> DON'T KNOW |  |  |
| 433A | Did you or any family member pay anything for the delivery of (NAME)? <br> Altogether, how much was officially paid for the delivery; including examination, laboratory tests, medicines, and staff fees? | YES <br> NO <br> (SKIP TO DON'T KNOW <br> FREE DON'T KNOW |  |  |
| 433C | How much was paid in additional expenses? | NOTHING . $\qquad$ <br> DON'T KNOW |  |  |
| 434 | How long after (NAME) was delivered did you stay there? <br> IF LESS THAN ONE DAY, RECORD HOURS. <br> IF LESS THAN ONE WEEK, RECORD DAYS. | HOURS 1 <br> DAYS 2 <br> WEEKS 3 <br> DON'T KNOW | HOURS DAYS WEEKS 3 <br> DON'T KNOW $\qquad$ 998 |  |
| 435 | Was (NAME) delivered by caesarean section? | $\begin{aligned} & \text { YES } \\ & \text { NO } \end{aligned}$ | $\begin{array}{ll} \text { YES . . . . . . . . . . . . . } & 1 \\ \text { NO . . . . . . . . . . . . } & 2 \end{array}$ | YES ................. 1 NO ............. 2 |
| 436 | Before you were discharged after (NAME) was born, did a health professional check on your health? | YES <br> NO <br> (SKIP TO 43 <br> DON'T KNOW . | YES $\ldots \ldots \ldots \ldots . .$. 1 <br> (SKIP TO 451)  <br> NO $\ldots \ldots \ldots \ldots$. 2 <br> DON'T KNOW . . . . . 8 | YES $\ldots \ldots \ldots \ldots .$. 1 <br> (SKIP TO 451)  <br> NO $\ldots \ldots \ldots \ldots$ 2 <br> DON'T KNOW . . . . . 8 |
| 437 | How many hours, days or weeks after delivery did the first check take place? <br> IF LESS THAN ONE DAY, RECORD HOURS. | HOURS 1 <br> DAYS 2 <br> WEEKS 3 |  |  |


| NO. | QUESTIONS AND FILTERS | LAST BIRTH <br> NAME $\qquad$ | NEXT-TO-LAST BIRTH <br> NAME $\qquad$ | SECOND-FROM-LAST BIRTH <br> NAME $\qquad$ |
| :---: | :---: | :---: | :---: | :---: |
|  | IF LESS THAN ONE WEEK, RECORD DAYS. | DON'T KNOW ... 998 |  |  |
| 438 | Who checked on your health at that time? <br> PROBE FOR MOST QUALIFIED PERSON. | DOCTOR $\ldots . . .$. 11 <br> NURSE/MIDWIFE . . 12 <br> FELDSHER $\ldots .$. 13 <br> FAMILY NURSE ... 14 <br> OTHER $\ldots . . . .$. $96-1$ <br> (SPECIFY)  <br> (SKIP TO 450)  |  |  |


| NO. | QUESTIONS AND FILTERS | LAST BIRTH <br> NAME $\qquad$ | NEXT-TO-LAST BIRTH <br> NAME $\qquad$ | SECOND-FROM-LAST BIRTH <br> NAME $\qquad$ |
| :---: | :---: | :---: | :---: | :---: |
| 439 | After you were discharged, did a health professional or a traditional birth attendant check on your health? |  |  |  |
| 440 | Why didn't you deliver in a health facility? <br> PROBE: Any other reason? <br> RECORD ALL MENTIONED. | SERVICE COST <br> TOO MUCH ...... A FACILITY NOT OPEN . B COST OF <br> TRANSPORT. ... C TOO FAR/ NO <br> TRANSPORT. ... D DON'T TRUST FACILITY/POOR QUALITY SERVICE E NO FEMALE PROVID- <br> ER AT FACILITY .. F HUSBAND/FAMILY <br> DID NOT ALLOW .. G NOT NECESSARY .. H NOT CUSTOMARY ..I DIDN'T HAVE ENOUGH TIME ........... J OTHER |  |  |
| 441 | After (NAME) was born, did a health professional or a traditional birth attendant check on your health? | YES $\ldots \ldots \ldots \ldots \ldots$NO $\ldots \ldots \ldots \ldots$$\ldots$ <br> (SKIP TO 445) |  |  |
| 442 | How many hours, days or weeks after delivery did the first check take place? <br> IF LESS THAN ONE DAY, RECORD HOURS. <br> IF LESS THAN ONE WEEK, RECORD DAYS. | HOURS 1   <br>     <br> DAYS 2   <br>     <br> WEEKS 3   <br>     <br> DON'T KNOW . . .    |  |  |
| 443 | Who checked on your health at that time? <br> PROBE FOR MOST QUALIFIED PERSON. | DOCTOR $\ldots . . .$. 11 <br> NURSE/MIDWIFE .. 12 <br> FELDSHER $\ldots .$. 13 <br> FAMILY NURSE $\ldots$. 14 <br> OTHER $\ldots \ldots .$. 96 <br> $($ SPECIFY $)$  |  |  |



| NO. | QUESTIONS AND FILTERS | LAST BIRTH <br> NAME $\qquad$ | NEXT-TO-LAST BIRTH <br> NAME $\qquad$ | SECOND-FROM-LAST BIRTH <br> NAME $\qquad$ |
| :---: | :---: | :---: | :---: | :---: |
| 448 | Where did this first check of (NAME) take place? <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. |  |  |  |
| 450 | Has your menstrual period returned since the birth of (NAME)? |  |  |  |
| 451 | Did your period return between the birth of (NAME) and your next pregnancy? |  | $\begin{array}{ccc} \text { YES } \ldots \ldots \ldots \ldots \ldots & 1 \\ \text { NO . . . . . . . . . . . . } & 2 \\ (\text { SKIP TO 455) } & \end{array}$ | YES $\ldots \ldots \ldots \ldots$ NO . . . . . . . . . . . . . (SKIP TO 455) (S. |
| 452 | For how many months after the birth of (NAME) did you not have a period? | MONTHS <br> DON'T KNOW | MONTHS <br> DON'T KNOW $\qquad$ | MONTHS <br> DON'T KNOW |
| 453 <br> 454 | CHECK 226: <br> IS RESPONDENT PREGNANT? <br> Have you resumed sexual relations since the birth of (NAME)? | YES $\ldots \ldots \ldots \ldots \ldots$ NO $\ldots \ldots \ldots \ldots$ (SKIP TO 455A) $\longleftarrow$. |  |  |
| 455 | For how many months after the birth of (NAME) did you not have sexual relations? | MONTHS <br> DON'T KNOW $\qquad$ | MONTHS <br> DON'T KNOW $\qquad$ | MONTHS <br> DON'T KNOW |
| 455A | Now I'd like to ask some more questions about your baby. After the birth, was (NAME) put directly on the bare skin of your chest? | YES $\ldots \ldots . .$. ... 1 <br> NO $\ldots \ldots . .$. 2  <br> DON'T KNOW . . . . . . . 8  |  | YES $\ldots . . . . . . . . . . . . . . . . . . . . . . . . . . ~$ 2 <br> NO ............. 8 |
| 456 | Did you ever breastfeed (NAME)? | YES $\ldots \ldots \ldots . .$. 1 <br> NO . . . . . . . . . . . . 2 <br> $($ SKIP TO 463)  |  | YES $\ldots \ldots \ldots \ldots \ldots$ NO $\ldots \ldots \ldots \ldots$ $($ SKIP TO 463$) \ldots$ |


| NO. | QUESTIONS AND FILTERS | LAST BIRTH <br> NAME $\qquad$ | NEXT-TO-LAST BIRTH <br> NAME $\qquad$ | SECOND-FROM-LAST BIRTH <br> NAME $\qquad$ |
| :---: | :---: | :---: | :---: | :---: |
| 457 | How long after birth did you first put (NAME) to the breast? <br> IF LESS THAN 1 HOUR, RECORD '00' HOURS. <br> IF LESS THAN 24 HOURS, RECORD HOURS. OTHERWISE, RECORD DAYS. |  |  |  |
| 458 | In the first three days after delivery, was (NAME) given anything to drink other than breast milk? | $\begin{aligned} & \text { YES } \ldots \ldots \ldots \ldots \ldots \\ & \text { NO ................... } \\ & \begin{array}{l} 2 \\ (\text { SKIP TO 460) } \end{array} \end{aligned}$ |  |  |
| 459 | What was (NAME) given to drink? <br> Anything else? <br> RECORD ALL LIQUIDS MENTIONED. | ```MILK (OTHER THAN BREAST MILK ) . A PLAIN WATER ... B SUGAR OR GLU- COSE WATER . . . C GRIPE WATER ... D SUGAR-SALT-WATER SOLUTION ...... E FRUIT JUICE ...... F INFANT FORMULA . G TEA/INFUSIONS ... H HONEY ........... I OTHER }\mp@subsup{\mp@code{(SPECIFY)}}{}{X``` |  |  |
| 460 | CHECK 404: <br> IS CHILD LIVING? | LIVING  <br> $\square$  <br> $\square$ DEAD $\quad \square$ |  |  |
| 461 | Are you still breastfeeding (NAME)? | $\begin{aligned} & \text { YES . . . . . . . . . . . . . } \\ & \begin{array}{l} 1 \\ \text { (SKIP TO 464) } \\ \text { NO . . . . . . . . . . . . } \end{array} \end{aligned}$ |  |  |
| 462 | For how many months did you breastfeed (NAME)? | MONTHS $\square$ <br> DON'T KNOW | MONTHS $\square$ <br> DON'T KNOW | MONTHS $\square$ <br> DON'T KNOW |
| 463 | CHECK 404: <br> IS CHILD LIVING? |  |  |  |
| 464 | How many times did you breastfeed last night between sunset and sunrise? <br> IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER. | NUMBER OF NIGHTTIME FEEDINGS |  |  |


| NO. | QUESTIONS AND FILTERS | LAST BIRTH <br> NAME $\qquad$ | NEXT-TO-LAST BIRTH <br> NAME $\qquad$ | SECOND-FROM-LAST BIRTH <br> NAME $\qquad$ |
| :---: | :---: | :---: | :---: | :---: |
| 465 | How many times did you breastfeed yesterday during the daylight hours? <br> IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER. | NUMBER OF DAYLIGHT FEEDINGS $\square$ |  |  |
| 466 | Did (NAME) drink anything from a bottle with a nipple yesterday or last night? | YES $\ldots \ldots \ldots . . .$. 1 <br> NO ....................... 2 <br> DON'T KNOW ..... 8 | YES $\ldots \ldots \ldots . . .$. 1 <br> NO ......................... 2 <br> DON'T KNOW ..... 8 | YES $\ldots \ldots \ldots . . .$. 1 <br> NO . ................... 2 <br> DON'T KNOW ...... 8 |
| 467 |  | GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 468. | GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 468. | GO BACK TO 405 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 468. |



| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 471 |  | NOT A SINGLE "YES" $\square$ | $\longrightarrow 501$ |
| 472 | How many times did (NAME) eat solid, semisolid, or soft foods other than liquids yesterday during the day or at night? <br> IF 7 OR MORE TIMES, RECORD ' 7 '. | NUMBER OF TIMES $\square$ <br> DON'T KNOW |  |


| 501 | ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 2000 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. <br> (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES). |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 502 | LINE NUMBER <br> FROM 212 | LAST BIRTH <br> LINE NUMBER | NEXT-TO-LAST BIRTH <br> LINE <br> NUMBER | SECOND-FROM-LAST BIRTH <br> LINE <br> NUMBER <br> NU. . . . |
| 503 | FROM 216 <br> AND 218 |  |  |  |
| 504 | After death of (NAME), did you register the death with the civil authorities? |  | YES . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . 2 - <br> DON'T KNOW ........... 8 - <br> (GO TO 503 IN NEXT $\qquad$ COLUMN OR, IF NO <br> MORE BIRTHS, GO <br> TO 547) | YES . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . DON'T KNOW . . . . . . . 8- DO TO 503 IN NEXT- (GO <br> TO-LAST COLUMN OF NEW QUESTIONNAIRE, OR IF NO MORE BIRTHS, GO TO 547) |
| 506 | Is (NAME) currently taking iron pills or capsules with iron? | YES . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . 8 DON'T KNOW . . . . . . . 8 | YES . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . 2 DON'T KNOW . . . . . . . 8 | YES . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . 2 DON'T KNOW . . . . . . 8 |
| $\begin{aligned} & 506 \\ & \text { A } \end{aligned}$ | Has (NAME) taken any drug for intestinal parasites in the past 6 months? | YES . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . 2 DON'T KNOW . . . . . . . . 8 | YES . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . 2 DON'T KNOW . . . . . . . 8 | YES . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . 8 DON'T KNOW . . . . . . 8 |
| 507 | Do you have a card where (NAME'S) vaccinations are written down? <br> IF YES: <br> May I see it please? |  |  |  |
| 508 | Did you ever have a vaccination card for (NAME)? |  |  |  |

509 (1) COPY VACCINATION DATE FOR EACH VACCINE FROM THE CARD.
(2) WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A VACCINATION WAS GIVEN, BUT NO DATE IS RECORDED.


| NO. | QUESTIONS AND FILTERS | LAST BIRTH <br> NAME $\qquad$ | NEXT-TO-LAST BIRTH <br> NAME $\qquad$ | SECOND-FROM-LAST BIRTH <br> NAME $\qquad$ |
| :---: | :---: | :---: | :---: | :---: |
| 510 | Has (NAME) received any vaccinations that are not recorded on this card? <br> RECORD 'YES' ONLY IF RESPONDENT MENTIONS BCG, HEP 1-3, POLIO 0-3, DPT 1-3, AND/OR MEASLES VACCINES. | YES .................. . 1 <br> (PROBE FOR <br> VACCINATIONS AND <br> WRITE '66' IN THE CORRESPONDING <br> DAY COLUMN IN 509) (SKIP TO 513) <br>  | YES .................. . 1 <br> (PROBE FOR <br> VACCINATIONS AND <br> WRITE '66' IN THE CORRESPONDING <br> DAY COLUMN IN 509) (SKIP TO 513) <br> NO $\ldots . . . . . . . . .2$ (SKIP TO 513) T KNOW ..... 8 | YES .................. . 1 <br> (PROBE FOR <br> VACCINATIONS AND <br> WRITE '66' IN THE <br> CORRESPONDING <br> DAY COLUMN IN 509) <br> (SKIP TO 513) <br> NO $\left.\begin{array}{l}\ldots \ldots \ldots \ldots . . \\ \text { (SKIP TO 513) } \\ \text { DON'T KNOW } \ldots \ldots\end{array}\right)$ |
| 511 | Did (NAME) ever receive any vaccinations to prevent him/her from getting diseases? | YES $\ldots \ldots \ldots \ldots \ldots .1$NO $\ldots \ldots \ldots \ldots \ldots$(SKIP TO 513)DON'T KNOW $\ldots \ldots$ | $\begin{aligned} & \text { YES } \ldots \ldots \ldots \ldots \ldots .1 \\ & \text { NO } \ldots \ldots \ldots \ldots .2 \\ & \begin{array}{l} \text { (SKIP TO 513) } \\ \text { DON'T KNOW } \ldots \ldots . \end{array} \end{aligned}$ | YES $\ldots \ldots \ldots \ldots \ldots 1$NO $\ldots \ldots \ldots \ldots \ldots$(SKIP TO 513$)$DON'T KNOW $\ldots \ldots$. |
| 512 $512 A$ | Please tell me if (NAME) received any of the following vaccinations: <br> A BCG vaccination against tuberculosis, that is, an injection in the arm or shoulder that usually causes a scar? |  |  |  |
| 512B | A HEP-1,2,3 vaccine, which is realize in the thigh. |  |  |  |
| 512C | How many times was the HEP-1,2,3 vaccine received? | NUMBER OF TIMES $\square$ <br> DON'T KNOW $\square$ 8 | NUMBER OF TIMES $\square$ <br> DON'T KNOW $\square$ 8 | NUMBER OF TIMES $\square$ <br> DON'T KNOW $\qquad$ |
| 512D | Polio vaccine, that is, drops in the mouth? | YES $\ldots \ldots \ldots \ldots \ldots .1$ NO $\ldots \ldots \ldots \ldots .2$ (SKIP TO 512F) | YES $\ldots \ldots \ldots \ldots \ldots .1$ NO $\ldots \ldots \ldots \ldots \ldots$ (SKIP TO 512F) DON'T KNOW ...... |  |
| 512E | How many times was the polio vaccine received? | NUMBER OF TIMES $\square$ <br> DON'T KNOW $\qquad$ | NUMBER OF TIMES $\square$ <br> DON'T KNOW $\qquad$ | NUMBER OF TIMES $\square$ <br> DON'T KNOW $\qquad$ |
| 512F | A DPT vaccination, that is, an injection given in the thigh or buttocks, sometimes at the same time as polio drops? | YES $\ldots \ldots \ldots \ldots \ldots$ NO $\ldots \ldots \ldots \ldots$ $\left.\begin{array}{l}\text { (SKIP TO } 512 H\end{array}\right)$ DON'T KNOW $\ldots \ldots$ |  | YES $\ldots \ldots \ldots \ldots \ldots .1$NO $\ldots \ldots \ldots \ldots \ldots 2$(SKIP TO $512 H)$DON'T KNOW $\ldots \ldots$ |
| 512G | How many times was a DPT vaccination received? | NUMBER OF TIMES $\square$ <br> DON'T KNOW $\qquad$ 8 | NUMBER OF TIMES $\square$ <br> DON'T KNOW $\qquad$ | NUMBER OF TIMES <br> DON'T KNOW $\qquad$ |
| 512 H | An injection to prevent measles? (MMR) |  |  |  |
| 513 | Has (NAME) had an illness, an accident, or suffered from a chronic health problem in the last three months? | $\begin{aligned} & \text { YES } \ldots \ldots \ldots \ldots \ldots .1 \\ & \begin{array}{l} (\text { SKIP TO 513B) } \ldots \ldots \end{array} \\ & \text { NO . . . . . . . . . . . . . } 2 \end{aligned}$ | $\begin{aligned} & \text { YES } \ldots \ldots \ldots \ldots \ldots .1 \\ & \begin{array}{c} (\text { SKIP TO 513B) } \\ \text { NO } \ldots \ldots \ldots \ldots \ldots \ldots \end{array} \end{aligned}$ | YES $\ldots \ldots \ldots \ldots \ldots .1$ $\begin{aligned} & \text { (SKIP TO 513B) } \\ & \text { NO } \ldots \ldots \ldots \ldots \ldots .2\end{aligned}$ |
| 513A | In the last three months, did (NAME) visit a health facility or consult with a health professional? | ```YES \ldots............1``` | ```YES \ldots...........1``` | YES $\ldots \ldots \ldots \ldots \ldots 1$ $\left.\begin{array}{l}\text { (SKIP TO 513E) } \\ \text { NO } \ldots \ldots \ldots \ldots 2 \\ (\text { SKIP TO 513O) }\end{array}\right)$ |
| 513B | What kind of illness, accident or health problem? <br> IF MORE THAN ONE, RECORD THE MOST RECENT. | ACCIDENT/INJURY . 01   <br> CARDIOVASCULAR . 02   <br> RESPIRATORY $\ldots$ 03  <br> DIARRHEA $\ldots$. $\ldots$ 04 <br> FEVER $\ldots$. $\ldots$ 05 <br> OTHER ILLNESS . 06  <br> OTHER  96  | ACCIDENT/INJURY . 01   <br> CARDIOVASCULAR . 02   <br> RESPIRATORY $\ldots$ 03  <br> DIARRHEA $\ldots$ $\ldots$ 0 <br> FEVER $\ldots$ 04  <br> OTHER ILLNESS . 05  <br> OTHER  06  <br>    96 <br> (SPECIFY)    | ACCIDENT/INJURY . 01   <br> CARDIOVASCULAR . 02   <br> RESPIRATORY $\ldots$ 03  <br> DIARRHEA $\ldots .$. . 04 <br> FEVER $\ldots .$. . 05 <br> OTHER ILLNESS . 06  <br> OTHER  96  <br> (SPECIFY)    |


| NO. | QUESTIONS AND FILTERS | LAST BIRTH <br> NAME $\qquad$ | NEXT-TO-LAST BIRTH <br> NAME | SECOND-FROM-LAST BIRTH <br> NAME $\qquad$ |
| :---: | :---: | :---: | :---: | :---: |
| 513C | In the last three months, did (NAME) visit a health facilty or consult with a health professional? |  |  |  |
| 513D | Why didn't (NAME) go to a health facility? |  |  |  |
| 513E | How many times did (NAME) visit health facilty or consult a health professional in the last three months? | NUMBER OF VISITS $\square$ <br> DON'T KNOW $\qquad$ | NUMBER OF VISITS $\square$ <br> DON'T KNOW $\qquad$ 98 | NUMBER OF VISITS $\square$ <br> DON'T KNOW |
| 513F | Now I am going to ask you about the (last) visit (NAME) made in the last three months. <br> Where did the visit or consultation take place? |  |  |  |
| 513G | When (NAME) had the last visit/ consultation, how did he/she get there? |  |  |  |





| NO. | QUESTIONS AND FILTERS | LAST BIRTH <br> NAME $\qquad$ | NEXT-TO-LAST BIRTH <br> NAME $\qquad$ | SECOND-FROM-LAST BIRTH <br> NAME $\qquad$ |
| :---: | :---: | :---: | :---: | :---: |
| 515 | Has (NAME) had diarrhea in the last 2 weeks? | YES $\ldots \ldots \ldots \ldots \ldots$ NO $\ldots \ldots \ldots \ldots \ldots$ (SKIP TO 530) DON'T KNOW $\ldots \ldots$ | YES $\ldots \ldots \ldots \ldots \ldots .1$ NO $\ldots \ldots \ldots \ldots \ldots 2$ (SKIP TO 530) DON'T KNOW $\ldots \ldots$ | YES $\ldots \ldots \ldots \ldots \ldots$ NO $\ldots \ldots \ldots \ldots \ldots$ (SKIP TO 530) |



| NO. | QUESTIONS AND FILTERS | LAST BIRTH <br> NAME | NEXT-TO-LAST BIRTH <br> NAME | SECOND-FROM-LAST BIRTH <br> NAME $\qquad$ |
| :---: | :---: | :---: | :---: | :---: |
|  | began did you first seek advice or treatment for (NAME)? <br> IF THE SAME DAY, RECORD '00'. | DAYS | DAYS | DAYS |
| 524 | Does (NAME) still have diarrhea? |  |  |  |
| 525 | Was he/she given any of the following to drink at any time since he/she started having the diarrhea: <br> A fluid made from a special packet called Regydron or ORS? <br> A homemade fluid recommended by a health professional? |  YES NO DK <br> FLUID FROM    <br> ORS PKT 1 2 8 <br> HOMEMADE    <br> FLUID 1 2 8    |  YES NO DK <br> FLUID FROM    <br> ORS PKT 1 2 8 <br> HOMEMADE    <br> FLUID 1 2 8    |  YES NO DK <br> FLUID FROM    <br> ORS PKT 1 2 8 <br> HOMEMADE    <br> FLUID 1 2 8 |
| 526 | Was anything (else) given to treat the diarrhea? |  |  | YES $\ldots \ldots \ldots \ldots \ldots$NO $\ldots \ldots \ldots \ldots \ldots$(SKIP TO 530$)$$\|$DON'T KNOW $\ldots \ldots$. |
| 527 | What (else) was given to treat the diarrhea? <br> Anything else? <br> RECORD ALL TREATMENTS GIVEN. |  |  |  |
| 530 | Has (NAME) been ill with a fever at any time in the last 2 weeks? |  |  |  |
| 531 | Has (NAME) had an illness with a cough at any time in the last 2 weeks? | YES $\ldots \ldots \ldots \ldots \ldots$NO $\ldots \ldots \ldots \ldots \ldots$(SKIP TO 534)DON'T KNOW $\ldots \ldots$ | YES $\ldots \ldots \ldots \ldots \ldots$NO $\ldots \ldots \ldots \ldots \ldots$(SKIP TO 534)DON'T KNOW $\ldots \ldots$ | YES $\ldots \ldots \ldots \ldots \ldots$NO $\ldots \ldots \ldots \ldots \ldots$(SKIP TO 534)$\|$DON'T KNOW $\ldots \ldots$ |
| 532 | When (NAME) had an illness with a cough, did he/she breathe faster than usual with short, rapid breaths or have difficulty breathing? | $\begin{aligned} & \text { YES } \ldots \ldots \ldots \ldots \ldots .1 \\ & \text { NO } \ldots \ldots \ldots \ldots \ldots \\ & \begin{array}{r} \text { (SKIP TO 535) } \end{array} \\ & \text { DON'T KNOW } \ldots \ldots .8 \end{aligned}$ |  | YES $\ldots \ldots \ldots \ldots \ldots .1$NO $\ldots \ldots \ldots \ldots \ldots 2$(SKIP TO 535)DON'T KNOW $\ldots \ldots .8$ |
| 533 | When (NAME) had this illness, did he/she have a problem in the chest or a blocked or runny nose? |  |  |  |
| 534 | CHECK 530: <br> HAD FEVER? |  |  |  |
| 535 | Now I would like to know how much (NAME) was given to drink 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? <br> IF LESS, PROBE: Was he/she | MUCH LESS ...... 1 <br> SOMEWHAT LESS . 2 <br> ABOUT THE SAME . 3 <br> MORE ........... 4 <br> NOTHING TO DRINK 5 <br> DON'T KNOW ...... 8 | MUCH LESS $\ldots . .$. 1 <br> SOMEWHAT LESS . . 2 <br> ABOUT THE SAME . 3 <br> MORE ............ 4 <br> NOTHING TO DRINK 5 <br> DON'T KNOW ...... 8 | MUCH LESS $\ldots . .$. 1  <br> SOMEWHAT LESS . 2 <br> ABOUT THE SAME . 3  <br> MORE ............ 4  <br> NOTHING TO DRINK 5  <br> DON'T KNOW ...... 8  |


| NO. | QUESTIONS AND FILTERS | LAST BIRTH <br> NAME $\qquad$ | NEXT-TO-LAST BIRTH <br> NAME | SECOND-FROM-LAST BIRTH <br> NAME $\qquad$ |
| :---: | :---: | :---: | :---: | :---: |
|  | given much less than usual to drink or somewhat less? |  |  |  |
| 536 | 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? <br> IF LESS, PROBE: Was he/she given much less than usual to eat or somewhat less? | MUCH LESS ...... 1 <br> SOMEWHAT LESS . 2 <br> ABOUT THE SAME . 3 <br> MORE ............ 4 <br> STOPPED FOOD 5 <br> NEVER GAVE FOOD 6 <br> DON'T KNOW ...... 8 | MUCH LESS ...... 1 <br> SOMEWHAT LESS . 2 <br> ABOUT THE SAME . 3 <br> MORE ............ 4 <br> STOPPED FOOD 5 <br> NEVER GAVE FOOD 6 <br> DON'T KNOW ...... 8 | MUCH LESS ...... 1 <br> SOMEWHAT LESS . 2 <br> ABOUT THE SAME . 3 <br> MORE ............ 4 <br> STOPPED FOOD 5 <br> NEVER GAVE FOOD 6 <br> DON'T KNOW ...... 8 |
| 537 | Did you seek advice or treatment for the illness from any source? |  |  | YES $\ldots \ldots \ldots \ldots \ldots .{ }^{1}$ NO $\ldots \ldots \ldots \ldots \ldots 2$ (SKIP TO 542) |
| 538 | Where did you seek advice or treatment? <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. <br> (NAME OF PLACE) <br> Anywhere else? <br> RECORD ALL SOURCES MENTIONED. |  |  |  |
| 539 | CHECK 538: |  |  |  |
| 540 | Where did you first seek advice or treatment? <br> USE LETTER CODE FROM 538. | FIRST PLACE ... | FIRST PLACE ... | FIRST PLACE |
| 541 | How many days after the illness began did you first seek advice or treatment for (NAME)? <br> IF THE SAME DAY, RECORD '00'. | DAYS $\square$ | DAYS $\square$ | DAYS ..... $\square$ |
| 542 | Is (NAME) still sick with a (fever/ cough)? |  |  |  |
| 543 | At any time during the illness, did (NAME) take any drugs for the illness? |  |  | YES $\ldots \ldots \ldots \ldots \ldots$NO $\ldots \ldots \ldots \ldots$(SKIP TO 546$)$DON'T KNOW $\ldots \ldots$ |


| NO. | QUESTIONS AND FILTERS | LAST BIRTH <br> NAME $\qquad$ | NEXT-TO-LAST BIRTH <br> NAME $\qquad$ | SECOND-FROM-LAST BIRTH <br> NAME |
| :---: | :---: | :---: | :---: | :---: |
| 544 | What drugs did (NAME) take? <br> Any other drugs? <br> RECORD ALL MENTIONED. <br> IF BRAND NAME WRITE BELOW: $\qquad$ $\qquad$ |  |  |  |
| 544A | CHECK 544: <br> ANY CODE E-K CIRCLED? |  |  |  |
| 545 | Did you already have (NAME OF DRUG FROM 544) at home when the child became ill? <br> IF YES, CIRCLE CODE FOR THAT DRUG. <br> ASK SEPARATELY FOR EACH ANTIBIOTIC DRUG GIVEN IN 544. |  |  |  |
| 546 |  | GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 547. | GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 547. | GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 547. |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 547 | CHECK 213 AND 220, ALL ROWS: <br> NUMBER OF CHILDREN BORN IN 2000 OR LATER LIVING WITH THE <br> ONE OR MORE <br> NONE | RESPONDENT | $\rightarrow 550$ |
| 548 | The last time (NAME OF YOUNGEST CHILD) passed stools, what was done to dispose of the stools? |  |  |
| 549 | CHECK 525(a), ALL COLUMNS: <br> NO CHILD <br> ANY CHIL <br> RECEIVED FLUID RECEIV <br> FROM ORS PACKET | D <br> D FLUID $\square$ RS PACKET | $\rightarrow 601$ |
| 550 | Have you ever heard of a special product called Rehydron you can get for the treatment of diarrhea? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 601 | Are you currently married or living together with a man as if married? | YES, CURRENTLY MARRIED $\ldots \ldots .$. YES, LIVING WITH A MAN NO, $\ldots \ldots$. NOT IN UNION $\ldots \ldots$ | $\xrightarrow{\longrightarrow} 605$ |
| 602 | Have you ever been married or lived together with a man as if married? | YES, FORMERLY MARRIED . . . . . . . 1 <br> YES, LIVED WITH A MAN $\ldots$ 2 <br> NO . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2  | $\xrightarrow{\longrightarrow} 604$ |
| 603 | ENTER 'O' IN COLUMN 4 OF CALENDAR IN THE MONTH OF INTER \# | W, AND IN EACH MONTH BACK TO | $\rightarrow 614$ |
| 604 | What is your marital status now: are you widowed, divorced, or separated? | WIDOWED . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 <br> DIVORCED . . . . . . . . . . . . . . . . . . . 3 | $610$ |
| 605 | Is your (husband/partner) living with you now or is he staying elsewhere? | LIVING WITH HER . . . . . . . . . . . . . . . . 1 <br> STAYING ELSEWHERE . . . . . . . . . 2 |  |
| 606 | 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 <br> LINE NO. |  |
| 610 | Have you been married or lived with a man only once or more than once? | ONLY ONCE $\ldots . . . . . . . . . . . . . . . . . . . . . . ~$ 1 <br> MORE THAN ONCE . . . . . . . . . . 2 |  |
| 611 | CHECK 610: |  | $\longrightarrow 613$ |
| 612 | How old were you when you first started living with him? | AGE |  |
| 613 | DETERMINE MONTHS MARRIED OR LIVING WITH A MAN SINCE J IN COLUMN 4 OF CALENDAR FOR EACH MONTH MARRIED OR LIV FOR EACH MONTH NOT MARRIED/NOT LIVING WITH A MAN, SINC <br> FOR WOMEN WITH MORE THAN ONE UNION: PROBE FOR DATE IF APPROPRIATE, FOR STARTING AND TERMINATION DATES OF <br> FOR WOMEN NOT CURRENTLY IN UNION: PROBE FOR DATE WH TERMINATION DATE AND, IF APPROPRIATE, FOR THE STARTING PREVIOUS UNIONS. | UARY 2000. ENTER ' $X$ ' NG WITH A MAN, AND ENTER 'O' JANUARY 2000. <br> HEN CURRENT UNION STARTED AND, YY PREVIOUS UNIONS. <br> LAST UNION STARTED AND FOR ND TERMINATION DATES OF ANY |  |



| NO. | QUESTIONS AND FILTERS | LAST SEXUAL PARTNER | SECOND-TO-LAST SEXUAL PARTNER |
| :---: | :---: | :---: | :---: |
| 623 | When was the last time you had sexual intercourse with this other person? |  |  |
| 624 | The last time you had sexual intercourse (with this other person), was a condom used? | YES $\ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots$ NO $\ldots \ldots \ldots \ldots \ldots \ldots \ldots$ $($ SKIP TO 626$) \longleftarrow$ | YES $\ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots$ NO $\ldots \ldots \ldots \ldots \ldots \ldots \ldots$ (SKIP TO 626$)^{\longleftarrow}$ |
| 625 | Did you use a condom every time you had sexual intercourse with this person in the last 12 months? | YES .......................................... 2 | YES ........................................... 2 |
| 626 | What was your relationship to this person with whom you had sexual intercourse? <br> IF BOYFRIEND: <br> Were you living together as if married? <br> IF YES, CIRCLE '02' <br> IF NO, CIRCLE '03' |  |  |
| 627 | For how long (have you had/did you have) a sexual relationship with this person? <br> IF ONLY HAD SEXUAL RELATIONS WITH THIS PERSON ONCE, RECORD '01' DAYS. |  | DAYS <br> MONTHS <br> YEARS $\qquad$ |
| 628 | CHECK 105: |  |  |
| 629 | How old is this person? | AGE OF PARTNER $\square$ DON'T KNOW $\qquad$ 98 | AGE OF PARTNER $\square$ DON'T KNOW $\qquad$ 98 |
| 630 | Is this person older than you, younger than you, or about the same age? |  | OLDER $\ldots \ldots \ldots \ldots \ldots$ 1 <br> YOUNGER $\ldots \ldots \ldots \ldots$. 2 <br> ABOUT THE SAME AGE . <br> DON'T KNOW $\ldots \ldots \ldots \ldots$ 3 <br> (SKIP TO 632)  |
| 631 | Would you say this person is ten or more years older than you or less than ten years older than you? | TEN OR MORE    <br> YEARS OLDER $\ldots \ldots \ldots$. 1  <br> LESS THAN TEN    <br> YEARS OLDER $\ldots \ldots \ldots .$. 2  <br> OLDER, UNSURE <br> HOW MUCH $\ldots \ldots \ldots \ldots$.   | TEN OR MORE   <br> YEARS OLDER $\ldots \ldots \ldots$. 1 <br> LESS THAN TEN   <br> YEARS OLDER $\ldots \ldots \ldots$. 2 <br> OLDER, UNSURE   <br> HOW MUCH $\ldots \ldots \ldots . .$.  |
| 632 | The last time you had sexual intercourse (with this other person), did you or this person drink alcohol? |  |  |


| NO. | QUESTIONS AND FILTERS | LAST SEXUAL PARTNER | SECOND-TO-LAST SEXUAL PARTNER |
| :---: | :---: | :---: | :---: |
| 633 | Were you or your partner drunk at that time? <br> IF YES: Who was drunk? | RESPONDENT ONLY $\ldots \ldots . .$. 1 <br> PARTNER ONLY ............. 2 <br> RESPONDENT AND  <br> PARTNER BOTH . . . . . . . . . . . 3 <br> NEITHER . . . . . . . . . . . . . . 4 |  |
| 634 | Apart from this person, have you had sexual intercourse with any other person in the last 12 months? |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 635 | In total, with how many different people have you had sexual intercourse in the last 12 months? <br> IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. <br> IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.' | NUMBER OF PARTNERS LAST 12 MONTHS <br> DON'T KNOW |  |
| 636 | In total, with how many different people have you had sexual intercourse in your lifetime? <br> IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. <br> IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.' | NUMBER OF PARTNERS <br> IN LIFETIME $\qquad$ <br> DON'T KNOW |  |
| 637 | Do you know of a place where a person can get condoms? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 | $\rightarrow 640$ |
| 638 | Where is that? <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. <br> (NAME OF PLACE) <br> Any other place? <br> RECORD ALL SOURCES MENTIONED. |  |  |
| 639 | If you wanted to, could you yourself get a condom? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 <br> NO . . . . . . . . . . . . . . . . . . . 8 |  |
| 640 | Do you know of a place where a person can get female condoms? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . | $\longrightarrow 701$ |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 641 | Where is that? <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. <br> (NAME OF PLACE) <br> Any other place? <br> RECORD ALL SOURCES MENTIONED. | PUBLIC SECTOR <br> hOSPITAL ........................ B <br> CHILDREN'S HOSPITAL ........... C <br> MATERNITY HOSPITAL ............ D <br> POLICLINIC ........................... . E <br> ABULATORY ...................... F <br> WOMEN'S HEALTH CONSULT CTR. G <br> MEDICAL DIAGNOSTIC CENTER . . . H <br> FAP .................................. I <br> OTHER PUBLIC <br> (SPECIFY) <br> PRIVATE SECTOR <br> HOSPITAL ......................... K <br> CHILDREN'S HOSPITAL <br> MATERNITY HOSPITAL <br> POLICLINIC <br> ABULATORY <br> WOMEN'S HEALTH CONSULT CTR. <br> MEDICAL DIAGNOSTIC CENTER . <br> FAP <br> OTHER PRIVATE <br> (SPECIFY) <br> OTHER <br> PHARMACYISHOP $\qquad$ <br> NGO <br> FRIEND/RELATIVE/NEIGHBOUR OTHER $\qquad$ |  |
| 642 | If you wanted to, could you yourself get a female condom? |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 701 | CHECK 311/311A: <br> NEITHER <br> HE OR SHE <br> STERILIZED STERILIZED |  | $\rightarrow 713$ |
| 702 | CHECK 226: |  | $\begin{array}{r} \longrightarrow 704 \\ \longrightarrow 713 \\ \longrightarrow 709 \\ \longrightarrow 708 \end{array}$ |
| 703 | CHECK 226: <br> NOT PREGNANT OR UNSURE <br> How long would you like to wait from now before the birth of (a/another) child? <br> PREGNANT <br> After the birth of the child you are expecting now, how long would you like to wait before the birth of another child? |  |  |
| 704 | CHECK 226: <br> NOT PREGNANT <br> PREGNANT OR UNSURE |  | $\rightarrow 709$ |
| 705 | CHECK 310: USING A CONTRACEPTIVE METHOD? <br> CUR |  | $\rightarrow 713$ |
| 706 | CHECK 703: <br> NOT <br> 24 OR MORE MONTHS <br> ASKED OR 02 OR MORE YEARS | -23 MONTHS 00-01 YEAR | $\longrightarrow 709$ |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 707 | CHECK 702: |  |  |
| 708 | CHECK 310: USING A CONTRACEPTIVE METHOD? <br> NOT NOT CURRENTLY USING $\square$ | YES, NTLY USING | $\rightarrow 713$ |
| 709 | Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8 | $\xrightarrow{\longrightarrow} 711$ |
| 710 | Which contraceptive method would you prefer to use? |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 711 | What is the main reason that you think you will not use a contraceptive method at any time in the future? | NOT MARRIED | $\rightarrow 713$ |
| 712 | Would you ever use a contraceptive method if you were married? |  |  |
| 713 | CHECK 218: <br> HAS LIVING CHILDREN <br> NO LIVING CHILDREN <br> If you could go back to the time If you could choose exactly the you did not have any children number of children to have in and could choose exactly the your whole life, how many number of children to have in would that be? your whole life, how many would that be? <br> PROBE FOR A NUMERIC RESPONSE. |  | $\longrightarrow 715$ $\longrightarrow 715$ |
| 714 | How many of these children would you like to be boys, how many would you like to be girls and for how many would the sex not matter? |  |  |
| 715 | In the last few months have you heard about family planning: <br> On the radio? <br> On the television? <br> In a newspaper or magazine? <br> In a pamphlet/poster/leaflets/booklets? <br> At a community event? |  |  |




| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
|  |  |  <br> OTHER <br> PHARMACYISHOP ................ T <br> NGO <br> FRIEND/RELATIVE/NEIGHBOUR . . . V <br> TRADITIONAL HEALER .......... W <br> OTHER |  |
| 738 | What kind of exam did they do? | GENERAL GYNECOLOGY OBSERVATIOI A HORMONAL ECHOGRAPHY <br> UTERUS AND TUBING XRAY ....... D LABORASCOPE ...................... E <br> EXAMINATION OF PAPSMEAR . .F EXAMINATION OF GENITAL INFECTIONS G ANY OTHER $\qquad$ X (SPECIFY) |  |
| 739 | Can you tell me what was diagnosed as the reason for the infertility? <br> RECORD ALL MENTIONED. |  |  |
| 740 | Have you had any treatment for infertility? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $\rightarrow 801$ |
| 741 | Please, tell me, what kind of treatment did you get? <br> RECORD ALL MENTIONED. |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 801 |  | NEVER MARRIED AND NEVER $\square$ LIVED WITH A MAN |  |
| 802 | How old was your husband/partner on his last birthday? | AGE IN COMPLETED YEARS |  |
| 803 | Did your (last) husband/partner ever attend school? | $\begin{aligned} & \text { YES } \\ & \text { NO } \end{aligned}$ | $\longrightarrow 806$ |
| 804 | What was the highest level of school he attended: primary/secondary, secondary special or higher? | PRIMARY/SECONDARY (1-10) SECONDARY SPECIAL <br> HIGHER <br> DON'T KNOW | $\longrightarrow 806$ |
| 805 | What was the highest (grade/form/year) he completed at that level? | GRADE DON'T KNOW |  |
| 806 | CHECK 801: <br> CURRENTLY MARRIED/ <br> FORMERLY MARRIED/ LIVING WITH A MAN LIVED WITH A MAN <br> What is your husband's/partner's What was your (last) husband's/ occupation? partner's occupation? <br> That is, what kind of work does That is, what kind of work did he he mainly do? mainly do? | $\square$ |  |
| 807 | Aside from your own housework, have you done any work in the last seven days? | YES <br> NO | $\rightarrow 811$ |
| 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 <br> NO | $\longrightarrow 811$ |
| 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 <br> NO | $\longrightarrow 811$ |
| 810 | Have you done any work in the last 12 months? | $\begin{aligned} & \text { YES } \\ & \text { NO } \end{aligned}$ | $\longrightarrow 818$ |
| 811 | What is your occupation, that is, what kind of work do you mainly do? |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 812 | CHECK 811: <br> WORKS IN <br> DOES NOT WORK <br> AGRICULTURE IN AGRICULTURE |  | $\rightarrow 814$ |
| 813 | Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else's land? | OWN LAND . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . <br> FAMILY LAND . . . . . . . . . . . . . . |  |
| 814 | Who employs you for this work? Do you do this work for a member of your family, for someone else, or are you self-employed? | FOR FAMILY MEMBER $\ldots . . . . . . .$. 1 <br> FOR SOMEONE ELSE $\ldots \ldots . . .$. 2 <br> SELF-EMPLOYED $\ldots . . . . . . .$. 3 |  |
| 815 | Do you usually work at home or away from home? | HOME . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 |  |
| 816 | Do you usually work throughout the year, or do you work seasonally, or only once in a while? | $\begin{array}{ll} \text { THROUGHOUT THE YEAR . . . . . . . . . . } & 1 \\ \text { SEASONALLY/PART OF THE YEAR } & . \\ \text { ONCE IN A WHILE . . . . . . . . . . . . . } & 2 \end{array}$ |  |
| 817 | Are you paid in cash or kind for this work or are you not paid at all? |  |  |
| 818 | CHECK 601: <br> CURRENTLY <br> MARRIED/LIVING <br> NOT IN UNION WITH A MAN $\square$ |  | $\rightarrow 824$ |
| 819 | CHECK 817: <br> CODE 1 OR 2 <br> CIRCLED <br> OTHER |  | $\rightarrow 822$ |
| 820 | Who decides how the money you earn will be used: mainly you, mainly your husband/partner, or you and your husband/partner jointly? |  |  |
| 821 | Would you say that the money that you bring into the household is more than what your husband/partner brings in, less than what he brings in, or about the same? | MORE THAN HIM . . . . . . . . . . . . . . . . . . . 1 <br> LESS THAN HIM . . . . . . . . . . . . . . 2 <br> ABOUT THE SAME . . . . . . . . . . 3 <br> HUSBAND/PARTNER DOESN'T  <br> BRING IN ANY MONEY . . . . . . . . . 4 <br> DON'T KNOW . . . . . . . . . . . . . . . . 8 | $\longrightarrow 823$ |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES |  |  |  |  | SKIP |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 822 | Who decides how your husband's/partner's earnings will be used: mainly you, mainly your husband/partner, or you and your husband/partner jointly? |  | DENT <br> /PARTN <br> DENT AN AND/PAR /PARTN RNINGS <br> (SPE | ER JOINT HAS <br> Y) |  | $\begin{aligned} & 1 \\ & 2 \end{aligned}$ <br> 3 <br> 4 <br> 6 |  |
| 823 | Who usually makes decisions about health care for yourself: mainly you, mainly your husband/partner, you and your husband/partner jointly, or someone else? <br> Who usually makes decisions about making major household purchases? <br> Who usually makes decisions about making purchases for daily household needs? <br> Who usually makes decisions about visits to your family or relatives? | RES <br> HUS <br> RES <br> SOM <br> OTH <br> 1 <br> 1 <br> 1 <br> 1 | $N T=1$ <br> ARTNER = <br> NT \& HUSB <br> LSE $=4$ <br> 2 <br> 2 <br> 2 <br> 2 | /PARTNER <br> 3 <br> 3 <br> 3 <br> 3 | $\text { NTLY = } 3$ | 5 <br> 5 <br> 5 <br> 5 |  |
| 824 | PRESENCE OF OTHERS AT THIS POINT (PRESENT AND LISTENING, PRESENT BUT NOT LISTENING, OR NOT PRESENT) |  | $N<10$ <br> ALES <br> EMALES | $\begin{array}{ll} \ldots & 1 \\ \ldots & 1 \\ \ldots & 1 \\ \ldots & 1 \end{array}$ | RES/ <br> NOT <br> STEN. <br> 2 <br> 2 <br> 2 <br> 2 | NOT PRES <br> 8 <br> 8 <br> 8 <br> 8 |  |
| 825 | Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations: <br> If she goes out without telling him? <br> If she neglects the children? <br> If she argues with him? <br> If she refuses to have sex with him? <br> If she burns the food? | GO | T ILDREN <br> SEX <br> OOD | $\begin{array}{ll}  & \\ & \text { YES } \\ \ldots & 1 \\ \ldots & 1 \\ \ldots & 1 \\ \ldots & 1 \\ \ldots & 1 \end{array}$ | NO <br> 2 <br> 2 <br> 2 <br> 2 <br> 2 | $\begin{gathered} \text { DK } \\ 8 \\ 8 \\ 8 \\ 8 \\ 8 \end{gathered}$ |  |

SECTION 9. HIVIAIDS AND OTHER SEXUALLY TRANSMITTED INFECTIONS

| 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 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 | $\rightarrow 917$ |
| 902 | Can people reduce their chances of getting the AIDS virus by having just one sex partner who is not infected and who has no other partners? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . . . . 8 |  |
| 903 | Can people get the AIDS virus from mosquito bites? |  |  |
| 904 | Can people reduce their chances of getting the AIDS virus by using a condom every time they have sex? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . . . . . . . 8 |  |
| 905 | Can people get the AIDS virus by sharing food with a person who has AIDS? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . . . . . . . 8 |  |
| 906 | Can people reduce their chance of getting the AIDS virus by abstaining from sexual intercourse? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . . . . . . 8 |  |
| 907 | Can people get the AIDS virus because of witchcraft or other supernatural means? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  |
| 907A | Can people get the AIDS virus from coughing? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  |
| 908 | Is there anything else a person can do to avoid or reduce the chances of getting the AIDS virus? |  | $\xrightarrow{\longrightarrow} 910$ |
| 909 | What can a person do? <br> Anything else? <br> RECORD ALL WAYS MENTIONED. |  |  |
| 910 | Is it possible for a healthy-looking person to have the AIDS virus? |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 911 | Do you know of a place where people can go to get tested for the virus that causes AIDS? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $\rightarrow 913$ |
| 912 | Where is that? <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. <br> Any other place? <br> RECORD ALL SOURCES MENTIONED. |  |  |
| 913 | Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  |
| 914 | If a member of your family got infected with the AIDS virus, would you want it to remain a secret or not? |  |  |
| 915 | If a relative of yours became sick with the virus that causes AIDS, would you be willing to care for her or him in your own household? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8 NO . . . . . . . . . . 8 |  |
| 916 | 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 . . . . . . . . . . . <br> SHOULD NOT BE ALLOWED . . . . . . |  |
| 917 |  | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 918 | CHECK 615: <br> HAS HAD SEXUAL <br> HAS NOT HAD SEXUAL INTERCOURSE INTERCOURSE |  | $\longrightarrow 1001$ |
| 919 | CHECK 917: HEARD ABOUT OTHER SEXUALLY TRANSMITTED | FECTIONS? <br> NO $\square$ | $\rightarrow 921$ |
| 920 | 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 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8 |  |
| 921 | Sometimes women experience a bad smelling abnormal genital discharge. <br> During the last 12 months, have you had a bad smelling abnormal genital discharge? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  |
| 922 | Sometimes women have a genital sore or ulcer. During the last 12 months, have you had a genital sore or ulcer? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  |
| 923 | CHECK 920, 921, AND 922: <br> HAS HAD AN <br> HAS NOT HAD AN INFECTION INFECTION OR (ANY 'YES') DOES NOT KNOW |  | $\longrightarrow 1001$ |
| 924 | The last time you had (PROBLEM FROM 920/921/922), did you seek any kind of advice or treatment? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $\rightarrow 1001$ |
| 925 | Where did you go? <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. <br> (NAME OF PLACE) <br> Any other place? <br> RECORD ALL SOURCES MENTIONED. |  |  |

SECTION 10. OTHER HEALTH ISSUES

| No. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 1001 | Have you had an illness, an accident, or suffered from a diagnosed chronic health problem in the last 3 months? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 | $\rightarrow 1005$ |
| 1002 | What kind of health problem? <br> IF MORE THAN ONE, RECORD MOST RECENT PROBLEM. |  |  |
| 1003 | In the last 3 months, did you visit a health facility or consult a health professional? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 | $\rightarrow 1006$ |
| 1004 | Why was nothing done? | MINOR HEALTH PROBLEM . LONG DISTANCE TO PROVIDER GOOD CARE NOT AVAILABLE LONG WAIT AT PROVIDER . LACK OF FUNDS FOR MEDICINE LACK OF FUNDS FOR TRAVEL TRANSPORT UNAVAILABLE RESPONSIBILITIES AT HOME . RESPONSIBILITIES AT WORK . CONSULTED TRADITIONAL PRACTITIONER . . . . . . . . . . . . . OTHER | $\longrightarrow 1006 \mathrm{~K}$ |
| 1005 | In the last 3 months, did you visit a health facility or consult a health professional? |  | $\rightarrow$ 1006K |
| 1006 | In the last three months, how many times did you visit a health facility or consult with a health professional? | NUMBER OF TIMES $\quad \square$ |  |
| 1006A | Now I'm going to ask you about the (last) visit you made in the last three months. <br> Did you undergo an operation during that (last) visit? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  |
| 1006B | Where did the (last) visit/consultation take place? |  |  |


| No. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
|  |  |  | $1006 \mathrm{~F}$ |
| 1006C | When you had the (last) visit/consultation, how did you get there? |  | $\begin{aligned} & \rightarrow 1006 \mathrm{E} \\ & \longrightarrow 1006 \mathrm{E} \\ & \longrightarrow 1006 \mathrm{E} \\ & \rightarrow 1006 \mathrm{E} \end{aligned}$ |
| 1006D | Altogether, how much was paid for transportation, round-trip, to go to the (PLACE FROM Q1006B) the last time had a visit/consultation? | COST $\|$     <br>      <br> NOTHING. . . . . . . . . . . . . . . . . . . . . . . . . . 000000     <br> DON'T KNOW . . . . . . . . . . . 9998     |  |
| 1006E | How long did it take you to go to the (PLACE FROM Q1006B) for the visit/consultation? | MINUTES <br> DON'T KNOW <br> 998 |  |
|  | Altogether, how much was officially paid for your (last) visit? | COSTC.\| <br> FREE . . . . . . . . . . . . . . . . . . . . . . 00000000 <br> DON'T KNOW . . . . . . . . . . . 9999998 |  |
| 1006G | How much did you pay in additional expenses for that (last) visit? | COSTC.\|NOTHING . . . . . . . . . . . . . . . . . . . . . . 00000000DON'T KNOW . . . . . . . . . . . 999998 |  |
| 1006H | Did you obtain any medicine as a result of the visit/consultation? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . | $\rightarrow$ 1006K |
| 10061 | Where did you obtain the medicine for that consultation? |  | 1006K |


| No. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
| 1006J | How much was paid the (last) time the medicine was obtained? |  <br> COST <br>  <br> FREE ..................................... 0000000 <br> DON'T KNOW . . . . . . . 9999998 |  |
| 1006K | Have you taken any (other) medicines during the last 3 months? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $\rightarrow 1006 \mathrm{~N}$ |
| 1006L | Where did you obtain that (other) medicine the last time? |  | $\rightarrow 1006 \mathrm{~N}$ |
| 1006M | How much was paid the (last) time you obtained the medicine? | COSTC\|l|l|l|l|l|l| <br> FREE ..................................... 0000000 <br> DON'T KNOW . . . . . . . 9999998 |  |
|  | CHECK 1002 <br> CODE '06' <br> NOT CIRCLED | CODE '06' CIRCLED $\square$ | $1007$ |
| $10060$ | CHECK 212 AND 213 <br> ANY ABORTION IN LAST 12 MONTHS | NO ABORTION IN LAST 12 MONTHS $\square$ | $\rightarrow 1007$ |
| $1006 \mathrm{P}$ | Where did your last abortion take place? | PUBLIC SECTOR  <br> HOSPITAL . 11 <br> CHILDREN'S HOSPITAL . 12 |  |





| No. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 1018 | Among these injections, how many were administered by a doctor, a nurse, a pharmacist, a dentist, or any other health worker? <br> IF NUMBER OF INJECTIONS IS GREATER THAN 90, OR DAILY FOR 3 MONTHS OR MORE, RECORD ' 90 '. <br> IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. | NUMBER OF INJECTIONS | $\rightarrow 1021$ |
| 1019 | The last time you had an injection given to you by a health worker, where did you go to get the injection? <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. |  |  |
| 1020 | Did the person who gave you that injection take the syringe and needle from a new, unopened package? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  |
| 1021 | Now l'd like to ask you about tobacco use. <br> Have you smoked at least 100 cigarettes during your entire life? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  |
| 1022 | Do you currently smoke cigarettes? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $\rightarrow 1024$ |
| 1023 | In the last 24 hours, how many cigarettes did you smoke? | CIGARETTES . ............. |  |
| 1024 | Do you currently smoke or use any other type of tobacco? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $\rightarrow 1026$ |
| 1025 | What (other) type of tobacco do you currently smoke or use? <br> RECORD ALL MENTIONED. |  |  |
| 1026 | Do you live in a household in which (other) people smoke on a daily basis? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  |
| 1027 | Have you ever heard of an illness called tuberculosis or TB? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $\longrightarrow 1033$ |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 1028 | How does tuberculosis spread from one person to another? <br> PROBE: Any other ways? <br> RECORD ALL MENTIONED. |  |  |



| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 1034 | Have you heard about "family medicine?" If not, how about a "family doctor?" | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 | $\rightarrow 1042$ |
| 1035 | What does this term mean to you? |  |  |
| 1036 | Do you think that "family medicine" is appropriate for Armenia? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $\begin{array}{ll} \longrightarrow & 1038 \\ \longrightarrow & 1039 \end{array}$ |
| 1037 | Why do you think that it is appropriate? |  |  |
| 1038 | Why do you think it is not appropriate? |  |  |
| 1039 | Have you ever been registered with a family doctor? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 | $\longrightarrow 1042$ |
| 1040 | How long have you had a family doctor? |  |  |
| 1041 | Are you satisfied with your family doctor? |  |  |
| 1042 | Have you ever had a consultation with an eye doctor? IF YES: When was the last time you saw an eye doctor? |  | $\xrightarrow{\longrightarrow} 1045$ |
| 1043 | What was the reason for the visit? |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 1044 | Was any diagnosis given? <br> IF YES: What was the diagnosis? |  |  |
| 1045 | RECORD THE TIME. | HOUR <br> MINUTES |  |

# TO BE FILLED IN AFTER COMPLETING INTERVIEW 

COMMENTS ABOUT RESPONDENT:
$\qquad$

COMMENTS ON SPECIFIC QUESTIONS:
$\qquad$

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$ $\longrightarrow$

NAME OF SUPERVISOR: $\qquad$ DATE:

EDITOR'S OBSERVATIONS
$\qquad$

$\qquad$ $\longrightarrow$

NAME OF EDITOR: $\qquad$ DATE:

INSTRUCTIONS:
ONLY ONE CODE SHOULD APPEAR IN ANY BOX.
FOR COLUMNS 1 AND 4, ALL MONTHS SHOULD BE FILLED IN.
INFORMATION TO BE CODED FOR EACH COLUMN
COL. 1: BIRTHS, PREGNANCIES, CONTRACEPTIVE USE **
B BIRTHS
P PREGNANCIES
D INDUCED ABORTIONS
V MISCARRIAGES
S STILLBIRTHS
NO METHOD
FEMALE STERILIZATION
MALE STERILIZATION
PILL
IUD
INJECTABLES
IMPLANTS
CONDOM
FEMALE CONDOM
DIAPHRAGM
SUPPOSITORY, FOAM OR JELLY
K LACTATIONAL AMENORRHEA METHOD
L RHYTHM METHOD
M WITHDRAWAL
X OTHER $\qquad$
COL. 2: SOURCE OF CONTRACEPTION
$\begin{array}{ll}1 & \text { GOVT. HOSPITAL } \\ 2 & \text { GOVT. CHILDREN'S }\end{array}$
MATERNITY HOSPITAL
POLICLINIC
GOVT. MOBILE CLINIC
WOMEN'S HEALTH CONSULT CTR.
MEDICAL DIAGNOSTIC CENTER . .
FAP
OTHER PUBLIC
A PRIVATE HOSPITAL
B PRIVATE CHILDREN'S HOSPITAL
PRIVATE MATERNITY HOSPITAL
D PRIVATE POLICLINIC
E PRIVATE MOBILE CLINIC
F PRIV WOMEN'S HEALTH CONSULT CTR.
G PRIV MEDICAL DIAGNOSTIC CENTER
H FAP
K OTHER PRIVATE
L PHARMACY
M NGO
N FRIENDS/RELATIVES/HUSBAND
X OTHER $\qquad$
COL. 3: DISCONTINUATION OF CONTRACEPTIVE USE
0 INFREQUENT SEX/HUSBAND AWAY
1 BECAME PREGNANT WHILE USING
WANTED TO BECOME PREGNANT
HUSBAND/PARTNER DISAPPROVED
WANTED MORE EFFECTIVE METHOD
HEALTH CONCERNS
SIDE EFFECTS
LACK OF ACCESS/TOO FAR
COSTS TOO MUCH
INCONVENIENT TO USE
H NOT AVAILABLE AT PHARMACY/SOURCE
F FATALISTIC
A DIFFICULT TO GET PREGNANT/MENOPAUSAL
D MARITAL DISSOLUTION/SEPARATION
X OTHER
Z DON'T KNOW
COL. 4: MARRIAGE/UNION
X IN UNION (MARRIED OR LIVING TOGETHER)
0 NOT IN UNION


Republic of Armenia
National Statistical Service
Ministry of Health

*RESULT CODES:



| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 116 | In the last 12 months, on how many separate occasions have you traveled away from your home community and slept away? | NUMBER OF TRIPS $\square$ NONE | $\rightarrow 118 \mathrm{~A}$ |
| 117 | In the last 12 months, have you been away from your home community for more than one month at a time? |  |  |
| 118A | Now I would like to talk about the term "Quality of life," the definition of which is an individual's perception of their position in life in the context of their goals, expectations and physical health. <br> How would you rate your quality of life? |  |  |
| 118B | How satisfied are you with your health? |  |  |
| 118C | Do you have enough energy for everyday life? | NOT AT ALL . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 <br> A LITTLE . . . . . . . . . . . . . . . . . . . . . . . 2 <br> MODERATELY . . . . . . . . . . . . . . 4 <br> MOSTLY . . . . . . . . . . . . . . . . . . . 5  |  |
| 118D | How satisfied are you with your ability to perform your daily living activities? |  |  |
| 118E | Have you enough money to meet your needs? | NOT AT ALL . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 <br> A LITTLE . . . . . . . . . . . . . . . . . . . . . . . 2 <br> MODERATELY . . . . . . . . . . . . . . . . . 4 <br> MOSTLY . . . . . . . . . . . . . . . . . 5 |  |
| 118F | How satisfied are you with the conditions of your living space? |  |  |
| 120 | Are you currently working? |  | $\rightarrow 123$ |
| 121 | Have you done any work in the last 12 months? |  | $\rightarrow 123$ |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 122 | What have you been doing for most of the time over the last 12 months? | GOING TO SCHOOL/STUDYING . ...... 01 LOOKING FOR WORK ................ 02 RETIRED . . . . . . . . . . . . . . . . . . . . . . . . . . . 03 TOO ILL TO WORK ................. 04 HANDICAPPED, CANNOT WORK ... 05 HOUSEWORK/CHILD CARE ......... 06 OTHER $\qquad$ 96 <br> (SPECIFY) | $] \rightarrow 201$ |
| 123 | What is your occupation, that is, what kind of work do you mainly do? | $\qquad$ |  |
| 124 | CHECK 123: <br> WORKS IN DOES NOT WORK AGRICULTURE in Agriculture |  | $\rightarrow 126$ |
| 125 | Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else's land? | OWN LAND . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 <br> FAMILY LAND . . . . . . . . . . . . . . . . 3 <br> RENTED LAND . . . . . . . . . . 4 |  |
| 126 | Are you paid in cash or kind for this work or are you not paid at all? |  |  |

SECTION 2. REPRODUCTION

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES |  | SKIP |
| :---: | :---: | :---: | :---: | :---: |
| 201 | Now I would like to ask about any children you have had. I am interested only in the children that are biologically yours. Have you ever fathered any children with any woman? | YES <br> NO <br> DON'T KNOW | $\begin{aligned} & 1 \\ & 2 \\ & 8 \end{aligned}$ | $\xrightarrow{\longrightarrow} 206$ |
| 202 | Do you have any sons or daughters that you have fathered who are now living with you? | $\begin{aligned} & \text { YES } \\ & \text { NO } \end{aligned}$ |  | $\longrightarrow 204$ |
| 203 | How many sons live with you? <br> And how many daughters live with you? <br> IF NONE, RECORD '00'. | SONS AT HOME <br> DAUGHTERS AT HOME |  |  |
| 204 | Do you have any sons or daughters you have fathered who are alive but do not live with you? | $\begin{aligned} & \text { YES } \\ & \text { NO } \end{aligned}$ |  | $\longrightarrow 206$ |
| 205 | How many sons do not live with you? <br> And how many daughters do not live with you? <br> IF NONE, RECORD '00'. | SONS ELSEWHERE <br> DAUGHTERS ELSEWHERE |  |  |
| 206 | Have you ever fathered a boy or girl who was born alive but later died? <br> IF NO, PROBE: Any baby who cried or showed signs of life but did not survive? | YES <br> NO |  | $\longrightarrow 208$ |
| 207 | How many boys have died? <br> And how many girls have died? <br> IF NONE, RECORD '00'. | BOYS DEAD <br> GIRLS DEAD |  |  |
| 208 | (In addition to the children that you have just told me about), do you have: <br> a) any other living sons or daughters who are biologically your children but who are not legally yours or do not have your name? <br> b) any other sons or daughters who died who were biologically your children but who were not legally yours or did not have your name? | $\begin{aligned} & \text { YES } \\ & \text { NO } \end{aligned}$ |  |  |
| 209 | SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'. | TOTAL |  |  |
| 210 | CHECK 209: <br> HAS HAD ONLY ONE CHILD <br> HAS HAD <br> MORE THAN <br> ONE CHILD <br> HAS NOT HAD ANY CHILDREN |  |  | $\begin{aligned} & \longrightarrow 213 \\ & \longrightarrow 214 \end{aligned}$ |
| 211 | Do the children you have fathered all have the same biological mother? | $\begin{aligned} & \text { YES } \\ & \text { NO } \end{aligned}$ |  | $\longrightarrow 213$ |


| 212 | In all how many women have you fathered children with? | NUMBER OF WOMEN |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 213 | How old were you when your (first) child was born? | AGE IN YEARS |  |  |
| 214 | Are you the primary care giver for any children? | $\begin{aligned} & \text { YES } \\ & \text { NO } \end{aligned}$ | $\begin{aligned} & \text {. . . . . . . . . . . . . . . } \\ & \text {. . . . . . . . . . } \\ & 2 \end{aligned}$ | $\longrightarrow 301$ |
| 215 | Are any of these children for whom you are the primary caregiver under the age of $18 ?$ | $\begin{aligned} & \text { YES } \\ & \text { NO } \end{aligned}$ | $\begin{aligned} & 1 \\ & 2 \end{aligned}$ | $\longrightarrow 301$ |
| 216 | Have you made arrangements for someone to care for these children in the event that you fall sick or are unable to care for them? | YES <br> NO <br> UNSURE |  |  |



| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 303 | In the last 12 months, have you discussed the practice of family planning with a health worker or health professional? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 |  |
| 304 | Now I would like to ask you about when a woman is most likely to get pregnant. <br> From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant if she has sexual relations? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . NO . . . . . . . . . . . . . . . . . . 8 | $\xrightarrow{\longrightarrow} 306$ |
| 305 | Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods? |  |  |
| 306 | Do you think that a woman who is breastfeeding her baby can get pregnant? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8 |  |
| 307 | I will now read you some statements about contraception. Please tell me if you agree or disagree with each one. <br> a) Contraception is women's business and a man should not have to worry about it? <br> b) Women who use contraception may become promiscuous. <br> c) A woman is the one who gets pregnant so she should be the one to get sterilized. | AGREE DISAGREE DK <br> a) <br> b) <br> c) |  |

SECTION 4. MARRIAGE AND SEXUAL ACTIVITY


|  |  | $\begin{gathered} \hline \text { LAST } \\ \text { SEXUAL PARTNER } \end{gathered}$ | SECOND-TO-LAST SEXUAL PARTNER |
| :---: | :---: | :---: | :---: |
| 419A | When was the last time you had sexual intercourse with this other person? |  | DAYS AGO <br> WEEKS AGO <br> MONTHS AGO |
| 420 | The last time you had sexual intercourse with this (second) person was a condom used? |  | YES $\ldots \ldots \ldots \ldots \ldots$ <br> NO $\ldots \ldots \ldots \ldots$ |
| 421 | Did you use a condom every time you had intercourse with this person in the last 12 months? |  |  |
| 422 | What was your relationship to this person with whom you had sexual intercourse? <br> IF GIRLFRIEND: <br> Were you living together as if married? <br> IF YES, CIRCLE '02' <br> IF NO, CIRCLE '03' |  |  |
| 423 | For how long (have you had/did you have) a sexual relationship with this person? <br> IF ONLY HAD SEXUAL RELATIONS WITH THIS PERSON ONCE, RECORD '01' DAYS. | DAYS <br> MONTHS <br> YEARS | DAYS <br> MONTHS <br> YEARS |
| 424 | The last time you had sexual intercourse with this (second) person, did you or this person drink alcohol? | YES $\ldots \ldots \ldots \ldots \ldots$ 1 <br> NO $\ldots \ldots \ldots \ldots$ 2 <br>    <br>  $($ SKIP TO 426)  | YES $\ldots \ldots \ldots \ldots \ldots$ 1 <br> NO $\ldots \ldots \ldots \ldots c$.  <br>    <br>  (SKIP TO 426)  |
| 425 | Were you or your partner drunk at that time? <br> IF YES: Who was drunk? | RESPONDENT ONLY  1 <br> PARTNER ONLY $\ldots$ 2 <br> RESPONDENT AND   <br> PARTNER BOTH . 3  <br> NEITHER $\quad \ldots . . . . .$. 4  | RESPONDENT ONLY  1 <br> PARTNER ONLY $\ldots$ 2 <br> RESPONDENT AND   <br> PARTNER BOTH . 3  <br> NEITHER $\quad \ldots . . . . .$. 4  |
| 426 | Apart from [this person/these two people], have you had sexual intercourse with any other person in the last 12 months? |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 427 | In total, with how many different people have you had sexual intercourse in the last 12 months? <br> IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. <br> IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.' | NUMBER OF PARTNERS LAST 12 MONTHS $\square$ DON'T KNOW |  |
| 428 | In total, with how many different people have you had sexual intercourse in your lifetime? <br> IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. <br> IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.' | NUMBER OF PARTNERS <br> IN LIFETIME . $\qquad$ $\square$ <br> DON'T KNOW |  |
| 429 | CHECK 422 ALL COLUMNS: <br> AT LEAST ONE <br> NO PARTNERS PARTNER A $\square$ <br> ARE COMMERCIAL COMMERCIAL SEX WORKERS SEX WORKER | Q. 422 NOT ASKED $\square$ | $\begin{array}{\|l} \longrightarrow 431 \\ \longrightarrow \end{array} 443$ |
| 430 | In the last 12 months, did you pay anyone in exchange for sex? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 | $\rightarrow 433$ |
| 431 | The last time you paid someone in exchange for sex, was a condom used? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $\rightarrow 433$ |
| 432 | Was a condom used every time you paid someone in exchange for sex in the last 12 months? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . |  |
| 433 | CHECK 420 COLUMN 1 (CONDOM USE WITH LAST SEXUAL P <br> YES OTHER $\square$ | NER) | $\rightarrow 439$ |
| 434 | The last time you had intercourse you told me you used a condom. Did you or your partner obtain the condom? | MAN HIMSELF . . . . . . . . . . . . . . . . . . 1 <br> PARTNER . . . . . . . . . . . . . . . . . . . . . . 2  <br> SOMEONE ELSE . . . . . . . . . . . 3  |  |
| 438 | From where did you (your partner) obtain the condom the last time? <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. <br> (NAME OF PLACE(S)) |  <br> OTHER <br> PHARMACY/SHOP . . . . . . . . . . . . . . . 51 <br> NGO .............................. 52 <br> FRIEND/RELATIVE/NEIGHBOUR/WIFE 53 <br> OTHER .................................. . . 96 <br> (SPECIFY) |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 439 | CHECK 302 (02) USING MALE STERILIZATION <br> NO <br> YES $\square$ |  | $\longrightarrow 442$ |
| 440 | The last time you had sex did you (or your partner) use any method (other than the condom) to avoid or prevent a pregnancy? |  | $\xrightarrow{\longrightarrow} 442$ |
| 441 | What method did you (your partner) use? <br> PROBE: <br> Did you use any other method to prevent pregnancy? |  |  |
| 442 | CHECK 420 COLUMN 1 (CONDOM USE WITH LAST SEXUAL <br> NO/OTHER YES $\square$ |  | $\longrightarrow 447$ |
| 443 | CHECK 301 (07) KNOWS MALE CONDOM <br> YES NO $\square$ |  | $\longrightarrow 501$ |
| 444 | Do you know of a place where a person can get condoms? |  | $\rightarrow 447$ |
| 445 | Where is that? <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. <br> (NAME OF PLACE) <br> Any other place? <br> RECORD ALL SOURCES MENTIONED. |  |  |
| 446 | If you wanted to, could you yourself get a condom? |  |  |
| 447 | I will now read you some statements about the male condom. Please tell me if you agree or disagree with each statement. <br> Condoms diminish a man's sexual pleasure. <br> Condoms diminish a woman's pleasure. <br> A condom is very inconvenient to use. <br> A condom can be reused. <br> Buying condoms is embarrasing. |  |  |

SECTION 5. FERTILITY PREFERENCES



| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES |  |  |  | SKIP |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 517 | Do you think that if a woman refuses to have sex with her husband when he wants her to, he has the right to... <br> a) Get angry and reprimand her? <br> b) Refuse to give her money or other means of financial support? <br> c) Use force and have sex with her even if she doesn't want to? <br> d) Go and have sex with another woman? | a) <br> b) <br> c) <br> d) | $\begin{gathered} \text { YES } \\ 1 \\ 1 \\ 1 \\ 1 \end{gathered}$ | $\begin{gathered} \mathrm{NO} \\ 2 \\ 2 \\ 2 \\ 2 \end{gathered}$ | DON'T KNOW, DEPENDS <br> 8 <br> 8 <br> 8 <br> 8 |  |
| 518 | When a wife knows her husband has a disease that can be transmitted through sexual contact, is she justified in asking that they use a condom when they have sex? |  |  |  | $\begin{array}{lll} \ldots & 1 \\ \ldots & . & \\ \hline \ldots . & 2 \\ \ldots \end{array}$ |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 601 | Now I would like to talk about something else. Have you ever heard of an illness called AIDS? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 | $\longrightarrow 617$ |
| 602 | Can people reduce their chances of getting the AIDS virus by having just one sex partner who is not infected and who has no other partners? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 NO . . . . . . . . . . . . . . . . . . 8 |  |
| 603 | Can people get the AIDS virus from mosquito bites? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . . . . . . . 8 |  |
| 604 | Can people reduce their chances of getting the AIDS virus by using a condom every time they have sex? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 <br> NO . . . . . . . . . . . . . . . . . . . . . . . 8 |  |
| 605 | Can people get the AIDS virus by sharing food with a person who has AIDS? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . . . . 8 |  |
| 606 | Can people reduce their chance of getting the AIDS virus by abstaining from sexual intercourse? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . . . . . . 8 |  |
| 607 | Can people get the AIDS virus because of witchcraft or other supernatural means? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . NO . . . . . . . . . . . . . . . . . . . 8 |  |
| 607A | Can people get the AIDS virus from coughing? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . NO . . . . . . . . . . . . . . . . . . . . . . . |  |
| 608 | Is there anything else a person can do to avoid or reduce the chances of getting the AIDS virus? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 NO . . . . . . . . . . . . . . . . . . . . 8 | $\xrightarrow{\longrightarrow} 610$ |
| 609 | What can a person do? <br> Anything else? <br> RECORD ALL WAYS MENTIONED. |  |  |
| 610 | Is it possible for a healthy-looking person to have the AIDS virus? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . . . . . 8 |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 611 | Do you know of a place where people can go to get tested for the virus that causes AIDS? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 | $\rightarrow 613$ |
| 612 | Where did you go? <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. <br> (NAME OF PLACE) <br> Any other place? <br> RECORD ALL SOURCES MENTIONED. |  |  |
| 613 | Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8 |  |
| 614 | 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 $\ldots . . . . .$. 1 <br> NO . . . . . . . . . . . . . . . . . . . . . . . . . 2  <br> DK/NOT SURE/DEPENDS ....... 8 |  |
| 615 | If a relative of yours became sick with the virus that causes AIDS, would you be willing to care for her or him in your own household? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . 8 DK/NOT SURE/DEPENDS . . . . . |  |
| 616 | 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 $\ldots . . . . . . .$. 1 <br> SHOULD NOT BE ALLOWED $\ldots . .$. 2 <br> DK/NOT SURE/DEPENDS $\ldots . . . . .$. 8 |  |
| 617 |  | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 618 | CHECK 412: <br> HAS HAD SEXUAL <br> HAS NOT HAD SEXUAL INTERCOURSE INTERCOURSE |  | $\rightarrow 701$ |
| 619 | CHECK 617: HEARD ABOUT OTHER SEXUALLY TRANSMITTED <br> YES $\square$ | ECTIONS? <br> NO $\square$ | $\rightarrow 621$ |
| 620 | 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 <br> NO . . . . . . . . . . . . . . . . . . . . . . 8  |  |
| 621 | Sometimes men experience a bad smelling abnormal genital discharge. <br> During the last 12 months, have you had a bad smelling abnormal genital discharge? |  |  |
| 622 | Sometimes men have a genital sore or ulcer. <br> During the last 12 months, have you had a genital sore or ulcer? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8 |  |
| 623 | CHECK 620, 621, AND 622: <br> HAS HAD AN <br> HAS NOT HAD AN INFECTION INFECTION OR (ANY 'YES') DOES NOT KNOW |  | $\rightarrow 701$ |
| 624 | The last time you had (PROBLEM FROM 620/621/622), did you seek any kind of advice or treatment? | $\begin{aligned} & \text { YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . } 2 \\ & \text { NO . . . . . } \end{aligned}$ | $\longrightarrow 701$ |
| 625 | Where did you go? <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. <br> (NAME OF PLACE) <br> Any other place? <br> RECORD ALL SOURCES MENTIONED. |  |  |

SECTION 7. OTHER HEALTH ISSUES

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 701 | Have you had an illness, an accident, or suffered from a diagnosted chronic health problem in the last 3 months? |  | $\longrightarrow 705$ |
| 702 | What kind of health problem? |  |  |
| 703 | In the last 3 months, did you visit a health facility or consult a health professional? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . | $\rightarrow 706$ |
| 704 | Why was nothing done? | MINOR HEALTH PROBLEM ......... A LONG DISTANCE TO PROVIDER ... B GOOD CARE NOT AVAILABLE ... C LONG WAIT AT PROVIDER ......... D LACK OF FUNDS FOR MEDICINE . LACK OF FUNDS FOR TRAVEL TRANSPORT UNAVAILABLE RESPONSIBILITIES AT HOME RESPONSIBILITIES AT WORK CONSULTED TRADITIONAL <br> PRACTITIONER OTHER | $706 \mathrm{~K}$ |
| 705 | In the last 3 months, did you visit a health facility or consult a health professional? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . | $\rightarrow 706 \mathrm{~K}$ |
| 706 | In the last three months, how many times did you visit a health facility or consult with a health professional? | NUMBER OF TIMES $\quad \square$ |  |
| 706A | Now I'm going to ask you about the (last) visit you made in the last three months. <br> Did you undergo an operation during that (last) visit? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . . . . 2 |  |
| 706B | Where did the visit/consultation take place? |  |  |



| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
| 706M | How much was paid the (last) time you obtained the medicine? | COST <br>  <br> FREE ................................... 0000000 <br> DON'T KNOW . . . . . . 9999998 |  |
| 707C | Have you stayed overnight in a hospital in the last year for reasons concerning your own health? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . . . 2 | $\rightarrow 708$ |
| 707D | During the last 12 months, on how many different occasions were you hospitalized? | NUMBER OF TIMES $\quad$\begin{tabular}{\|l|l|}
\hline
\end{tabular} |  |
| 707E | Now I'm going to ask you abou the (last) time you were hospitalized. <br> What health problem led you to be hospitalized? |  |  |
| 707F | Did you undergo an operation during that (last) hospitalization? |  |  |
| 707G | When you had the (last) hospitalization, how did you get there? |  | $\begin{aligned} & \rightarrow 7071 \\ & \rightarrow 7071 \\ & \rightarrow 7071 \\ & \rightarrow 7071 \end{aligned}$ |
| 707H | Altogether, how much was paid for transportation, round-trip, when you were (last) hospitalized? |  |  |
| 7071 | How long did it take you to go to the hospital the last time you were hospitalized? | MINUTES <br> DON'T KNOW <br> 998 |  |
| 707J | Altogether, how much was officially paid for your (last) hospitalization? | COSTC.\|l|l|l|l|l|l| <br> FREE . . . . . . . . . . . . . . . . . . . 00000000 <br> DON'T KNOW . . . . . . . . . . . . . . 9999998 |  |
| 707K | How much did you pay in additional expenses for that (last) hospitalization? |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 707L | Did you obtain any medicine during your hospitalization? |  | $\longrightarrow 708$ |
| 707M | Where did you obtain the medicine for the hospitalization? |  | $\rightarrow 708$ |
| 707N | How much was paid the (last) time the medicine was obtained? | COST <br>  <br> FREE <br> DON'T............................... 0000000 <br> DON KNOW . . . . . . 9999998 |  |
| 708 | These next questions are about blood pressure. <br> Has your blood pressure ever been checked by a doctor or other health professional? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . . . 2 | $\longrightarrow 717$ |
| 709 | When was the last time you had your blood pressure checked by a doctor or other health professional? |  |  |
| 710 | Who took your blood pressure? |  |  |
| 711 | Have you ever been told by a doctor or other health professional that you had hypertension or high blood pressure? |  | $\begin{aligned} & \longrightarrow 717 \\ & \\ & \hline 17 \end{aligned}$ |
| 712 | Were you told on 2 or more different visits that you had hypertension or high blood pressure? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . . . . . . . . . . 8 |  |
| 713 | Did a doctor or other health professional tell you what to do about your hypertension or high blood pressure? |  | $\rightarrow 717$ |
| 714 | Who told you this? |  |  |
| 715 | Did the doctor or the other health professional tell you to: <br> a. take prescribed oral medicine? <br> b. receive an injection <br> c. take asprin <br> d. control your weight or lose weight? <br> e. cut down on salt in your diet? |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
|  | f. exercise more? <br> g. cut down on alcohol? <br> h. stop smoking? <br> i. do other things? <br> PROBE: What other things? |  |  |
| 716 | To lower your hypertension or high blood pressure, are you now: <br> a. taking prescribed oral medici $\qquad$ <br> b. take asprin <br> c. controlling your weight or lose weight? <br> d. cutting down on salt in your diet? <br> e. exercising? <br> f. cutting down on alcohol consumption? <br> g. stopping smoking? |   YES NO N/A  <br>       <br> TAKE MEDICINE $\ldots \ldots$ $\ldots$ 2 3  <br> TAKE ASPRIN $\ldots$ $\ldots$ 1 2 3 <br> CONTROL WEIGHT $\ldots$ 1 2 3  <br> CUT DOWN ON SALT $\ldots$ 1 2 3  <br> EXERCISE $\ldots . . . . .$. 1 2 3   <br> CUT DOWN ALCOHOL 1 2 3   <br> STOP SMOKING $\ldots . . .$. 1 2 3  |  |
| 717 | Now I would like to ask you some questions about any injections you have had in the last 12 months. Have you had an injection for any reason in the last 12 months? <br> IF YES: How many injections have you had? <br> IF NUMBER OF INJECTIONS IS GREATER THAN 90, OR DAILY FOR 3 MONTHS OR MORE, RECORD ' 90 '. <br> IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. | NUMBER OF INJECTIONS <br> NONE | $\rightarrow 721$ |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 718 | Among these injections, how many were administered by a doctor, a nurse, a pharmacist, a dentist, or any other health worker? <br> IF NUMBER OF INJECTIONS IS GREATER THAN 90, OR DAILY FOR 3 MONTHS OR MORE, RECORD ' 90 '. <br> IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. | NUMBER OF INJECTIONS <br> NONE | $\rightarrow 721$ |
| 719 | The last time you had an injection given to you by a health worker, where did you go to get the injection? <br> IF SOURCE IS ANY TYPE OF HEALTH FACILITY, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. |  |  |
| 720 | Did the person who gave you that injection take the syringe and needle from a new, unopened package? | YES $\ldots \ldots$  <br> NO . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 <br> DON'T KNOW . . . . . . . . . . . . . . . 8  |  |
| 721 | Now l'd like to ask you about tobacco use. <br> Have you smoked at least 100 cigarettes during your entire life? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . |  |
| 722 | Do you currently smoke cigarettes? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . | $\rightarrow 724$ |
| 723 | In the last 24 hours, how many cigarettes did you smoke? | CIGARETTES . ........... $\square$ |  |
| 724 | Do you currently smoke or use any other type of tobacco? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . | $\rightarrow 726$ |
| 725 | What (other) type of tobacco do you currently smoke or use? <br> RECORD ALL MENTIONED. | PIPE $\ldots \ldots \ldots \ldots \ldots$CHEWING TOBACCO $\ldots \ldots \ldots \ldots \ldots$SNUFF $\ldots \ldots \ldots \ldots \ldots \ldots$OTHER(SPECIFY) |  |
| 726 | Do you live in a household in which (other) people smoke on a daily basis? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . . 2 |  |
| 727 | Have you ever heard of an illness called tuberculosis or TB? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 NO . . . . . . . . . . . . . . . . . . . 2 | $\rightarrow 733$ |
| 728 | How does tuberculosis spread from one person to another? <br> PROBE: Any other ways? <br> RECORD ALL MENTIONED. |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 729 | What are the signs or symptoms would lead you to think that a person has tuberculosis? <br> Any others? <br> RECORD ALL MENTIONED? |  |  |
| 730 | Can tuberculosis be cured? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . NO . . . . . . . . . . . . . . . . . . . . . . . . 8 NO 8 |  |
| 731 | If a member of your family got tuberculosis, would you want it to remain a secret or not? |  |  |
| 732 | Have you ever been told by a doctor or other health professional that you had tuberculosis? |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 733 | Have you heard about "family medicine?" IF NOT, how about a "family doctor?" | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 NO . . . . . . . . . . . | $\rightarrow 741$ |
| 734 | What does this term mean to you? |  |  |
| 735 | Do you think that "family medicine" is appropriate for Armenia? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 <br> NO . . . . . . . . . . . 8  | $\begin{array}{r} \longrightarrow 737 \\ \longrightarrow 738 \end{array}$ |
| 736 | Why do you think that it is appropriate? |  |  |
| 737 | Why do you think it is not appropriate? |  |  |
| 738 | Have you ever been registered with a family doctor? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . | $\rightarrow 741$ |
| 739 | How long have you had a family doctor? |  |  |
| 740 | Are you satisfied with your family doctor? |  |  |
| 741 | Have you ever had a consultation with an eye doctor? IF YES: When was the last time you saw an eye doctor? |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 742 | What was the reason for the visit? |  |  |
| 743 | Was any diagnosis given? <br> IF YES: What was the diagnosis? |  |  |
| 744 | CHECK 209: <br> NO CHILD <br> HAVE/HAD A CHILD |  | $\rightarrow 754$ |
| 745 | You have already told me, that you have never fathered a child. Please tell me, have you ever tried to father a child? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 | $\rightarrow 754$ |
| 746 | How old were you the first time you tried to fathered a child? | AGE |  |
| 747 | How long were you trying to father a child? |  | $\longrightarrow 754$ |
| 748 | Did you receive any examination to determine the reason of infertility? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8 | $\xrightarrow{\longrightarrow} 754$ |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 749 | Where was the examination performed? <br> RECORD ALL SOURCES MENTIONED. |  |  |
| 750 | What kind of exam did they do? |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 751 | Can you tell me what was diagnosed as the reason for the infertility? <br> RECORD ALL MENTIONED. | ```WEAKNESS/LACK (IMPOTENCY) OF SEXUAL ACTIVITY . . . . . . . . . . A DEFECTIVE SEMEN .................. B LACK OF MOTILE SPERMATOZOIDS DILATION OF SCROTAL VESSELS (VARICOCELE) . . . . . . . D INFLAMATION OF PROSTATE OR ANY OTHER ACCESSORY GLANDS INFLAMMATION ENDOCRINE DISORDERS CONGENITAL PATHOLOGIES OF GENITOURINARY SYSTEM ..... G OTHER``` $\qquad$ ```NoneNone ``` |  |
| 752 | Have you had any treatment for infertility? | YES . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8 | $\rightarrow 754$ |
| 753 | Please, tell me, what kind of treatment did you get? <br> RECORD ALL MENTIONED. | VITAMINS/BIOSTIMULANTS ANTIBIOTICS/SULFANILAMIDES MEDICATIONS IMPROVING THE QUALITY OF SEMEN HORMONAL THERAPY MEDICATIONS INCREASING SEXUAL ACTIVITY FOLK MEDICINE PSYCHOTHERAPY PHYSIOTHERAPY PROSTATE MASSAGE SURGICAL INTERVENTION OTHER |  |
| 754 | RECORD THE TIME. | HOUR <br> MINUTES |  |

# TO BE FILLED IN AFTER COMPLETING INTERVIEW 

COMMENTS ABOUT RESPONDENT:
$\qquad$

COMMENTS ON SPECIFIC QUESTIONS:
$\qquad$

ANY OTHER COMMENTS:

## SUPERVISOR'S OBSERVATIONS

$\qquad$
NAME OF THE SUPERVISOR: $\qquad$ DATE:

EDITOR'S OBSERVATIONS
$\qquad$

$\qquad$ $\longrightarrow$

NAME OF EDITOR: $\qquad$ DATE:


[^0]:    ${ }^{1}$ Since 2005, according to law children are allowed to enter school starting at 6 years and 6 months.

[^1]:    ${ }^{2}$ Students who are over age for a given level of schooling may have started school over age, may have repeated one or more grades in school, or may have dropped out of school and later returned.

[^2]:    ${ }^{1}$ In the 2000 ADHS, men age 15-54 in every third household were included in the survey.

[^3]:    ${ }^{1}$ The legal age at marriage in Armenia is 17.

[^4]:    ${ }^{1}$ The 2005 ADHS questionnaire differed from the 2000 ADHS questionnaire in terms of asking about LAM. In 2000, a description of LAM would be read to the respondent if she did not recognize the term "lactational amenorrhea method." The 2000 results suggested that the description caused many respondents to confuse the modern method of LAM with the folk method of breastfeeding. Thus, the description was dropped in the 2005 ADHS questionnaire.

[^5]:    ${ }^{2}$ While "subfecund/infecund" women make up more than one-third of the women who are not using contraception and do not intend to, they constitute a much smaller proportion of the overall survey sample. Women who have declared themselves infecund make up 4.2 percent ( 279 women) of the unweighted sample and 3.9 percent ( 257 women) of the weighted sample.

[^6]:    ${ }^{1}$ The pregnancy history was structured to ensure as complete reporting of abortions as possible, especially for the period immediately before the survey. Data were collected in reverse chronological order (i.e., information was first collected about the most recent pregnancy and then about the next to last and so on). This procedure was designed to result in more complete reporting of events for the years immediately before the survey than collecting information in chronological order. At the end of the pregnancy history, interviewers were required to check the consistency between the aggregate data collected at the outset of the reproductive section and the number of events reported in the pregnancy history.
    ${ }^{2}$ A modification in data collection methodology should be noted. In the 2000 ADHS, respondents were asked about "self-induced abortions" and "induced abortions" separately. This was done in response to other research that indicated a significant proportion of abortions are self-induced (Khachikyan and Abrahamyan, 1998). However, only 37 women in the 2000 ADHS sample reported inducing an abortion themselves without the assistance of a medical professional. Thus, this distinction was dropped in the 2005 ADHS questionnaire.

[^7]:    ${ }^{1}$ For a description of the calculation, see footnote 1, Table 8.3.

[^8]:    ${ }^{1}$ For example, see the neonatal and infant mortality rates for Austria (1960), Canada (1953), Belgium (1957), Republic of Germany (1959), Ireland (1957), and Scotland (1952) in the U.N. Demographic Yearbook, 1961 (Table 13), and Cuba (1968) and Puerto Rico (1965) in the U.N. Demographic Yearbook, 1974 (Table 22).

[^9]:    ${ }^{3}$ In cases in which the gestational age is unknown, fetuses that weigh less than 1,000 grams or measure less than 35 centimeters in length are considered premature and are classified as miscarriages.

[^10]:    ${ }^{1}$ Height was measured standing up for children age two years and above and lying down for children under two years using Shorr Boards. Weight was measured using electronic Seca scales.

[^11]:    Note: BMI is expressed as the ratio of weight in kilograms to the square of height in meters $\left(\mathrm{kg} / \mathrm{m}^{2}\right)$.
    ${ }^{1}$ Excludes pregnant women and women with a birth in the preceding two months

[^12]:    Note: For women with two or more live births in the five-year period, data refer to the most recent birth. 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.
    ${ }^{1}$ Women who reported nightblindness but did not report difficulty with vision during the day

[^13]:    ${ }^{1}$ Tables 13.3.1 and 13.3.2 do not include results on misconceptions about transmission of the virus by witchcraft or other supernatural means because only 1 percent of women and an even smaller proportion of men said the AIDS virus can be transmitted by these means.

[^14]:    ${ }^{1}$ General population statistics, pertaining to a specific age range, which classify persons as hypertensive if they were taking antihypertensive medication or if their blood pressure was $\geq 140 / 90 \mathrm{mmHg}$.

[^15]:    na = Not applicable
    ${ }^{1}$ Replace with calendar years in stub. For example, if survey takes place in 2000, 0 becomes 2000, 1 becomes 1999, etc.
    ${ }^{2}$ Both year and month of birth given
    ${ }^{3}(\mathrm{Bm} / \mathrm{Bf}) \times 100$, where Bm and Bf are the numbers of male and female births, respectively
    ${ }^{4}[2 B x /(B x-1+B x+1)] \times 100$, where $B x$ is the number of births in calendar year $x$

[^16]:    ${ }^{1} \leq 6$ days $/ \leq 30$ days

