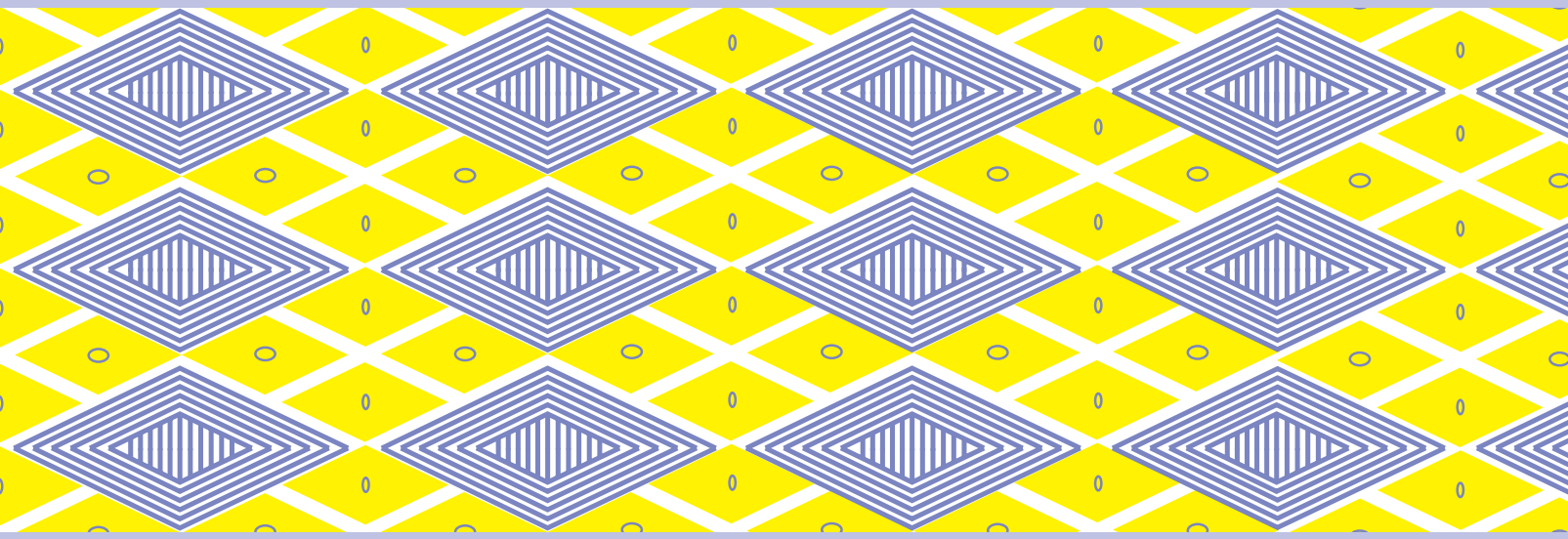
Ethiopia



Demographic and
Health Survey

2005

Ethiopia Demographic and Health Survey 2005

Central Statistical Agency
Addis Ababa, Ethiopia

ORC Macro
Calverton, Maryland, USA

September 2006

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FOREWORD

The 2005 Ethiopia Demographic and Health Survey (EDHS) was conducted under the auspices of the Ministry of Health and implemented by the then Population and Housing Census Commission Office (PHCCO), now merged with the Central Statistical Agency (CSA). The key findings of the survey were released in a preliminary report in November 2005. This final report details the findings of the survey. The first ever Demographic and Health Survey (DHS) in Ethiopia was conducted in 2000. The 2005 EDHS differed from the 2000 EDHS mainly because it included testing for the prevalence of anaemia and HIV. Major stakeholders from various Ministries were closely involved in the management and oversight of the survey and analysis of the survey results.

The primary objective of the 2005 EDHS was to provide up-to-date information for policy makers, planners, researchers and programme managers, which would allow guidance in the planning, implementation, monitoring and evaluation of population and health programmes in the country. The information obtained from the EDHS, in conjunction with statistical information obtained from the Welfare Monitoring Survey (WMS) and Household Income, Consumption and Expenditure Survey (HICES), will provide critical information for the monitoring and evaluation of the country's Plan for Accelerated and Sustained Development to End Poverty (PASDEP), the various sector development policies and programmes, and assist in the monitoring of the progress towards meeting the Millennium Development Goals (MDGs).

The 2005 EDHS collected information on the population and health situation, covering topics on family planning, fertility levels and determinants, fertility preferences, infant, child, adult and maternal mortality, maternal and child health, nutrition, malaria, women's empowerment, and knowledge of HIV/AIDS. In addition the EDHS includes population estimates of HIV and anaemia prevalence in the country. Key indicators relating to each of the above topics are provided for the nine regional states and two city administrations. In addition, data are also provided by urban and rural residence for the country. Findings from the survey indicate some improvements in major health and demographic variables in the past five years.

The CSA would like to acknowledge a number of organizations and individuals who contributed to the successful completion of the 2005 EDHS. The Agency is grateful for the commitment of the Government of Ethiopia and the generous funding support primarily by the United States Agency for International Development (USAID) and the President's Emergency Plan for AIDS Relief (PEPFAR), the Dutch and Irish Governments, and the United Nations Population Fund (UNFPA). We also appreciate UNICEF for supplying weighing scales and salt test kits; and WHO/Ethiopia and the Japan International Cooperation Agency (JICA) for each lending a vehicle to support fieldwork. We would also like to thank ORC Macro in Maryland, U.S.A. for technical assistance in all aspects of the survey. The agency extends a special thanks to the Ministry of Health, to all the member institutions of the EDHS Steering Committee and to development partners and stakeholders, who contributed to the successful completion of the survey. Special thanks also goes to the Ethiopia Health and Nutrition Research Institute (EHNRI), which handled the testing of the blood samples for determining the HIV status of the surveyed population. We also wish to acknowledge the tireless effort of the CSA staff who made this survey a success.

Finally, we highly appreciate the field staff and, more importantly, the survey respondents, who were critical to the successful completion of this survey.

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SUMMARY OF FINDINGS

The 2005 Ethiopia Demographic and Health Survey (EDHS) is a nationally representative survey of 14,070 women age 15-49 and 6,033 men age 15-59. The EDHS is the second comprehensive survey conducted in Ethiopia as part of the worldwide Demographic and Health Surveys (DHS) project. The primary purpose of the EDHS is to furnish policymakers and planners with detailed information on fertility, family planning, infant, child, adult and maternal mortality, maternal and child health, nutrition and knowledge of HIV/AIDS and other sexually transmitted infections. In addition, in one of two households selected for the survey, women age 15-49 and children age 6-59 months were tested for anaemia, and women age 15-49 and men age 15-59 were tested for HIV. The 2005 EDHS is the first survey in Ethiopia to provide population-based prevalence estimates for anaemia and HIV.

FERTILITY

Survey results indicate that there has been a decline in fertility from 6.4 births per woman in 1990 to 5.4 births per woman in 2005, a one child drop in the last 15 years. The decline was more pronounced in the 10 years between 1990 and 2000 than in the five years between 2000 and 2005 and in urban than in rural areas. Rural women on average have two and a half children more than urban women. There is a substantial differential in fertility by region ranging from a low of 1.4 children per woman in Addis Ababa to a high of 6.2 children per woman in Oromiya. Education and wealth have a marked effect on fertility, with uneducated mothers having three times as many children as women with at least some secondary education and women in the lowest wealth quintile having twice as many children as women in the highest wealth quintile.

Childbearing starts early. At current age-specific rates of childbearing, an Ethiopian woman will have had more than half of her lifetime births by age 30, and nearly three-fourths by age 35.

Marriage patterns are an important determinant of fertility levels in a population. Although there was a marked decline in the percentage of women in union from 72 percent in 1990 to 64 percent in 2000, little change was observed in women currently in union in the last five years. Similar trends were observed in the median age at marriage and the median age at first sexual intercourse, with obvious increases in the ten-year period between 1990 and 2000 and little change in the five-year period between 2000 and 2005.

Ethiopian women generally begin sexual intercourse at the time of their first marriage. This can be seen from the identical medians in age at first marriage and age at first sexual intercourse (16.1). Men, on the other hand, are sexually active before marriage, although the difference in age at first intercourse and age at first marriage has narrowed over the past five years. The median age at first sexual intercourse for men is 21.2 years while the median age at first marriage is 23.8. In general, Ethiopian men marry nearly eight years later than women.

Data from the 2005 EDHS show that 12 percent of currently married women are married to men who are in a polygynous union. Older women, rural women, women residing in Gambela, uneducated women, and women in the poorest wealth quintile are more likely to be in a polygynous union than other women. About one in fifteen men is in a polygynous union. The extent of polygyny has declined over the past five years.

The interval between births is relatively long in Ethiopia. The median number of months since the preceding birth is 33.8. Twenty-one percent of nonfirst births occur within two years of a previous birth, 35 percent occur between 24 and 35 months later and 44 percent occur at least three years after a previous birth. Postpartum insusceptibility is one of the major factors contributing to the long birth interval in Ethiopia. The median duration of amenorrhea is 15.8 months, postpartum abstinence is 2.4 months, and insusceptibility is 16.7 months.

FAMILY PLANNING

Overall, knowledge of contraception has remained consistently high in Ethiopia over the past five years with 88 percent of currently married women and 93 percent of currently married men having heard of at least one method of contraception. The pill, injectables, and condom are the most widely known modern methods among both women and men. Currently married men are more than twice as likely to recognize the condom as a method of family planning than currently married women (84 percent versus 41 percent).

Twenty-four percent of currently married women and 19 percent of currently married men have used a family planning method at least once in their lifetime. Fifteen percent of currently married women are using a method of contraception. Modern methods are more widely used than traditional methods, with 14 percent of currently married women using a modern method and 1 percent using a traditional method. The most popular modern method is the injectable used by one in ten currently married women. About four in five currently married women obtain modern methods from the public sector, while 17 percent and 3 percent, respectively, obtain their method from the private medical sector or other private sources.

Use of contraceptive methods tripled in the fifteen-year period between 1990 and 2005 from 5 percent to 15 percent. The increase is especially marked for modern methods which more than doubled in the five years between 2000 and 2005. This trend is mostly attributable to the recent rapid rise in the use of injectables from 3 percent in 2000 to 10 percent in 2005.

More than half of currently married women who were not using any family planning method at the time of the survey say they intend to use a method in the future. The majority of prospective users prefer injectables while a sizeable proportion cite the pill as their preferred method.

The desire for more children is frequently mentioned by currently married nonusers as a reason for not intending to use a method of contraception in the future. The proportion of women who cited this reason for not wanting to use a method has dropped markedly over the past five years from 42 percent in 2000 to 18 percent in 2005.

Family planning information is largely received through the radio with limited exposure through the television and print media. Twenty-nine percent of women heard about family planning on the radio compared with 11 percent who heard about it from television and 8 percent who read about it in newspapers or magazines.

The majority of Ethiopian women (78 percent) and men (76 percent) prefer to space or limit the number of children they have, and have a potential need for family planning. One in three currently married women has an unmet need for family planning (34 percent). The need for spacing (20 percent) is higher than the need for limiting (14 percent). If all currently married women who say they want to space or limit the number of children were to use family planning, the contraceptive prevalence rate in Ethiopia would increase from 15 percent to 49 percent. Currently, only 31 percent of the demand for family planning is being met.

CHILD HEALTH

At current mortality levels, one in every 13 Ethiopian children dies before reaching age one, while one in every eight does not survive to the fifth birthday. Data from the 2005 EDHS show that infant mortality has declined by 19 percent over the past 15 years from 95 deaths per 1,000 live births to 77. Under-five mortality has gone down by 25 percent from 166 deaths per 1,000 live births to 123. The corresponding declines in neonatal and postneonatal mortality over the 15-year period are 15 percent and 22 percent, respectively.

Mortality is consistently lower in urban areas than in rural areas. The lowest level is in Addis Ababa, the most urbanized part of the country, while the highest levels are in Benishangul-Gumuz, Gambela, and Amhara. Maternal education is strongly correlated with child mortality. Under-five mortality among children born to mothers with no education is more than twice as high as that among children born to mothers with secondary education or higher.

Survival of infants and children is strongly influenced by the gender of the child, mother's

age at birth, birth order, and birth interval. Male children experience higher mortality than female children and the gender difference is especially pronounced for infant mortality. Childhood mortality is relatively higher among children born to mothers under age 20 and over age 40. First births and births of order seven and higher also suffer significantly higher rates of mortality than births of order two to six. Children born within two years of a preceding birth are more than three times as likely to die within the first year of life as children born three or more years after an older sibling.

Twenty percent of children age 12-23 months had been fully vaccinated at the time of the survey. Three in five have received the BCG vaccination, and 35 percent have been vaccinated against measles. The coverage for the first dose of DPT is relatively high (58 percent). However, only 32 percent go on to receive the third dose of DPT. Polio coverage is much higher than DPT coverage because of the success of the national immunization day campaigns during which polio vaccines are administered. Nevertheless, the dropout between the first and subsequent doses of polio is marked – a 40 percent decline between the first and third dose. Vaccination coverage in Ethiopia has improved over the past five years. The percentage of children 12-23 months fully vaccinated at the time of the survey increased by 43 percent from 14 percent in 2000 to 20 percent in 2005. However, the percentage who received none of the six basic vaccinations also increased from 17 percent in 2000 to 24 percent in 2005.

Thirteen percent of children under age five showed symptoms of acute respiratory infection (ARI) in the two weeks before the survey. Use of a health facility for the treatment of symptoms of ARI is low, with only 19 percent of children taken to a health facility or provider.

Nineteen percent of children under five were reported to have had fever, a major manifestation of malaria, in the two weeks before the survey. Less than one in five children was taken to a health facility or provider for treatment. A very small percentage of children with fever received antimalarial drugs (3 percent) or antibiotics (6 percent).

The 2005 EDHS gathered information on the use of mosquito nets, both treated and untreated. The data show that only 6 percent of households in Ethiopia own a mosquito net, with 3 percent of households owning an insecticide-treated net (ITN). Consistent with the degree of risk of malaria, ownership of mosquito nets varies inversely with altitude. For instance, 36 percent of households living in areas below 1,000 metres own some type of net, while the corresponding figure for households at altitudes above 2,000 metres or more is only 2 percent. Only 2 percent of children under five slept under a net the night prior to the interview, while less than 2 percent slept under an ever-treated net and under an ITN. Use of nets varies inversely with altitude with 19 percent of children living at altitudes less than 1,000 metres sleeping under a net compared with 4 percent or less among children living at altitudes above 1,000 metres. Eleven percent of households occupying a dwelling had their inner walls sprayed with insecticide to prevent malaria, 2 percent had been sprayed in the 6 months preceding the survey, and 3 percent had white insecticide powder visible on the inner walls.

Nationally, 18 percent of children under age five had diarrhoea at some time in the two weeks before the survey, while 6 percent had diarrhoea with blood during the same period. Around one in five of these children were taken to a health provider. Thirty-seven percent of children with diarrhoea were treated with some kind of oral rehydration therapy (ORT): 20 percent were treated with ORS (solution prepared from ORS packets); 19 percent were given recommended home fluids (RHF) prepared at home; and 9 percent were given increased fluids. About half of children with diarrhoea did not receive any type of treatment at all.

MATERNAL HEALTH

Twenty-eight percent of mothers who had a live birth in the five years preceding the survey received antenatal care from health professionals; less than 1 percent of mothers received antenatal care from trained and untrained traditional birth attendants. More than seven in ten mothers did not receive antenatal care. There was little improvement in the percentage of mothers who received antenatal care from a health professional in the five years between the 2000 and 2005 surveys. About one in ten women make four or more antenatal care visits during their entire pregnancy. The median duration of

pregnancy for the first antenatal visit is 5.6 months, indicating that Ethiopian women start antenatal care at a relatively late stage of their pregnancy.

Among mothers who received antenatal care 31 percent reported that they were informed about pregnancy complications during their antenatal care visits. Weight and blood pressure measurements were taken for 72 percent and 62 percent of mothers, respectively. About one-quarter of mothers gave urine and blood samples.

For last live births in the five years preceding the survey, only one in three women was protected against neonatal tetanus. Most of these women (28 percent) had received two or more tetanus injections while pregnant with the last birth. Despite the low coverage, there is evidence of improvement over time. The percentage of women who received two or more tetanus injections during pregnancy for the last birth increased from 17 percent in 2000 to 28 percent in 2005.

An overwhelming majority of births in the five years before the survey were delivered at home (94 percent). Five percent of births were delivered in a public facility and 1 percent in a private facility. Six percent of births were delivered with the assistance of a trained health professional, that is, a doctor, nurse, or midwife, while 28 percent were delivered by a traditional birth attendant (TBA). The majority of births (61 percent) were attended by a relative or some other person. Five percent of births were delivered without any type of assistance at all.

Postnatal care is extremely low in Ethiopia. Nine in 10 mothers who had a live birth in the five years preceding the survey received no postnatal care at all and only 5 percent of mothers received postnatal care within the critical first two days after delivery.

BREASTFEEDING AND NUTRITION

Breastfeeding is nearly universal in Ethiopia, and the median duration of any breastfeeding is long (25.8 months). Exclusive breastfeeding, on the other hand, is relatively short, with a median duration of 2.1 months. Contrary to WHO recommendations, only around one in three children age 4-5 months is exclusively breastfed. The data also show that complementary foods are not introduced in a timely fashion for many children. At 6-8 months, only one in two children is receiving complementary foods. The use of a bottle with a nipple is not widespread in Ethiopia. However, the proportion of children who are bottle-fed rises from 8 percent among children age less than 2 months to 19 percent among children age 6-8 months, after which it declines gradually.

More than half of Ethiopian children age 6-59 months are classified as anaemic, with 21 percent mildly anaemic, 28 percent moderately anaemic, and 4 percent severely anaemic. The prevalence of anaemia among women is less pronounced than among children. Twenty-seven percent of women age 15-49 are anaemic, with 17 percent mildly anaemic, 8 percent moderately anaemic, and just over 1 percent severely anaemic.

The level of malnutrition is significant with nearly one in two (47 percent) Ethiopian children under five years of age stunted (short for their age), 11 percent wasted (thin for their height), and 38 percent underweight. In general, rural children and children of uneducated mothers are more likely to be stunted, wasted, or underweight than other children. Regional variation in nutritional status of children is substantial. Stunting levels are above the national average in Amhara and SNNP. Wasting is higher than the national average in Somali, Benishangul-Gumuz, Amhara, Tigray and Dire Dawa. The percentage of underweight children is above the national average in Somali, Amhara, Tigray and Benishangul-Gumuz.

Survey results show that the level of chronic energy deficiency among women in Ethiopia is relatively high. Twenty-seven percent of women fall below the cutoff of 18.5 for the body mass index (BMI), which utilizes both height and weight to measure thinness. Four percent of women are overweight or obese.

HIV/AIDS AND STIs

Knowledge of AIDS is widespread in Ethiopia. Ninety percent of women age 15-49 and 97 percent of men age 15-49 have heard of AIDS. Women and men are most aware that the chances of getting the AIDS virus can be reduced

by limiting sex to one uninfected partner who has no other partners (63 percent and 79 percent, respectively) or by abstaining from sexual intercourse (62 percent and 80 percent, respectively). Knowledge of condoms and the role they can play in preventing transmission of the AIDS virus is much less common, particularly among women.

Only 51 percent of women and 69 percent of men know that a healthy-looking person can have the AIDS virus. Also, many women and men erroneously believe that AIDS can be transmitted by mosquito bites. Larger proportions of respondents are aware that the AIDS virus cannot be transmitted by supernatural means or by sharing food. The EDHS results also show that a minority of women (16 percent) and men (30 percent) have comprehensive knowledge of HIV/AIDS transmission, that is, they know that both condom use and limiting sex partners to one uninfected partner are HIV prevention methods; that a healthy-looking person can have HIV; and reject the two most common local misconceptions about HIV/AIDS —that AIDS can be transmitted through mosquito bites and by sharing food with an infected person. Around one-fifth of women and one-third of men age 15-24 have comprehensive knowledge about HIV/AIDS.

Sixty-nine percent of women and 75 percent of men know that HIV can be transmitted by breastfeeding. About one-fifth of women and one-fourth of men know that the risk of mother-to-child transmission (MTCT) can be reduced through the use of certain drugs during pregnancy.

Information on higher-risk sex (sexual intercourse with a partner who is neither a spouse nor a cohabiting partner) shows that less than 1 percent of women and 4 percent of men have had two or more partners during the 12 months preceding the survey, and 3 percent of women and 9 percent of men have had higher-risk sexual intercourse. Among respondents who engaged in higher-risk sexual intercourse, 24 percent of women and 52 percent of men reported condom use the last time they had sexual intercourse.

Among the adult population age 15-49, 4 percent of women and 6 percent of men reported that they had been tested for HIV at some time, and the majority of them had received the results of their test. Three percent of women reported that they had received information and counselling about HIV/AIDS during antenatal care for their most recent birth.

Two percent each of sexually active women and men reported that they had had an STI and/or STI symptoms in the 12 months prior to the survey.

Results from the 2005 EDHS indicate that 1.4 percent of Ethiopian adults age 15-49 are infected with HIV. HIV prevalence among women is nearly 2 percent, while for men 15-49, it is just under 1 percent. HIV prevalence levels rise with age, peaking among women in their late 30s and among men in their early 40s. The age pattern suggests that young women are particularly vulnerable to HIV infection compared with young men. Urban residents have a significantly higher risk of HIV infection (6 percent) than rural residents (0.7 percent). The risk of HIV infection among rural women and men is almost identical, while urban women are more than three times as likely as urban men to be infected. Prevalence levels are highest in Gambela (6 percent) and Addis Ababa (5 percent). Other regions in which HIV prevalence exceeds the national average include Harari, Dire Dawa, Affar, Tigray and Amhara. HIV infection levels increase directly with education among both women and men and are markedly higher among those with a secondary or higher education compared with those having less education. Employed women and men are also more likely to be HIV infected than the unemployed, as are women and men in the highest wealth quintile compared with those in the other wealth quintiles.

WOMEN'S STATUS

The DHS data shed some light on the status of women in Ethiopia. While the majority of Ethiopians have little or no education, women are generally less educated than men. However, the male-female gap in education is more obvious at higher than at lower levels of education, indicating the government's recognition and successful intervention to address gender disparity in more recent years.

Marked differences were observed in the levels of employment by gender. The majority of men (86 percent) were employed at the time of the survey, compared with 29 percent of women. Nearly one in three currently married women was employed during the 12 months before the survey. Three-tenths of employed women earn cash only or cash and in-kind earnings. Nearly three-fifths of currently married women are not paid at all.

Almost two-fifths of currently married women who receive cash earnings report that they alone decide how their earnings are used, while more that half of currently married women say that they decide jointly with their husband or partner. Information on women's decisionmaking autonomy shows that almost 53 percent of currently married women make independent decision about daily household purchases. While 15 percent of women make sole decisions on their own health care, one-third say that their husband or partner makes such decisions. Decisions on large household purchases are typically made by the husband or partner alone or jointly with their husband or partner. More than two-thirds of women say that decisions to visit family or relatives are made jointly with their husband or partner.

The majority of women and men agree that a woman is justified in refusing to have sexual intercourse with her husband or partner for at least one of three specified reasons. Only one in ten women and men is of the opinion that a woman cannot refuse sexual intercourse for any reason. On the other hand, a sizable proportion of women (44 percent) and to a lesser extent men (23 percent), believe that a husband is justified in beating his wife if she refuses to have sex with him. Overall, eight in ten women and around half of men believe that there are at least some situations in which a husband is justified in beating his wife.

EDHS data indicate a positive relationship between women's status and contraceptive use. Contraceptive use is highest among women who participate in most household decisions, who agree that a woman can refuse sexual intercourse with her partner for all three specified reasons, and who believe that wife beating is not justified for all five specified reasons. The data show that mean ideal family size declines as women's status increases. Also, there is a correlation between women's status and utilization of health services. The more empowered a woman, the more likely she is to receive antenatal, postnatal, and delivery care from a health professional. The relationship between childhood mortality and women's empowerment is mixed.

The EDHS provides insight into several harmful traditional practices existent in Ethiopia. The practice of female circumcision is widespread in Ethiopia, with three in four women age 15-49 circumcised. Six percent of circumcised women reported that their vagina had been sewn closed (infibulation). More than two in five Ethiopian women themselves have had a uvulectomy or tonsillectomy. More than two-fifths of women with at least one daughter have a daughter who has had a uvulectomy or tonsillectomy. Eight percent of women reported that they had been married by abduction and about 1 percent with at least one daughter reported that a daughter was married by abduction.

Around one in four women interviewed in the EDHS had heard of obstetric fistula and 1 percent of women who have ever given birth reported having experienced obstetric fistula. A small percentage of women (less than 1 percent) reported that they had been treated for obstetric fistula. According to information gathered from women who have heard of the condition, 4 percent of other women resident in the household also suffer from obstetric fistula.

Maternal mortality is relatively high in Ethiopia with more than one in five deaths to women age 15-49 in the seven years preceding the survey attributed to pregnancy or pregnancy-related causes. The maternal mortality ratio, which measures the obstetric risk associated with each live birth, is 673 deaths per 100,000 live births for the period 1994-2000.

Direct estimates of male and female mortality obtained from the sibling history gathered in the EDHS show that there were more female than male deaths in the seven years preceding the survey (925 compared with 903). The female mortality rate is 6.4 deaths per 1,000 population, which is 8 percent higher than the male mortality rate of 5.9 deaths per 1,000 population.

Millennium Development Goal Indicators, Ethiopia 2005			
Goal	Indicator	Value	
1. Eradicate extreme poverty and hunger	Prevalence of underweight children under five years of age	Male: 38.9% Female: 37.9%	Total: 38.4%
2. Achieve universal primary education	Net enrolment ratio in primary education[1]	Male: 42.2% Female: 42.4%	Total: 42.3%
	Proportion of pupils starting grade 1 who reach grade 5[1]	Male: 73.7% Female: 83.5%	Total: 78.0%
	Literacy rate of 15-24-year olds[2]	Male: 67.2% Female: 41.6%	Total: 54.4%
3. Promote gender equality and empower women	Ratio of girls to boys in primary and secondary education	Primary education: 0.91 Secondary education: 0.65	
	Ratio of literate women to men, 15-24 years old		0.62
	Share of women in wage employment in the non-agricultural sector[3]		76.5%
4. Reduce child mortality	Under-five mortality rate (per 1,000 live births)		123 per 1,000
	Infant mortality rate (per 1,000 live births)		77 per 1,000
	Proportion of 1-year-old children immunised against measles	Male: 36.4% Female: 33.2%	Total: 34.9%
5. Improve maternal health	Maternal Mortality Ratio (per 100,000 live births)		673 per 100,000
	Proportion of births attended by skilled health personnel		5.7%
6. Combat HIV/AIDS, malaria, and other diseases	Condom use rate of the contraceptive prevalence rate (any modern method, currently married women 15-49)		1.32%
	Condom use at last high-risk sex (population age 15-24)[4]	Male: 46.8% Female: 28.4%	
	Percentage of population age 15-24 years with comprehensive knowledge of HIV/AIDS[5]	Male: 33.3% Female: 20.5%	
	Contraceptive prevalence rate (any modern method, currently married women 15-49)		13.9%
	Ratio of school attendance of orphans to school attendance of non-orphans age 10-14 years		0.9
7. Ensure environmental sustainability	Proportion of population using solid fuels[6]	Urban: 96.5% Rural: 99.9%	Total: 99.5%
	Proportion of population with sustainable access to an improved water source, urban and rural[7]	Urban: 92.7% Rural: 55.5%	Total: 60.0%
	Proportion of population with access to improved sanitation, urban and rural[8]	Urban: 22.6% Rural: 5.4%	Total: 7.4%

[1] Excludes children with parental status missing
[2] Refers to respondents who attended secondary school or higher and women who can read a whole sentence
[3] Wage employment includes respondents who receive wages in cash or in cash and kind.
[4] High risk refers to sexual intercourse with a partner who neither was a spouse nor who lived with the respondent; time frame is 12 months preceding the survey.
[5] A person is considered to have a comprehensive knowledge about AIDS when they say that use of condoms for every sexual intercourse and having just one uninfected and faithful partner can reduce the chance of getting the AIDS virus, that a healthy-looking person can have the AIDS virus, and when they reject the two most common local misconceptions. The most common misconceptions in Ethiopia are that AIDS can be transmitted through mosquito bites and that a person can become infected with the AIDS virus by sharing food or utensils with someone who is infected.
[6] Charcoal, firewood, straw, dung, or crop waste
[7] Improved water sources are: household connection (piped), public standpipe, borehole, protected dug well, protected spring, or rainwater collection.
[8] Improved sanitation technologies are: connection to a public sewer, connection to septic system, pour-flush latrine, simple pit latrine, or ventilated improved pit latrine.

INTRODUCTION 1

1.1 History, Geography, and Economy

History

Ethiopia is an ancient country with a rich diversity of peoples and cultures and a unique alphabet that has existed for more than 3,000 years. Palaeontological studies identify Ethiopia as one of the cradles of mankind. "Dinknesh" or "Lucy," one of the earliest and most complete hominoids discovered through archaeological excavations, dates back to 3.5 million years. Ethiopia's geographical and historical factors have had a great influence on the distribution of its peoples and languages. The country is situated at the cross roads between the Middle East and Africa. Through its long history, Ethiopia has become a melting pot of diverse customs and varied cultures, some of which are extremely ancient. Ethiopia embraces a complex variety of nations, nationalities and peoples, and linguistic groups. Its peoples altogether speak over 80 different languages constituting 12 Semitic, 22 Cushitic, 18 Omotic and 18 Nilo-Saharan languages (MOI, 2004).

The country has always maintained its independence, even during the colonial era in Africa. Ethiopia is one of the founding members of the United Nations. Ethiopia has been playing an active role in African affairs, specifically played a pioneering role in the formation of the Organization of African Unity (OAU). In fact, the capital city, Addis Ababa, has been a seat for the OAU since its establishment and continues serving as the seat for the African Union (AU) today.

Ethiopia was ruled by successive emperors and kings with a feudal system of government until 1974. In 1974, the military took over the reign of rule by force and administered the country until May 1991. Currently, a federal system of government exists, and political leaders are elected every five years. The government is made up of two tiers of parliament, the House of Peoples' Representatives and the House of the Federation. Major changes in the administrative boundaries within the country have been made three times since the mid-1970s, and at present Ethiopia is administratively structured into nine regional states, namely, Tigray, Affar, Amhara, Oromiya, Somali, Benishangul-Gumuz, Southern Nations, Nationalities and Peoples, Gambela and Harari regional states and two city administrations, that is, Addis Ababa and Dire Dawa Administration Council.

Geography

Ethiopia is situated in the Horn of Africa between 3 and 15 degrees north latitude and 33 and 48 degrees east longitude. It is a country with great geographical diversity; its topographic features range from the highest peak at Ras Dashen, which is 4,550 metres above sea level, down to the Affar Depression at 110 metres below sea level (CSA, 2000). The climatic condition of the country varies with the topography, with temperatures as high as 47 degrees Celsius in the Affar Depression and as low as 10 degrees Celsius in the highlands. The total area of the country is about 1.1 million square kilometres and Djibouti, Eritrea, Sudan, Kenya, and Somalia border it. A large part of the country is high plateaux and mountain ranges, with precipitous edges dissected by rushing streams of tributaries of famous rivers like the Abay (The Blue Nile), Tekeze, Awash, Omo, the Wabe Shebelie and the Baro-Akobo (MOI, 2004).

As the country is located within the tropics, its physical conditions and variations in altitude have resulted in great diversity of terrain, climate, soil, flora, and fauna. Ethiopia's major physical features are the result of extensive and spectacular faulting that cracked the old crystalline block of the African continent along the eastern side, producing the Great Rift Valley that stretches from the

eastern end of the Mediterranean Basin down to Mozambique in the southeastern part of our continent (MOI, 2004).

There are three principal climatic groups in Ethiopia, namely the tropical rainy, dry, and warm temperate climates. In Ethiopia the mean maximum and minimum temperatures vary spatially and temporally. Generally, the mean maximum temperature is higher from March to May and the mean minimum temperature is lower from November to December as compared to the other months (MOI, 2004). Ethiopia's mean annual distribution of rainfall is influenced by the direction of both westerly and southeasterly winds. Thus, in Ethiopia the general pattern of annual rainfall distribution remains seasonal, varying in amount, space, and time, as the rain moves from the southwest to the northeast of the country (MOI, 2004).

Economy

Ethiopia is an agrarian country and agriculture accounts for 54 percent of the gross domestic product (GDP). Agriculture employs about 80 percent of the population and accounts for about 90 percent of the exports (CSA, 2000). The country is one of the least developed in the world, with a per capita gross national income (GNI) in 2004 of US$110 (World Bank, 2006). Coffee has remained the main export of the country; however, other agricultural products are currently being introduced on the international market. The Ethiopian currency is the Birr, and at present, 1 US dollar is equivalent to about 8.60 Birr. Between 1974 and 1991, the country operated a central command economy under the socialist banner of the Derg regime. However, since their overthrow, Ethiopia has moved toward a market-oriented economy. At present, the country has one commercial and two specialized government-owned banks and also six privately owned commercial banks; one government-owned insurance company and seven private insurance companies (NBE, 2000). There are also 15 microfinancing institutions established by private organizations.

For the past three years the Ethiopian economy has shown mixed performance, with negative real GDP growth rate of 3.8 percent in 2002/03 as a result of drought, followed by strong positive performance of 11.3 percent and 8.9 percent during the past two years. Accordingly, during 2001/02-2004/05 the annual real GDP growth averaged 5 percent. As usual, variability of growth was mostly a result of the variability in the output of the agricultural sector. Agricultural value-added declined by about 12 percent in 2002/03 and rebounded by 18 percent in the following year. Inflation stood at 15.1 percent in 2002/03, but declined to 9 percent in 2003/04 and 6.8 percent in 2004/05. Exports registered substantial growth in recent years, owing to both increases in volume and revival in the prices of major exports in the international market. In 2003/04 and 2004/05 the total value of exports grew by 25.0 and 36.0 percent, respectively (MoFED, 2005).

Despite improvements in the past few years, sustaining long-term growth remains a challenge. Economic growth averaged about 5 percent per annum over the period 1999/2000 to 2004/05. Adjusting for population growth, the average per capita income rose by about 2.1 percent per annum. Major disruptions and shocks in the 1970s and 1980s resulted in economic decline, and the relatively good performance of the 1990s and early 2000s has only recently helped to reverse and raise incomes (MoFED, 2005). Ethiopia is one of the seven priority countries selected by the Millennium Project to prepare a scaled-up investment plan that would allow the country to meet the Millennium Development Goal (MDG) targets in 2005. Ethiopia is on the verge of embarking on the second poverty reduction strategy, which is referred to as the "Plan for Accelerated and Sustained Development to End Poverty (PASDEP)" that supersedes the first strategy "Sustainable Development and Poverty Reduction Program (SDPRP). The PASDEP carries forward important strategic directions pursued under the SDPRP—related to human development, rural development, food security and capacity building—but also embodies some bold new directions (MoFED, 2005). The PASDEP, which is the government's national development plan for the five years covering 2005/06-2009/10, consists of eight strategic elements, namely: a massive push to accelerated growth, a geographically differentiated strategy, addressing the population challenge, unleashing the potential of

Ethiopia's women, strengthening the infrastructural backbone, managing risk and volatility, scaling-up to reach the MDG, and creating jobs.

1.2 POPULATION

Despite its long history, there were no estimates of the total population of Ethiopia prior to the 1930s. However, population estimates for some towns like Axum, Lalibela and Debre Berhan are available from the 16th century onwards. Many of the estimates were made by travellers and were based on a general observation. The first ever population and housing census was conducted in 1984. The 1984 Census covered about 81 percent of the population of the country and official estimates were given for the remaining 19 percent that were not enumerated in the census. The second population and housing census was conducted in 1994. Unlike the first census, the second census covered the entire population. Table 1.1 provides a summary of the basic demographic indicators for Ethiopia from data collected in the two population and housing censuses. The population increased over the decade from 42.6 million in 1984 to 53.5 million in 1994. There was a slight decline in the population growth rate over the decade, from 3.1 percent in 1984 to 2.9 percent in 1994. Ethiopia is one of the least urbanized countries in the world, with less than 14 percent of the country urbanized in 1994. Female life expectancy is about two years higher than male life expectancy. Over the decade, life expectancy for both males and females did not improve.

Table 1.1 Basic demographic indicators

Indicator	1984 Census[1]	1994 Census[2]
Population (millions)	42.6	53.5
Intercensal grown rate (percent)	3.1	2.9
Density (pop./km^2.)	34.0	48.6
Percent urban	11.4	13.7
Life expectancy		
Male	51.1	50.9
Female	53.4	53.5

[1] Including Eritrea; CSA, 1991
[2] CSA, 1998

The majority of the population lives in the highland areas of the country. The main occupation of the settled population is farming, while in the lowland areas, the mostly pastoral population moves from place to place with their livestock in search of grass and water. Among the nine regional states, Amhara, Oromiya and SNNP comprised about 80 percent of the total population of the country. Affar, Somali, Benishangul-Gumuz and Gambela regions are relatively underdeveloped. Christianity and Islam are the main religions; 51 percent of the population are Orthodox Christians, 33 percent are Muslims, and 10 percent are Protestants. The rest follow a diversity of other faiths. The country is home to about 80 ethnic groups that vary in population size from more than 18 million people to less than 100 (CSA, 1998).

Efforts were made to generate reliable demographic data by conducting a number of demographic surveys. These include the 1981 Demographic Survey, the 1990 National Family and Fertility Survey, the 1995 Fertility Survey of Urban Addis Ababa, and the 2000 Ethiopia Demographic and Health Survey (EDHS). The 1990 National Family and Fertility Survey (NFFS) was the first nationally representative survey that incorporated wider information on fertility, family planning, contraceptive use and other related topics. In addition to the topics covered by the NFFS, the 2000 EDHS collected information on maternal and child health, nutrition and breastfeeding practices, HIV and other sexually transmitted diseases.

Population Policy

Population policies had been accorded a low priority in Ethiopia prior to the early 1990s. After the end of the Derg regime, the Transitional Government adopted a national population policy in 1993 (TGE, 1993b). The primary objective of the population policy was to harmonize the rate of population growth with socio-economic development to achieve a high level of welfare. The main long-term objective was to close the gap between high population growth and low economic productivity and to expedite socio-economic development through holistic integrated programs. Other objectives included preserving the environment and reducing rural-urban migration and reducing morbidity and mortality, particularly infant and child mortality. More specifically, the population policy was targeted to:

i. Reduce the total fertility rate from 7.7 children per woman in 1990 to 4.0 children per woman in 2015;
ii. Increase the prevalence of contraceptives from 4 percent in 1990 to 44 percent in 2015;
iii. Reduce maternal, infant and child morbidity and mortality rates as well as promote the level of general welfare of the population;
iv. Significantly increase female participation at all levels of the educational system;
v. Remove all legal and customary practices that prevent women from the full enjoyment of economic and social rights, including the full enjoyment of property rights and access to gainful employment;
vi. Ensure spatially balanced population distribution patterns with a view to maintaining environmental security and extending the scope of development activities;
vii. Improve productivity in agriculture and introduce off-farm and non-agricultural activities for the purpose of employment diversification;
viii. Mount an effective countrywide population information and education programme addressing issues pertaining to small family size and its relationship with human welfare and environmental security (TGE, 1993b).

The policy indicated that population activities will be undertaken in Ethiopia under the framework that would be defined in the technical and programmatic guidelines to be developed by the Office of Population in consultation with the National Population Council. The policy also proposed the establishment of certain institutional structures for its implementation. In general, the national population policy covered all the major grounds that need to be covered in providing directives on the management of population dynamics in the interest of sustainable development.

1.3 Health Priorities and Programming

The health system in Ethiopia is underdeveloped, and transportation problems are severe. The majority of the population resides in the rural areas and has little access to any type of modern health institution. It is estimated that about 75 percent of the population suffers from some type of communicable disease and malnutrition, which are potentially preventable (TGE, 1995). There was no health policy up through the 1950s; however, in the early 1960s, a health policy initiated by the World Health Organization (WHO) was adopted. In the mid-1970s, during the Derg regime, an elaborate health policy with emphasis on disease prevention and control was formulated. This policy gave priority to rural areas and advocated community involvement (TGE, 1993a). At present, the government health policy takes into account population dynamics, food availability, acceptable living conditions, and other requisites essential for health improvements (TGE, 1993a). The present health policy arises from the fundamental principle that health constitutes physical, mental, and social well-being for the enjoyment of life and for optimal productivity. To realize this objective, the government has established the Health Sector Development Programme (HSDP), which incorporates a 20-year health development strategy, through a series of five-year investment programmes (MOH, 1999). This programme calls for the democratisation and decentralization of health services; development of preventive health care; capacity building within the health service system; equitable access to health services; self-reliance; promotion of intersectoral activities and participation of the private sector,

including non-governmental organizations (NGOs); and cooperation and collaboration with all countries in general and neighbouring countries in particular and between regional and international organizations (TGE, 1993a).

The HSDP was implemented in two cycles, currently extending into the third programme (HSDP III). The focus of HSDP III will be on poverty-related health conditions, communicable diseases such as malaria and diarrhoea, and health problems that affect mothers and children. Efforts will be concentrated on rural areas and on extending services outwards from static facilities to reach villages and households. In addition, and more importantly, gender will be mainstreamed at all levels of the health system (MoFED, 2005). The main implementation modalities identified were:

i. The Health Service Extension Programme (HSEP)—which involves the use of female workers to deliver 16 health care packages in four main areas, i.e., hygiene and environmental sanitation, disease prevention and control, family health services, and health education and communication on outreach basis.
ii. The Accelerated Expansion of Primary Health Care Coverage—which has already been developed and endorsed by the government, with a view to achieving universal coverage of primary health care in the rural population by 2008.
iii. A Health Care Financing Strategy—which aims at increasing resource flow to the health sector, improving efficiency of resource utilization, and ensuring sustainability of financing to improve the coverage and quality of health service;
iv. The Health Sector Human Resource Development Plan—which aims at overcoming problems related to the absolute shortage, maldistribution and productivity of workforce.

Despite the progress to date, coverage of the system remains inadequate, and the quality of services available, especially in rural areas, is variable. In line with the government's current five-year national plan, the health sector will continue to emphasize primary health care and preventive services; with a big focus on extending these services to those who have not been reached, and improving the effectiveness of services, especially addressing difficulties in staffing and the flow of drugs. The major health outcome objectives envisaged in the five-year period include (MoFED, 2005):

i. To cover all rural localities with the HSEP to achieve universal primary health care coverage by the year 2008;
ii. To reduce the maternal mortality ratio from 871/100,000 to 600 per 100,000 live births;
iii. To reduce under-five mortality from 140 to 85 per 1000 population, and the infant mortality rate from 97 to 45 per 1000 populations;
iv. To reduce total fertility rate from 5.9 to 4.0 children per woman;
v. To reduce the adult incidence of HIV from 0.68 to 0.65 and maintain the prevalence of HIV at 4.4 percent;
vi. To reduce morbidity attributed to malaria from 22 percent to 10 percent;
vii. To reduce the case fatality rate of malaria in age groups five years and above from 4.5 percent to 2 percent and the rate in children under five from 5 percent to 2 percent; and
viii. To reduce mortality attributed to tuberculosis (TB) from 7 percent to 4 percent of all treated cases.

1.4 Objectives of the Survey

The principal objective of the 2005 Ethiopia Demographic and Health Survey (DHS) is to provide current and reliable data on fertility and family planning behaviour, child mortality, adult and maternal mortality, children's nutritional status, the utilization of maternal and child health services, knowledge of HIV/AIDS and prevalence of HIV/AIDS and anaemia. The specific objectives are to:

- collect data at the national level which will allow the calculation of key demographic rates;

- analyze the direct and indirect factors which determine the level and trends of fertility;
- measure the level of contraceptive knowledge and practice of women and men by method, urban-rural residence, and region;
- collect high quality data on family health including immunization coverage among children, prevalence and treatment of diarrhoea and other diseases among children under five, and maternity care indicators including antenatal visits and assistance at delivery;
- collect data on infant and child mortality and maternal and adult mortality;
- obtain data on child feeding practices including breastfeeding and collect anthropometric measures to use in assessing the nutritional status of women and children;
- collect data on knowledge and attitudes of women and men about sexually transmitted diseases and HIV/AIDS and evaluate patterns of recent behaviour regarding condom use;
- conduct haemoglobin testing on women age 15-49 and children under age five years in a subsample of the households selected for the survey to provide information on the prevalence of anaemia among women in the reproductive ages and young children;
- collect samples for anonymous HIV testing from women and men in the reproductive ages to provide information on the prevalence of HIV among the adult population.

This information is essential for informed policy decisions, planning, monitoring, and evaluation of programs on health in general and reproductive health in particular at both the national and regional levels. A long-term objective of the survey is to strengthen the technical capacity of the Central Statistical Agency to plan, conduct, process, and analyse data from complex national population and health surveys. Moreover, the 2005 Ethiopia DHS provides national and regional estimates on population and health that are comparable to data collected in similar surveys in other developing countries. The first ever Demographic and Health Survey (DHS) in Ethiopia was conducted in the year 2000 as part of the worldwide DHS programme. Data from the 2005 Ethiopia DHS survey, the second such survey, add to the vast and growing international database on demographic and health variables.

Wherever possible, the 2005 EDHS data is compared with data from the 2000 EDHS. In addition, where applicable, the 2005 EDHS is compared with the 1990 NFFS, which also sampled women age 15-49. Husbands of currently married women were also covered in this survey. However, for security and other reasons, the NFFS excluded from its coverage Eritrea, Tigray, Asseb, and Ogaden autonomous regions. In addition, fieldwork could not be carried out for Northern Gondar, Southern Gondar, Northern Wello, and Southern Wello due to security reasons. Thus, any comparison between the EDHS and the NFFS has to be interpreted with caution.

1.5 Organization of the Survey

The 2005 EDHS was carried out under the aegis of the Ministry of Health and was implemented by the then Population and Housing Census Commission Office (PHCCO), now merged with the Central Statistical Agency (CSA). The testing of the blood samples for HIV status was handled by the Ethiopia Health and Nutrition Research Institute (EHNRI). ORC Macro provided technical assistance through its MEASURE DHS project. The resources for the conduct of the survey were committed by the Government of Ethiopia, and various international donor organizations and governments, namely, the United States Agency for International Development (USAID), the President's Emergency Plan for AIDS Relief (PEPFAR), the Dutch and Irish Governments, and the United Nations Population Fund (UNFPA).

A steering committee composed of major stakeholders drawn from the government, international organizations and NGOs was formed. The steering committee was responsible for coordination, oversight, advice and decision-making on all major aspects of the survey undertaking.

Members of the steering committee include the Ministry of Health (MOH), PHCCO, EHNRI, the HIV/AIDS Prevention and Control Office (HAPCO), the National Office of Population (NOP), the Ethiopian Science and Technology Agency, the Consortium of Reproductive Health Associations (CORHA), USAID, UNFPA, UNICEF, and WHO. A technical committee was also formed from among the steering committee institutions.

1.6 Sample Design

The 2005 EDHS sample was designed to provide estimates for the health and demographic variables of interest for the following domains: Ethiopia as a whole; urban and rural areas of Ethiopia (each as a separate domain); and 11 geographic areas (9 regions and 2 city administrations), namely: Tigray; Affar; Amhara; Oromiya; Somali; Benishangul-Gumuz; Southern Nations, Nationalities and Peoples (SNNP); Gambela; Harari; Addis Ababa and Dire Dawa. In general, a DHS sample is stratified, clustered and selected in two stages. In the 2005 EDHS a representative sample of approximately 14,500 households from 540 clusters was selected. The sample was selected in two stages. In the first stage, 540 clusters (145 urban and 395 rural) were selected from the list of enumeration areas (EA) from the 1994 Population and Housing Census sample frame.

In the census frame, each of the 11 administrative areas is subdivided into zones and each zone into weredas. In addition to these administrative units, each wereda was subdivided into convenient areas called census EAs. Each EA was either totally urban or rural and the EAs were grouped by administrative wereda. Demarcated cartographic maps as well as census household and population data were also available for each census EA. The 1994 Census provided an adequate frame for drawing the sample for the 2005 EDHS. As in the 2000 EDHS, the 2005 EDHS sampled three of seven zones in the Somali Region (namely, Jijiga, Shinile and Liben). In the Affar Region the incomplete frame used in 2000 was improved adding a list of villages not previously included, to improve the region's representativeness in the survey. However, despite efforts to cover the settled population, there may be some bias in the representativeness of the regional estimates for both the Somali and Affar regions, primarily because the census frame excluded some areas in these regions that had a predominantly nomadic population.

The 540 EAs selected for the EDHS are not distributed by region proportionally to the census population. Thus, the sample for the 2005 EDHS must be weighted to produce national estimates. As part of the second stage, a complete household listing was carried out in each selected cluster. The listing operation lasted for three months from November 2004 to January 2005. Between 24 and 32 households from each cluster were then systematically selected for participation in the survey.

Because of the way the sample was designed, the number of cases in some regions appear small since 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 in parentheses and percentages based on fewer than 25 unweighted cases are suppressed.

1.7 Questionnaires

In order to adapt the standard DHS core questionnaires to the specific socio-cultural settings and needs in Ethiopia, its contents were revised through a technical committee composed of senior and experienced demographers of PHCCO. After the draft questionnaires were prepared in English, copies of the household, women's and men's questionnaires were distributed to relevant institutions and individual researchers for comments. A one-day workshop was organized on November 22, 2004 at the Ghion Hotel in Addis Ababa to discuss the contents of the questionnaire. Over 50 participants attended the national workshop and their comments and suggestions collected. Based on these comments, further revisions were made on the contents of the questionnaires. Some additional questions were included at the request of MOH, the Fistula Hospital, and USAID. The questionnaires were finalized in English and translated into the three main local languages: Amharic, Oromiffa and

Tigrigna. In addition, the DHS core interviewer's manual for the Women's and Men's Questionnaires, the supervisor's and editor's manual, and the HIV and anaemia field manual were modified and translated into Amharic.

The Household Questionnaire was used to list all the usual members and visitors in the selected households. Some basic information was collected on the characteristics of each person listed, including age, sex, education, and relationship to the head of the household. The main purpose of the Household Questionnaire was to identify women and men who were eligible for the individual interview. The Household Questionnaire also collected information on characteristics of the household's dwelling unit, such as the source of water, type of toilet facilities, materials used for the floor and roof of the house, ownership of various durable goods, and ownership and use of mosquito nets. In addition, this questionnaire was used to record height and weight measurements of women age 15-49 and children under the age of five, households eligible for collection of blood samples, and the respondents' consent to voluntarily give blood samples.

The Women's Questionnaire was used to collect information from all women age 15-49 years and covered the following topics.

- Household and respondent characteristics
- Fertility levels and preferences
- Knowledge and use of family planning
- Childhood mortality
- Maternity care
- Childhood illness, treatment, and preventative actions
- Anaemia levels among women and children
- Breastfeeding practices
- Nutritional status of women and young children
- Malaria prevention and treatment
- Marriage and sexual activity
- Awareness and behaviour regarding AIDS and STIs
- Harmful traditional practices
- Maternal mortality

The Men's Questionnaire was administered to all men age 15-59 years living in every second household in the sample. The Men's Questionnaire collected similar information contained in the Women's Questionnaire, but was shorter because it did not contain questions on reproductive history, maternal and child health, nutrition and maternal mortality.

1.8 Haemoglobin and HIV Testing

In one in two households selected for the 2005 EDHS, women age 15-49 and children age 6-59 months were tested for anaemia. In addition, all eligible women and men in this subsample of households were tested for HIV. Anaemia and HIV testing were only carried out if consent was provided by the respondents and in the case of a minor, by the parent or guardian. Consent for HIV and anaemia was obtained separately. The protocol for haemoglobin and HIV testing was approved by the National Ethics Review Committee of the Ethiopia Science and Technology Commission in Addis Ababa, Ethiopia and the ORC Macro Institutional Review Board in Calverton, USA.

1.8.1 Haemoglobin Testing

Haemoglobin testing is the primary method of anaemia diagnosis. In the EDHS, testing was done using the HemoCue system. A consent statement was read to the eligible woman and to the parent or responsible adult of young children and women age 15-17. This statement explained the purpose of the test, informed prospective subjects tested and/or their caretakers that the results would

be made available as soon as the test was completed, and requested permission for the test to be carried out, as well as consent to report their names to health personnel in the local health facility if their haemoglobin level was severe.

Before the blood was taken, the finger was wiped with an alcohol prep swab and allowed to air-dry. Then the palm side of the end of a finger was punctured with a sterile, non-reusable, self-retractable lancet and a drop of blood collected on a HemoCue microcuvette and placed in a HemoCue photometer which displays the result. For children 6-11 months who were particularly undernourished and bony, a heel puncture was made to draw a drop of blood. The results were recorded in the Household Questionnaire, as well as on a brochure given to each woman, parent, or responsible adult, explaining what the results meant. For each person whose haemoglobin level was severe, and who agreed to have the condition reported, a referral was given to the respondent to be taken to a health facility.

1.8.2 HIV/AIDS Testing

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

If, after explaining the procedure, the confidentiality of the data, and the fact that the test results would not be made available to the subject, a respondent consented to the HIV testing, a minimum of three blood spots was obtained from a finger prick and collected on a filter paper to which was affixed a bar code label unique to the respondent, but with no other identifying information attached. Each respondent who consented to being tested for HIV was given an information brochure on AIDS, a list of fixed sites providing voluntary counselling and testing (VCT) services throughout the country, and a voucher to access free VCT services at any of these sites for the respondent and/or the partner.

Each dried blood spot (DBS) sample was given a bar code label, with a duplicate label attached to the Household Questionnaire on the line showing consent for that respondent. A third copy of the same bar code label was affixed to a Blood Sample Transmittal Form to track the blood samples from the field to the laboratory. Filter papers were dried overnight in a plastic drying box, after which the biomarker interviewer packed them in individual Ziploc bags for that particular sample point. Blood samples were periodically collected in the field along with the completed questionnaires and transported to the PHCCO headquarters in Addis Ababa for logging in, after which they were taken to EHNRI for HIV testing.

In preparation for carrying out the HIV testing, an assessment was conducted jointly by EHNRI staff and Macro consultants (from the Zambia Tropical Disease Research Centre) of the equipment and staff training required for the testing of the DBS samples. In addition, the consultants together with a biomarker specialist from ORC Macro worked with laboratory scientists at EHNRI to conduct a validation study and set up the dried blood spot methodology to test for HIV using two Enzyme-Linked Immunosorbent Assay (ELISA) tests from different manufacturers. Several meetings with ORC Macro staff, EHNRI staff, and staff of PHCCO, were held to discuss the monitoring of sample collection in the field, the collection of samples from the field, and the delivery of the samples to the laboratory, with built-in checks to verify the samples collected and delivered. It was emphasized at the meeting that the period between the collecting of blood samples in the field and the time of refrigeration should not exceed 14 days. The DBS filter paper samples with barcodes were

received by EHNRI. Upon receipt, the samples were counted and checked against the transmittal sheet to verify the barcode identifications and kept frozen until testing was started in September.

All specimens were tested with a screening test, Vironostika HIV Uni-Form Plus O manufactured by BioMerieux (ELISA I). All samples positive on the first screening test as well as 10 percent of the negatives were further tested with Enzygnost Anti HIV-1/2 Plus manufactured by Dade Behring (ELISA 2). According to the testing algorithm, samples positive on both ELISAs were regarded as positive and samples negative for both ELISAs were regarded as negative.

Samples that had discordant results on ELISA I and ELISA II were subject to a retest with both ELISAs. The results were obtained and interpreted in the same manner as indicated above for the repeat ELISA testing. Discordant samples from the repeat ELISAs, were tested with a confirmatory test, Genetic Systems HIV-1 Western Blot manufactured by Bio-Rad. The result on immunoblotting (Western Blot) was regarded as the final result.

1.9 Listing, Pretest, Training and Fieldwork

1.9.1 Listing

After the selection of the 540 clusters throughout the 11 administrative areas, a listing operation in the selected clusters starting from the month of October 2004 was conducted. For this purpose, training was conducted for 46 listers who had been recruited from all the regions to do the listing of households and delineation of EAs. A manual that described the listing procedure was prepared as a guideline and the training was conducted using classroom demonstrations and field practices. Instructions were given on the use of Global Positioning System (GPS) units to obtain locational coordinates for selected EAs. The listing was performed by organizing the listers into teams, with two listers per team. Seven field coordinators were also assigned from the head office to perform quality checks and handle all the administrative and financial issues of the listing staff. Supervision was carried out by the cartographic division of PHCCO to assess the quality of the field operation and the level of the accuracy of the GPS readings. Though the listing operation was aimed to be completed in three months, it was extended up to five months in some parts of the country, primarily because of a shortage of vehicles.

1.9.2 Pretest

Prior to the start of the fieldwork, the questionnaires were pretested in all the three local languages, to make sure that the questions were clear and could be understood by the respondents. In order to conduct the pilot survey, 12 interviewers were recruited from the Amhara, Oromiya and Tigray regions. In addition to the new recruits, 14 senior staff members of PHCCO were trained for a period of three weeks to conduct the pilot fieldwork and serve as trainers for the main fieldwork. The pilot training which was conducted from January 24 to February 11, 2005, included training in blood sample collection for the anaemia and HIV testing. The pilot survey was conducted from 11-25 February 2005 in four selected sites. The areas selected for the pretest were urban Addis Ababa and both urban and rural parts of Mekele, Ambo and Debre Birhan areas. Based on the findings of the pretest, the household, the women's and men's questionnaires were further refined in all the three local languages.

1.9.3 Training and Fieldwork

The recruitment of interviewers, editors and supervisors was conducted in the 9 regions and 2 city administrations taking into account language skills of the specific areas. Accommodation was arranged for the trainees as well as the trainers at a training site in Addis Ababa. The training of interviewers, editors and supervisors was conducted from March 14 to April 20, 2005. The Amharic questionnaires were used during the training, while the Tigrigna and Oromiffa versions were simultaneously checked against the Amharic questionnaires to ensure accurate translation. In addition

to classroom training, trainees did several days of field practice to gain more experience on interviewing in the three local languages and fieldwork logistics.

A total of 271 trainees were trained in five classrooms. In each class the training was conducted by two senior staff members of PHCCO. The Family Guidance Association of Ethiopia conducted a session demonstrating and explaining the different family planning methods, while UNFPA and CDC conducted a session on HIV/AIDS. After the training on how to complete the household, women's and men's questionnaires was completed, an exam was given to all trainees. On the basis of the scores on the exam and overall performances in the classroom, 240 trainees were selected to participate in the main fieldwork. From the group 30 of the best male trainees were selected as supervisors and 30 of the best female interviewers were identified as field editors. The remaining 180 trainees were selected to be interviewers. The trainees not selected to participate in the fieldwork were kept as reserve.

After completing the interviewers' training, the field editors and supervisors were trained for an additional three days on how to supervise the fieldwork and edit questionnaires in the field to ensure data quality.

Thirty male interviewers and 30 female interviewers were selected to attend the biomarker training. In addition, the 30 field editors also attended the training, as a backup to the biomarker interviewers. Thirteen regional laboratory technicians who were recruited from Private Laboratory Consortium Unit (PLCU) to serve as regional coordinators for the HIV testing were also trained, of whom 11 were eventually selected to supervise the blood collection. During the one-week biomarker training, six experienced experts from ORC Macro and EHNRI provided theoretical training followed by practical classroom demonstrations of the techniques for testing of haemoglobin and collection of dried blood spots from a finger prick for HIV testing. In addition to the classroom training, trainees did several days of field practice to gain more experience on blood collection.

A total of 30 data collection teams, each composed of four female interviewers, two male interviewers, one female editor, and a male team supervisor, were organized for the main fieldwork. Furthermore, the 30 field teams were organized into 11 regional groups, each headed by an experienced senior staff of PHCCO and accompanied by a regional coordinator from PLCU. The survey was fielded from April 27 to August 30, 2005. The fieldwork was closely monitored for data quality through regular field visits by senior staff from PHCCO, ORC Macro, and other member organizations of the Steering Committee. Data quality was also monitored through field check tables generated from completed clusters simultaneously data entered and produced during the fieldwork. Five senior experts from PHCCO were permanently assigned to monitor the fieldwork throughout the survey period by moving from one region to another. Continuous communication was maintained between the field staff and the headquarters through cell phones.

Fieldwork was successfully completed in 535 of the 540 clusters, with the 5 clusters not covered primarily due to reasons of inaccessibility. Two of these clusters were located in rural Oromiya, one in rural Somali, one in rural SNNP and one in urban Gambela. DBS samples were collected in 534 out of the 535 clusters and delivered to EHNRI for analysis. In one cluster in the Gambela Region, households refused to be finger-pricked for cultural and traditional reasons.

1.10 Data Processing

The processing of the 2005 EDHS results began soon after the start of fieldwork. Completed questionnaires were returned periodically from the field to the data processing department at the PHCCO headquarters. A total of 17 new recruits had been trained for office editing/coding and data entry of the questionnaires. Guidelines for the editing/coding procedures had been issued and questions, which needed coding, were identified and a list of codes prepared. After the actual entry of the data began, additional data entry operators were recruited and entry was performed in two shifts. A total of 22 data entry operators and 4 office editors carried out data entry and primary office editing

activities. Each of the questionnaires was keyed twice by two separate entry clerks. Consistency checks were made and entry errors were manually checked by going back to the questionnaires. A secondary editing program was then run on the data to indicate questions that showed inconsistency and these were also corrected by secondary editors. The data entry for the 535 clusters that started on 9 May 2005 was completed on 24 September 2005.

1.11 Response Rates

Table 1.2 shows the household and individual interview response rates for the survey. A total of 14,645 households were selected, of which 13,928 were occupied. The total number of households interviewed was 13,721, yielding a household response rate of 99 percent.

A total of 14,717 eligible women were identified in these households and interviews were completed for 14,070 women, yielding a response rate of 96 percent. One in two households were selected for the male survey and 6,778 eligible men were identified in this subsample of households, of whom 6,033 were successfully interviewed, yielding a response rate of 89 percent. The response rates are higher in rural areas than urban areas for both males and females.

Table 1.2 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence, Ethiopia 2005

	Residence		
Result	Urban	Rural	Total
Household interviews			
Households selected	3,989	10,656	14,645
Households occupied	3,762	10,166	13,928
Households interviewed	3,666	10,055	13,721
Household response rate	97.4	98.9	98.5
Interviews with women			
Number of eligible women	4,686	10,031	14,717
Number of eligible women interviewed	4,423	9,647	14,070
Eligible woman response rate	94.4	96.2	95.6
Household interviews for men			
Households selected	1,947	5,213	7,160
Households occupied	1,828	4,959	6,787
Households interviewed	1,785	4,904	6,689
Household response rate	97.6	98.9	98.6
Interviews with men			
Number of eligible men	1,948	4,830	6,778
Number of eligible men interviewed	1,628	4,405	6,033
Eligible man response rate	83.6	91.2	89.0

HOUSEHOLD POPULATION AND HOUSING CHARACTERISTICS

2

This chapter provides a summary of the socioeconomic characteristics of households and respondents surveyed, including age, sex, place of residence, educational status, household facilities, 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 indicators of the representativeness of the survey. The information is also useful in understanding and identifying the major factors that determine or influence the basic demographic indicators of the population.

The 2005 EDHS collected information from all usual residents of a selected household (the de jure population) and persons who had stayed in the selected household the night before the interview (the de facto population). Since the difference between these two populations is very small and to maintain comparability with other DHS reports, all tables in this report refer to the de facto population unless otherwise specified. A household was 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.

2.1 HOUSEHOLD POPULATION BY AGE AND SEX

Age and sex are important demographic variables and are the primary basis of demographic classification in vital statistics, censuses, and surveys. They are also very important variables in the study of mortality, fertility, and nuptiality. In general, a cross-classification with sex is useful for the effective analysis of all forms of data obtained in surveys.

The distribution of the household population in the 2005 EDHS is shown in Table 2.1 by five-year age groups, according to urban-rural residence and sex. The total population counted in the survey was 67,556, with females slightly outnumbering males. The results indicate an overall sex ratio of 99 males per 100 females. The sex ratio is higher in rural areas (101 males per 100 females) than in urban areas (85 males per 100 females).

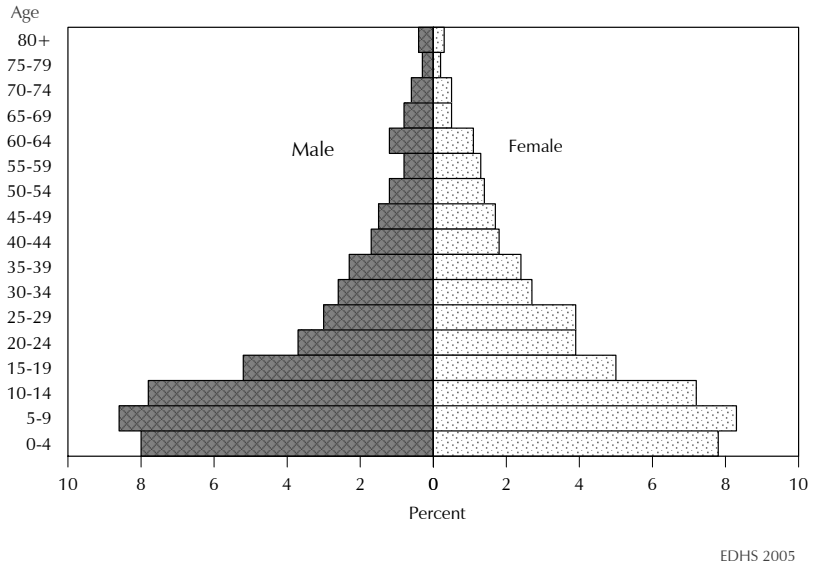
Table 2.1 Household population by age, sex, and residence

Percent distribution of the de facto household population by five-year age groups, according to sex and residence, Ethiopia 2005

	Urban			Rural			Total		
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total
<5	10.3	8.9	9.5	16.9	16.5	16.7	16.1	15.5	15.8
5-9	11.5	10.6	11.0	17.9	17.5	17.7	17.2	16.6	16.9
10-14	13.7	12.0	12.8	15.8	14.7	15.3	15.6	14.3	15.0
15-19	14.3	16.2	15.3	10.0	9.1	9.5	10.4	10.1	10.2
20-24	12.0	12.7	12.4	6.9	7.1	7.0	7.5	7.8	7.7
25-29	8.4	10.2	9.4	5.7	7.3	6.5	6.0	7.7	6.9
30-34	6.1	5.8	5.9	5.2	5.3	5.3	5.3	5.4	5.3
35-39	5.4	5.4	5.4	4.4	4.8	4.6	4.5	4.8	4.7
40-44	4.3	3.8	4.0	3.4	3.5	3.4	3.5	3.5	3.5
45-49	4.1	3.9	4.0	3.0	3.3	3.1	3.1	3.4	3.3
50-54	2.6	3.2	2.9	2.5	2.8	2.7	2.5	2.9	2.7
55-59	1.7	2.2	2.0	1.7	2.6	2.1	1.7	2.5	2.1
60-64	2.2	2.0	2.1	2.3	2.2	2.3	2.3	2.2	2.2
65-69	1.2	1.1	1.2	1.6	1.1	1.4	1.6	1.1	1.3
70-74	1.2	0.7	0.9	1.2	1.1	1.1	1.2	1.0	1.1
75-79	0.4	0.5	0.5	0.6	0.4	0.5	0.6	0.4	0.5
80 +	0.6	0.8	0.7	0.9	0.7	0.8	0.9	0.7	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	3,752	4,425	8,177	29,903	29,475	59,378	33,656	33,900	67,556

The age structure of the household population is typical of a society with a youthful population. The sex and age distribution of the population is shown in the population pyramid in Figure 2.1. Ethiopia has a pyramidal age structure due to the large number of children under 15 years of age. Children under 15 years of age account for 48 percent of the population, a feature of populations with high fertility levels. Forty-nine percent of the population is in the age group 15-64 and about 4 percent are over 65.

Figure 2.1 **Population Pyramid**



2.2 HOUSEHOLD COMPOSITION

Table 2.2 shows the distribution of households in the survey by the sex of the head of the household and by the number of household members in urban and rural areas. Households in Ethiopia are predominantly male headed, a common feature of most African countries. More than one in five households are headed by women with the proportion of female-headed households much higher in urban than in rural areas.

The average household size observed in the survey is 5 persons, which is slightly higher than the 2000 EDHS (4.8 persons). Rural households have 5.2 persons per household and are larger than urban households (4.2 persons). Single-person households are more common in urban areas (13 percent) than in rural areas (4 percent). Only 7 percent of households have nine or more members.

Table 2.2 Household composition

Percent distribution of households by sex of head of household and by household size, according to residence, Ethiopia 2005

Characteristic	Residence: Urban	Residence: Rural	Total
Household headship			
Male	61.4	79.9	77.2
Female	38.6	20.1	22.8
Total	100.0	100.0	100.0
Number of usual members			
1	13.0	3.7	5.0
2	13.0	8.4	9.0
3	16.4	13.4	13.8
4	17.6	15.3	15.7
5	14.4	17.2	16.8
6	10.5	14.6	14.0
7	6.4	11.9	11.1
8	3.9	7.7	7.2
9+	4.8	7.8	7.4
Total	100.0	100.0	100.0
Number of households	1,974	11,747	13,721
Mean size	4.2	5.2	5.0

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

Detailed information on children's living arrangements and orphanhood is presented in Table 2.3. In Ethiopia, 73 percent of children under 18 live with both parents, 12 percent live with only their mother, 4 percent live with only their father,

and 10 percent live with neither parent. Seven percent of children live with their mother even though their father is alive, 2 percent of children live with their father even though their mother is alive, and 6 percent live with neither parent even though both of them are alive. Eight percent of children do not have a father alive and 4 percent do not have a mother alive. The percentage of children not living with their parents increases with age of the child. The proportion of children living with both parents varies little by sex. However, rural children are more likely to live with both parents than urban children. The highest proportion of children living with both parents is in Somali (79 percent), while the lowest proportion is in Addis Ababa (49 percent).

Table 2.3 Children's living arrangements and orphanhood

Percent distribution of de jure children under age 18 by children's living arrangements and survival status of parents, according to background characteristics, Ethiopia 2005

Background characteristic	Living with both parents	Living with mother but not father		Living with father but not mother		Not living with either parent				Missing information on father or mother	Total	Percentage with one or both parents dead	Number of children
		Father alive	Father dead	Mother alive	Mother dead	Both alive	Only father alive	Only mother alive	Both dead				
Age													
<2	88.6	8.7	1.2	0.3	0.2	0.7	0.1	0.0	0.0	0.2	100.0	1.6	4,287
2-4	84.6	6.5	2.4	1.2	0.9	3.3	0.3	0.3	0.2	0.2	100.0	4.2	6,545
5-9	74.9	5.9	5.0	2.6	1.9	6.4	0.8	1.0	1.0	0.5	100.0	9.8	11,579
10-14	65.2	6.5	7.8	2.9	3.2	8.5	1.3	2.2	1.9	0.5	100.0	16.5	10,284
15-17	52.0	7.1	9.9	3.2	4.2	11.7	2.2	3.9	3.5	2.3	100.0	23.7	4,308
Sex													
Male	73.6	6.2	5.7	2.5	2.3	5.7	0.8	1.4	1.3	0.6	100.0	11.5	18,950
Female	72.1	7.1	5.3	1.9	2.0	7.1	1.1	1.4	1.3	0.7	100.0	11.2	18,052
Residence													
Urban	52.6	12.7	8.6	3.4	1.7	12.1	1.9	2.5	3.5	0.9	100.0	18.4	3,455
Rural	74.9	6.0	5.1	2.1	2.2	5.8	0.9	1.3	1.1	0.6	100.0	10.6	33,547
Region													
Tigray	70.0	12.9	5.0	2.1	1.8	4.5	1.0	0.9	1.4	0.5	100.0	10.1	2,344
Affar	75.2	7.1	5.8	2.1	3.1	3.3	1.3	0.7	1.2	0.3	100.0	12.0	408
Amhara	71.5	6.9	5.4	2.9	2.0	6.6	1.4	1.6	1.2	0.6	100.0	11.7	8,835
Oromiya	73.8	5.8	5.4	2.0	2.6	6.8	0.7	1.1	1.4	0.5	100.0	11.2	13,918
Somali	79.4	5.9	4.7	1.0	2.6	3.4	0.4	0.5	1.5	0.8	100.0	9.7	1,643
Benishangul-Gumuz	72.5	8.7	7.2	1.5	2.1	4.0	1.1	1.3	1.1	0.4	100.0	13.0	327
SNNP	74.8	5.7	5.5	2.1	1.6	6.0	1.0	1.8	0.9	0.7	100.0	10.8	8,449
Gambela	63.9	10.3	8.1	2.5	0.9	8.5	0.9	2.3	1.1	1.5	100.0	13.2	101
Harari	67.1	7.5	5.2	1.4	1.3	10.3	1.4	1.8	1.7	2.2	100.0	11.6	74
Addis Ababa	48.5	10.1	8.7	3.6	1.7	15.5	2.0	4.2	4.2	1.6	100.0	21.0	773
Dire Dawa	62.0	10.1	7.8	2.3	1.7	10.0	0.6	2.1	2.5	0.7	100.0	14.8	130
Wealth quintile													
Lowest	73.5	7.5	6.6	2.3	1.7	4.7	0.8	1.0	1.3	0.6	100.0	11.6	7,758
Second	73.9	6.9	5.6	1.8	2.4	4.9	1.3	1.4	0.9	0.8	100.0	11.6	7,534
Middle	74.7	5.7	4.8	2.2	2.5	6.2	0.9	1.5	1.1	0.4	100.0	10.8	7,574
Fourth	76.6	4.5	4.5	2.1	2.2	6.5	0.6	1.3	1.1	0.6	100.0	9.8	7,605
Highest	64.4	8.8	5.8	2.9	1.8	10.2	1.3	1.9	2.2	0.7	100.0	13.1	6,531
Total age <18	72.8	6.6	5.5	2.2	2.1	6.4	1.0	1.4	1.3	0.6	100.0	11.3	37,002
Total age <15	75.6	6.6	4.9	2.1	1.9	5.7	0.8	1.1	1.0	0.4	100.0	9.7	32,694

The EDHS administered three questions on succession planning to women and men. Women and men were first asked if they were primary caregivers to children under the age of 18, and if they were, an additional question was administered to ascertain if they had made any arrangements for someone to care for these children in the event of their illness or inability to care for their young children themselves. Information on succession planning is shown in Table 2.4.

Three-fifths of women and men are primary caregivers to their children. Among primary caregivers, just under half (46 percent) had made provisions for someone else to take care of their children in case of their illness or inability to care for their own children. As the data show, younger, male, urban, highly educated and wealthy respondents are more likely than other respondents to make arrangements in the case of an eventuality. Succession planning varies markedly by region, with respondents residing in Harari (68 percent) most likely and respondents residing in Dire Dawa (34 percent) least likely to make plans in the case of an eventuality.

Table 2.4 Succession planning

Percentage of de facto women and men age 15-49 who are the primary caregivers of children under age 18 years, and among the primary caregivers, the percentage who have made arrangements for someone else to care for the children in the event of their own inability to do so because of illness or death, by background characteristics, Ethiopia 2005

Background Characteristics	Percentage of women and men who are primary caregivers	Number of women and men age 15-49	Percentage of caregivers who have made succession arrangements	Number of primary caregivers
Age				
15-19	17.0	4,601	52.8	783
20-29	60.3	6,869	48.0	4,143
30-39	83.2	4,815	45.3	4,006
40-49	81.3	3,249	43.0	2,642
Sex				
Women	66.1	14,070	42.5	9,306
Men	41.5	5,464	61.7	2,268
Residence				
Urban	45.1	3,353	50.8	1,513
Rural	62.2	16,181	45.5	10,061
Region				
Tigray	61.4	1,235	55.8	758
Affar	60.6	205	45.7	124
Amhara	63.8	4,828	39.3	3,082
Oromiya	52.8	7,051	37.4	3,725
Somali	68.8	666	59.4	459
Benishangul-Gumuz	63.7	174	35.7	111
SNNP	67.0	4,138	60.2	2,774
Gambela	64.1	63	58.7	41
Harari	59.2	54	67.7	32
Addis Ababa	40.7	1,023	53.5	416
Dire Dawa	54.9	97	33.5	53
Education				
No education	71.9	11,436	42.4	8,217
Primary	44.1	5,263	52.8	2,322
Secondary and higher	35.7	2,641	61.5	943
Wealth quintile				
Lowest	65.9	3,373	45.2	2,225
Second	64.1	3,670	42.9	2,354
Middle	61.6	3,767	43.9	2,321
Fourth	60.2	3,727	45.3	2,245
Highest	48.6	4,996	53.4	2,429
Total	59.3	19,534	46.2	11,574

2.3 HOUSEHOLD EDUCATION

Studies show that education is one of the major socioeconomic factors that influence a person's behaviour and attitude. In general, the higher the level of education of a woman, the more knowledgeable she is about the use of health facilities, family planning methods, and the health of her children. Ethiopia's education system has been stable for a long time; however, recently a major restructuring and expansion programme was undertaken by the government. Following the free market oriented economic policy the education sector was opened to private investment. The current system of formal education is based on a three-tier system: eight years of primary education, followed by four years of secondary school and tertiary education. Prior to the change in the education policy, the education system was based on six years of primary education, followed by two years of junior secondary and four years of senior secondary education and tertiary education. Currently, several pre-university collages and various institutions operated by the government and the private sector offer vocational, technical and professional training in different parts of the country. The number of government universities, and private universities and vocational and technical schools has increased tremendously in various parts of the country.

2.3.1 Educational Attainment of Household Population

Tables 2.5.1 and 2.5.2 show the percent distribution of the de facto female and male household population age six and over by highest level of education attended or completed, according to background characteristics. Survey results show that the majority of Ethiopians have little or no education, with females much less educated than males. Fifty-two percent of males and 67 percent of females have never attended school, and 32 percent of males and 25 percent of females have only some primary education. Four percent of males and 2 percent of females have completed primary education only, and 8 percent of males and 5 percent of females have attended, but not completed secondary education.[1] Only 3 percent of males and 2 percent of females have completed secondary school or higher. Nevertheless, improvements in the education sector were observed since the 2000 EDHS, with the proportions of males and females with no education declining by 9 and 10 percentage points, respectively. The improvement is observed across all education categories. The male-female gap in education is more obvious at lower levels of education primarily because the proportion of males and females attending higher levels of education is so small.

An investigation of the changes in educational attainment by successive age groups indicates the long-term trend of the country's educational achievement. Survey results show that there has been a marked improvement in the educational attainment of women. For example, the proportion of women with no education has declined significantly from 99 percent among women age 65 and over to 41 percent among women age 10-14. A similar trend is noticeable among men, with the proportion of men with no education declining from 94 percent among those age 65 and over to 37 percent among those age 10-14.

As expected, educational attainment is much higher among the urban than the rural population. For example, 83 percent of males and 69 percent of females in urban areas have some education, compared with only 42 percent of males and 27 percent of females in rural areas. Regarding regional variation, the proportion of men and women with no education is highest in the Somali Region (82 percent and 89 percent, respectively), followed by the Affar Region (80 percent and 87 percent, respectively), and is lowest in the capital city, Addis Ababa (13 percent and 25 percent, respectively). It is noticeable that in the majority of the regions (Affar, Amhara, Oromiya, Somali, Benishangul-Gumuz, SNNP, and Gambela) about 2 percent or less of women and 3 percent or less of men have completed secondary and higher education. In the most urbanized regions, Harari, Addis Ababa, and Dire Dawa, much higher proportions of women and men have secondary education.

[1] Secondary education refers to both junior secondary (grades 7-8) and senior secondary (grades 9-12).

Table 2.5.1 Educational attainment of household population: female

Percent distribution of the de facto female household population age six and over by highest level of education attended or completed, according to background characteristics, Ethiopia 2005

Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Don't know/ missing	Total	Number
Age									
6-9	73.3	26.1	0.0	0.0	0.0	0.0	0.5	100.0	4,704
10-14	41.1	54.9	2.0	1.7	0.0	0.0	0.3	100.0	4,861
15-19	40.4	37.0	6.6	15.1	0.5	0.2	0.1	100.0	3,409
20-24	60.4	19.6	2.6	11.5	4.0	1.8	0.1	100.0	2,652
25-29	67.6	18.2	1.7	6.5	4.0	1.9	0.0	100.0	2,609
30-34	73.7	14.6	1.6	5.0	3.1	1.8	0.2	100.0	1,825
35-39	79.8	11.5	1.4	3.2	2.7	1.4	0.0	100.0	1,642
40-44	87.0	5.7	1.1	2.6	1.4	1.6	0.6	100.0	1,190
45-49	92.9	3.5	0.7	1.4	0.5	0.7	0.2	100.0	1,156
50-54	95.3	2.9	0.1	0.7	0.2	0.2	0.7	100.0	975
55-59	96.1	2.1	0.3	0.6	0.4	0.1	0.4	100.0	859
60-64	98.2	0.9	0.0	0.2	0.1	0.1	0.5	100.0	735
65+	98.9	0.7	0.1	0.2	0.0	0.0	0.0	100.0	1,075
Residence									
Urban	30.7	28.6	5.5	22.1	8.7	4.3	0.1	100.0	3,951
Rural	72.8	23.8	1.3	1.7	0.1	0.1	0.3	100.0	23,750
Region									
Tigray	63.0	24.6	2.6	7.1	1.4	0.8	0.3	100.0	1,795
Affar	87.0	8.0	0.9	3.2	0.4	0.0	0.4	100.0	286
Amhara	69.5	24.2	1.4	3.3	0.9	0.5	0.2	100.0	6,937
Oromiya	66.1	26.5	1.8	4.3	0.9	0.3	0.2	100.0	9,919
Somali	88.8	6.6	0.5	1.5	0.9	0.3	1.5	100.0	1,063
Benishangul-Gumuz	67.9	26.7	1.6	2.4	0.5	0.7	0.3	100.0	240
SNNP	69.6	24.8	1.8	2.9	0.4	0.2	0.3	100.0	6,051
Gambela	58.6	32.4	3.2	4.4	0.5	0.2	0.7	100.0	79
Harari	49.4	21.5	2.9	15.6	8.0	2.2	0.4	100.0	69
Addis Ababa	24.6	26.8	5.5	22.9	11.9	8.0	0.2	100.0	1,143
Dire Dawa	52.9	22.4	3.9	14.0	5.3	1.4	0.1	100.0	119
Wealth quintile									
Lowest	84.1	14.7	0.3	0.5	0.0	0.0	0.4	100.0	5,426
Second	78.5	19.8	0.5	0.7	0.0	0.0	0.4	100.0	5,412
Middle	71.9	25.0	1.4	1.4	0.0	0.0	0.3	100.0	5,440
Fourth	65.0	30.4	1.9	2.4	0.0	0.0	0.2	100.0	5,334
Highest	38.0	31.6	4.7	16.6	5.8	3.1	0.2	100.0	6,088
Total	66.8	24.5	1.9	4.6	1.3	0.7	0.3	100.0	27,701

Note: Total includes 5 women missing information on age and not shown separately.
[1] Completed grade 6 at the primary level
[2] Completed grade 12 at the secondary level

The proportion of female and male household members who have never attended school decreases with wealth. Seventy-three percent of men in the lowest wealth quintile have no education compared with only 24 percent in the highest quintile. Similarly, 84 percent of women in the lowest quintile have no education compared with 38 percent in the highest quintile.

Table 2.5.2 Educational attainment of household population: male

Percent distribution of the de facto male household population age six and over by highest level of education attended or completed, according to background characteristics, Ethiopia 2005

Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Don't know/ missing	Total	Number
Age									
6-9	73.7	25.6	0.0	0.0	0.0	0.0	0.7	100.0	4,865
10-14	37.0	57.7	3.1	2.1	0.0	0.0	0.2	100.0	5,247
15-19	26.8	42.4	9.0	20.7	0.7	0.2	0.2	100.0	3,512
20-24	35.5	30.4	6.3	21.2	4.1	2.3	0.2	100.0	2,527
25-29	43.0	31.3	5.0	12.5	5.0	2.7	0.6	100.0	2,019
30-34	46.9	29.1	6.7	9.7	5.4	2.1	0.0	100.0	1,789
35-39	49.4	27.6	6.3	9.1	4.1	3.2	0.3	100.0	1,527
40-44	59.5	21.0	3.2	8.0	4.1	4.0	0.3	100.0	1,179
45-49	65.4	16.8	3.8	7.4	2.7	3.7	0.2	100.0	1,041
50-54	74.7	14.7	2.9	3.2	2.2	1.7	0.6	100.0	838
55-59	78.9	14.8	1.7	2.5	0.8	1.3	0.0	100.0	567
60-64	88.2	8.3	0.4	1.3	0.5	1.0	0.4	100.0	781
65+	93.8	3.7	0.4	0.6	0.4	0.4	0.7	100.0	1,406
Residence									
Urban	16.3	27.1	6.7	29.2	11.9	8.4	0.4	100.0	3,289
Rural	57.3	33.1	3.5	5.0	0.4	0.2	0.4	100.0	24,019
Region									
Tigray	53.7	30.3	3.3	9.3	1.6	1.6	0.2	100.0	1,669
Affar	80.0	13.7	1.3	3.3	1.2	0.2	0.3	100.0	303
Amhara	62.2	27.5	2.5	5.6	1.1	0.7	0.4	100.0	7,004
Oromiya	48.0	37.2	4.5	8.0	1.3	0.7	0.3	100.0	9,921
Somali	82.4	10.1	1.0	3.6	1.1	0.4	1.5	100.0	1,165
Benishangul-Gumuz	52.6	36.2	3.6	4.9	0.8	0.9	1.0	100.0	230
SNNP	47.3	38.0	4.9	7.9	1.1	0.5	0.3	100.0	5,798
Gambela	40.1	33.0	7.2	15.5	2.0	1.0	1.2	100.0	85
Harari	31.1	28.4	5.5	20.4	9.6	4.6	0.4	100.0	63
Addis Ababa	13.1	21.6	7.3	27.2	16.6	14.0	0.2	100.0	955
Dire Dawa	33.6	25.5	7.3	21.2	9.3	3.0	0.2	100.0	116
Wealth quintile									
Lowest	73.3	22.8	1.5	2.0	0.0	0.0	0.4	100.0	5,261
Second	61.8	31.9	2.9	2.9	0.1	0.0	0.4	100.0	5,387
Middle	56.0	35.5	3.3	4.6	0.2	0.0	0.3	100.0	5,447
Fourth	48.2	38.6	5.2	6.9	0.5	0.1	0.5	100.0	5,612
Highest	24.2	32.7	6.5	22.6	8.0	5.8	0.2	100.0	5,601
Total	52.4	32.4	3.9	7.9	1.8	1.2	0.4	100.0	27,308

Note: Total includes 8 men with missing information on age and not shown separately.
[1] Completed grade 6 at the primary level
[2] Completed grade 12 at the secondary level

2.3.2 School Attendance Ratios

Data on net attendance ratios (NARs) and gross attendance ratios (GARs) for the de facto household population by school level, sex, residence, region and wealth index are shown in Table 2.6. The NAR indicates participation in primary schooling for the population age 7-12 and secondary schooling for the population age 13-18. The GAR measures participation at each level of schooling among those of any age. 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] An NAR of 100 percent would indicate that all those in the official age range for the level are attending at that level. The GAR can exceed 100 percent if there is significant overage or underage participation at a given level of schooling.

[2] Students who are overage for a given level of schooling may have started school overage, may have repeated one or more grades in school, or may have dropped out of school and later returned.

Table 2.6 School attendance ratios

Net attendance ratios (NAR) and gross attendance ratios (GAR) for the de facto household population by level of schooling and sex, according to background characteristics, Ethiopia 2005

Background characteristic	Net attendance ratio[1]			Gross attendance ratio[2]			Gender parity index[3]
	Male	Female	Total	Male	Female	Total	
PRIMARY SCHOOL							
Residence							
Urban	77.8	79.6	78.8	117.2	122.4	120.0	1.04
Rural	39.1	38.5	38.8	77.7	68.0	73.0	0.88
Region							
Tigray	48.6	52.7	50.6	78.3	84.1	81.1	1.07
Affar	19.1	11.0	15.3	34.9	21.0	28.5	0.60
Amhara	46.3	54.5	50.4	85.9	82.3	84.1	0.96
Oromiya	43.9	41.4	42.7	88.2	75.7	82.1	0.86
Somali	15.5	11.6	13.8	24.4	17.2	21.2	0.71
Benishangul-Gumuz	49.7	47.1	48.4	90.5	69.6	79.6	0.77
SNNP	37.2	31.8	34.5	76.3	63.7	70.0	0.84
Gambela	39.2	45.9	42.2	81.4	84.7	82.9	1.04
Harari	54.0	54.6	54.3	85.2	80.8	83.1	0.95
Addis Ababa	83.0	78.8	80.6	124.9	137.0	131.8	1.10
Dire Dawa	60.6	48.7	54.8	93.6	74.8	84.4	0.80
Wealth quintile							
Lowest	26.0	24.9	25.4	52.2	41.4	46.9	0.79
Second	35.9	34.7	35.3	71.8	60.8	66.6	0.85
Middle	42.8	40.2	41.5	83.9	76.0	80.1	0.91
Fourth	46.2	47.0	46.6	92.8	82.8	87.9	0.89
Highest	66.9	69.4	68.2	112.7	111.1	111.9	0.99
Total	42.2	42.4	42.3	80.9	73.3	77.1	0.91
SECONDARY SCHOOL							
Residence							
Urban	55.3	42.3	48.2	79.9	57.2	67.6	0.72
Rural	11.9	7.3	9.7	20.3	10.3	15.6	0.51
Region							
Tigray	19.6	17.6	18.6	32.8	26.1	29.3	0.80
Affar	6.7	4.1	5.3	12.6	7.9	10.2	0.62
Amhara	15.6	15.2	15.4	23.1	17.3	20.4	0.75
Oromiya	18.0	10.5	14.5	29.9	15.4	23.0	0.51
Somali	9.4	4.1	7.0	12.2	6.3	9.6	0.51
Benishangul-Gumuz	17.9	12.6	15.3	28.1	17.8	23.1	0.63
SNNP	14.2	9.6	11.9	25.0	15.1	20.2	0.60
Gambela	30.0	15.9	24.0	52.2	24.4	40.3	0.47
Harari	39.6	33.1	36.1	56.0	40.7	47.8	0.73
Addis Ababa	58.8	38.9	46.7	81.4	53.8	64.7	0.66
Dire Dawa	45.4	31.4	38.2	66.9	38.0	52.1	0.57
Wealth quintile							
Lowest	5.8	2.3	4.1	10.4	3.1	7.0	0.30
Second	8.3	3.3	5.8	15.2	4.9	10.1	0.32
Middle	9.4	7.0	8.2	18.8	9.3	14.1	0.49
Fourth	15.0	11.4	13.4	24.8	14.7	20.4	0.59
Highest	42.6	33.5	38.0	62.1	47.0	54.5	0.76
Total	17.7	13.3	15.6	28.2	18.3	23.5	0.65

[1] The NAR for primary school is the percentage of the primary-school-age (7-12 years) population that is attending primary school. The NAR for secondary school is the percentage of the secondary-school-age (13-18 years) population that is attending secondary school. By definition the NAR cannot exceed 100 percent.
[2] The GAR for primary school is the total number of primary school students, expressed as a percentage of the official primary-school-age population. The GAR for secondary school is the total number of secondary school students, expressed as a percentage of the official secondary-school-age population. If there are significant numbers of overage and underage students at a given level of schooling, the GAR can exceed 100 percent.
[3] The gender parity index for primary school is the ratio of the primary school GAR for females to the GAR for males. The gender parity index for secondary school is the ratio of the secondary school GAR for females to the GAR for males.

Forty-two percent of children who should be attending primary school are currently doing so. At the same time, only 16 percent of secondary-school-age youths are in school. Nevertheless, marked improvements in NAR are observed since the 2000 EDHS, with 12 and 4 percentage point improvements in the NARs for the primary and secondary levels, respectively. The NAR is higher among males than among females at the secondary level. Attendance ratios are much lower in rural areas than in urban areas and are the lowest in the Affar and Somali regions.

The GAR is higher among males than females at both the primary and secondary levels, at 81 and 73 at the primary-school level, respectively, and 28 and 18 at the secondary-school level, respectively, indicating higher attendance among males than among females. Although the overall GAR at the primary-school level is 77, there are significant levels of overage and/or underage participation in the urban areas among both males (117) and females (122) and also in Addis Ababa (132), the highest among the regions.

There is a strong relationship between household economic status and schooling that can be seen at both the primary and secondary levels and among males and females. For example, the NAR increases from 25 percent among students from poorer households (lowest wealth quintile) in primary school to 68 percent among students from richer households (highest wealth quintile). Similarly, the NAR rises from 4 percent among secondary attendees in the lowest wealth quintile to 38 percent among those in the highest wealth quintile.

The Gender Parity Index (GPI) represents the ratio of the GAR for females to the GAR for males. It is presented at both the primary and secondary levels and offers a summary measure of gender differences in school attendance rates. A GPI less than one indicates that a smaller proportion of females than males attend school. In Ethiopia, the GPI is slightly less than one (0.9) for primary school attendance, but 0.7 for secondary school attendance, indicating that the gender gap is smaller at the primary than the secondary level. There are also marked differences in the GPI by place of residence and by region. The primary school GPI is markedly lower in Affar, Somali and Benishangul-Gumuz than in other regions, while a higher female to male index is observed in Tigray, Gambela and Addis Ababa. The Tigray Region has the highest secondary school GPI (0.8) and Gambela, Oromiya and Somali regions the lowest.

Grade repetition and dropout rates for the de facto household population age 5-24 years who attended school in the previous school year is shown in Table 2.7. The repetition rate is defined as the percentage of students in a given grade in the previous school year who are repeating that grade in the current school year. Dropout rate refers to the percentage of students in a given grade in the previous school year who are not attending school in the current school year.

School attendance ratios in combination with repetition and dropout rates fully describe the flow of students through the school system. In countries with an automatic promotion policy, where students are nearly always promoted to the next grade at the end of the school year, repetition rates may approach zero. However, in Ethiopia the school system does not support automatic promotion of students. Therefore, repetition and dropout rates measure and show current educational problems and impacts of education policies and programmes. Repetition rates are higher in lower grades, specifically highest in grade one (6 percent). Males have higher repetition rates up to grade three compared with female children. However, more female than male children repeat in grades 4 and 5. Dropout rates are higher for males than females in all grade categories. Rural children are more disadvantaged than their urban counterparts; in all grade levels dropout rates are much higher for rural than urban children.

Table 2.7 Grade repetition and dropout rates

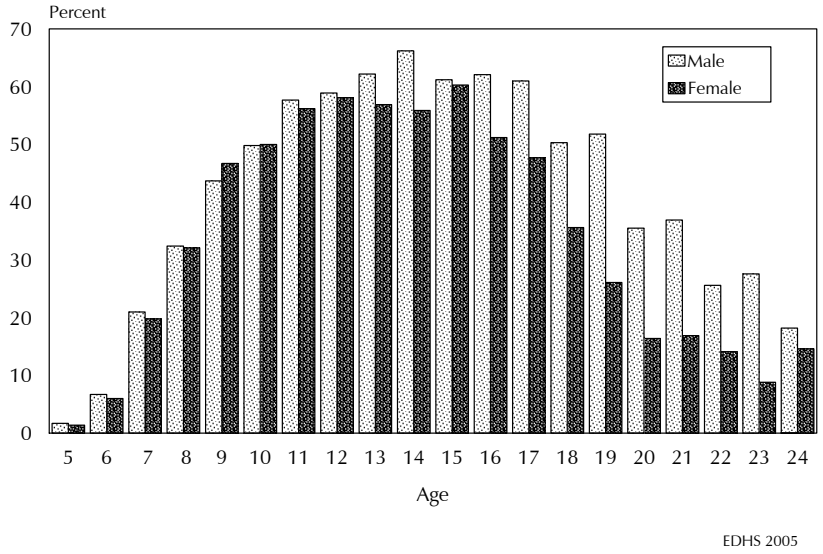
Repetition and dropout rates for the de facto household population age 5-24 years who attended school in the previous school year by school grade, according to background characteristics, Ethiopia 2005

Background characteristic	School grade					
	1	2	3	4	5	6
	REPETITION RATE					
Sex						
Male	6.5	2.1	1.8	1.1	1.3	2.2
Female	4.7	1.2	1.1	2.5	2.0	1.5
Residence						
Urban	4.3	1.1	1.3	2.5	0.7	2.4
Rural	5.8	1.8	1.5	1.5	1.9	1.8
Region						
Tigray	1.8	2.1	1.0	0.8	1.7	0.0
Affar	2.1	(0.0)	*	*	*	*
Amhara	6.6	1.2	1.8	0.6	2.2	0.0
Oromiya	6.5	2.2	0.6	2.4	1.4	3.2
Somali	1.6	(0.0)	(0.0)	(8.0)	*	*
Benishangul-Gumuz	13.2	1.6	2.0	0.0	(2.3)	0.0
SNNP	3.8	1.4	2.7	1.5	0.8	0.0
Gambela	7.5	0.7	1.8	5.4	3.6	5.3
Harari	6.1	4.6	2.5	3.1	2.8	1.4
Addis Ababa	9.5	0.7	2.1	2.6	2.3	3.3
Dire Dawa	0.0	0.0	0.0	0.0	2.7	2.3
Wealth quintile						
Lowest	7.8	2.7	1.2	0.5	3.6	0.1
Second	5.2	3.0	4.0	1.6	3.5	4.9
Middle	6.3	1.3	0.0	1.3	0.1	3.1
Fourth	4.5	1.4	1.5	2.3	2.4	1.4
Highest	5.1	1.0	1.1	2.0	0.7	1.5
Total	5.7	1.7	1.5	1.7	1.6	2.0
	DROPOUT RATE					
Sex						
Male	5.5	5.7	7.7	9.3	9.7	6.2
Female	3.6	5.4	3.9	4.0	5.2	4.8
Residence						
Urban	1.1	3.1	2.8	3.6	4.7	2.4
Rural	5.0	6.1	6.6	7.9	8.9	6.9
Region						
Tigray	2.5	4.1	7.0	8.1	6.8	5.0
Affar	2.3	4.8	*	*	*	*
Amhara	2.4	2.1	3.0	4.0	6.0	1.8
Oromiya	6.7	9.3	7.2	10.0	8.9	5.1
Somali	2.9	(1.4)	(0.0)	(6.8)	*	*
Benishangul-Gumuz	2.6	8.2	6.6	8.9	8.0	7.9
SNNP	5.0	4.1	7.1	5.5	9.8	11.3
Gambela	5.8	10.1	10.8	11.1	6.9	14.1
Harari	5.6	8.1	2.2	8.7	7.9	4.7
Addis Ababa	1.4	2.1	3.9	2.8	7.4	4.6
Dire Dawa	5.3	0.0	4.7	6.6	3.2	3.9
Wealth quintile						
Lowest	5.7	8.7	5.7	10.1	6.6	15.2
Second	4.2	7.1	7.6	6.1	15.1	9.6
Middle	5.1	3.8	2.8	11.1	7.8	6.7
Fourth	4.9	5.4	9.2	4.9	8.9	5.2
Highest	3.3	4.8	4.1	6.0	4.6	3.1
Total	4.6	5.6	6.0	7.1	7.9	5.6

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.

The age-specific attendance rates (ASARs) for the population age five and over by sex are shown in Figure 2.2. The ASAR indicates participation in schooling at any level, from primary to higher levels of education. Although the minimum age for schooling in Ethiopia is seven, there are some children enrolled prior to this age. Nevertheless, only 21 percent of children age seven are attending school, indicating that a large majority of children that age in Ethiopia have not entered the school system. However, a marked improvement in enrolment at age seven was observed since 2000 when 15 percent were attending school. There is little difference in the proportion of males and females attending school up to age 12; thereafter, a significantly higher proportion of males than females attends school.

Figure 2.2 **Age-Specific Attendance Rates**



2.4 HOUSEHOLD CHARACTERISTICS

The physical characteristics and availability and accessibility of basic household facilities are important in assessing the general welfare and socioeconomic condition of the population. In the 2005 EDHS respondents to the household questionnaire were asked about household drinking water and household sanitation facilities that included questions on the source of drinking water, time taken to the nearest source, and the person that usually collects drinking water, water treatment prior to drinking and questions on sanitation facilities.

Table 2.8 presents information on household drinking water. The majority (61 percent) of households in Ethiopia have access to an improved source of drinking water with access in urban areas much higher than in rural areas (94 percent and 56 percent, respectively). The most common source of improved drinking water in urban areas is piped water with 90 percent of households having access to this source. On the other hand, only 13 percent of rural households have access to piped water. The major source of improved drinking water in rural areas is a protected spring (39 percent). The proportion of households with access to piped water has increased from about 14 percent in 1994 (CSA, 1999) to 18 percent in 2000 and 24 percent in 2005.

Table 2.8 Household drinking water

Percent distribution of households by source, time to collect, person who usually collects drinking water, and treatment of water, according to residence, and percent distribution of the de jure population by source, time to collect, person who usually collects drinking water, and treatment of drinking water, Ethiopia 2005

Characteristics of household drinking water	Households		Total	De jure population
	Urban	Rural		
Source of drinking water				
Improved source	93.7	56.0	61.4	60.0
Piped into dwelling	2.5	0.0	0.4	0.3
Piped into compound	45.0	0.2	6.6	5.7
Piped outside compound	42.6	12.3	16.7	15.8
Tube well or borehole	0.0	0.1	0.1	0.1
Protected dug well	1.2	4.5	4.0	4.1
Protected spring	2.3	38.7	33.5	33.7
Rainwater	0.0	0.2	0.2	0.2
Non-improved source	6.1	43.8	38.4	39.9
Unprotected dug well	0.8	6.0	5.3	5.4
Unprotected spring	4.1	7.5	7.0	7.3
Tanker truck	0.5	0.2	0.2	0.2
Surface water	0.8	30.1	25.9	26.9
Other	0.2	0.2	0.2	0.2
Total	100.0	100.0	100.0	100.0
Time to obtain drinking water (round trip)				
Water on premises	48.4	1.6	8.4	7.4
Less than 30 minutes	36.4	45.6	44.3	44.1
30 minutes or longer	14.6	52.1	46.7	47.9
Missing	0.6	0.7	0.6	0.6
Total	100.0	100.0	100.0	100.0
Person who usually collects drinking water				
Adult male age 15+	7.1	5.7	5.9	4.8
Adult female age 15+	38.6	80.5	74.4	75.0
Male child under age 15	1.8	2.5	2.4	2.7
Female child under age 15	3.0	9.0	8.1	9.6
Water on premises	48.4	1.6	8.4	7.4
Other	1.0	0.6	0.6	0.4
Missing	0.1	0.2	0.2	0.1
Total	100.0	100.0	100.0	100.0
Water treatment prior to drinking				
Boiled	2.9	2.4	2.4	2.5
Bleach/chlorine added	0.6	0.2	0.2	0.2
Strained through cloth	0.6	5.2	4.6	4.9
Ceramic, sand or other filter	0.6	0.3	0.3	0.4
Let it stand and settle	0.1	0.2	0.2	0.1
Other	0.3	0.3	0.3	0.3
No treatment	94.7	91.4	91.9	91.6
Don't know/missing	0.5	0.9	0.9	0.9
Total	100.0	100.0	100.0	100.0
Number	1,974	11,747	13,721	68,981

Only 8 percent of households reported having water on their premises. Households not having access on their premises were asked for the time taken to fetch water. Forty-four percent of all households (36 percent urban and 46 percent rural) take less than 30 minutes to fetch drinking water. In the majority (74 percent) of households, an adult female usually collects drinking water. Female children under age 15 are over three times more likely than male children the same age to fetch drinking water.

In the survey all households were asked whether they treat water prior to drinking. An overwhelming majority of households (92 percent) do not treat drinking water. Rural households are somewhat more likely than urban households to treat drinking water and this is mostly done by straining water through cloth.

Table 2.9 presents information on household sanitation facilities by type of toilet/latrine. Sixty-two percent of Ethiopian households do not have a toilet facility. Overall a small proportion (7 percent) of households use improved toilets that are not shared. Urban households are more than three times as likely as rural households to have access to improved toilet facilities. In urban areas, a pit latrine with a slab (12 percent) is the major type of improved toilet facility. There has been a decline recently in the proportion of households with no toilet facilities from 82 percent in 2000 to 62 percent in 2005. The decline was observed in both urban and rural areas (from 30 percent to 12 percent in urban areas and from 92 percent to 70 percent in rural areas).

Table 2.9 Household sanitation facilities

Percent distribution of households by type of toilet/latrine facilities, according to residence and the percent distribution of the de jure population by toilet/latrine facilities, Ethiopia 2005

Type of toilet/ latrine facility	Households			De jure population
	Urban	Rural	Total	
Improved, not shared	18.0	4.9	6.8	7.4
Flush/pour flush to piped sewer system	1.1	0.0	0.2	0.1
Flush/pour flush to septic tank	1.3	0.0	0.2	0.2
Flush/pour flush to pit latrine	1.9	0.8	1.0	1.2
Ventilated improved pit (VIP) latrine	1.1	0.3	0.4	0.5
Pit latrine with a slab	11.5	0.8	2.3	2.5
Composting toilet	1.0	3.0	2.7	3.0
Not improved	81.9	95.0	93.1	92.5
Any facility shared with other households	51.1	5.9	12.4	9.8
Flush/pour flush not to sewer/septic tank/pit latrine	0.2	0.1	0.1	0.1
Pit latrine without slab/ open pit	18.1	18.6	18.5	20.3
Bucket	0.1	0.0	0.0	0.0
Hanging toilet/hanging latrine	0.1	0.0	0.1	0.0
No facility/bush/field	12.2	70.3	61.9	62.2
Other/missing	0.1	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0
Number	1,974	11,747	13,721	68,981

Information on household characteristics such as availability of electricity, type of flooring material, number of rooms for sleeping, type of fuel used for cooking, place for cooking and type of fire/stove among households using biomass are shown in Table 2.10. Fourteen percent of households have electricity, but this varies widely by place of residence. Two percent of households in rural areas have access to electricity, compared with 86 percent of urban households. The proportion of households with electricity rose from 76 percent to 86 percent in urban areas between 2000 and 2005 and from 0.4 percent to 1.9 percent in rural areas. Sixty-five percent of households have earth or sand floors and 25 percent have dung floors. Rural houses are more likely than urban houses to have earth, sand, or dung floors, while urban houses are more likely than rural houses to have floors made with cement/bricks.

Table 2.10 Household characteristics

Percent distribution of households by household characteristics, according to residence, Ethiopia 2005

Household characteristic	Households		Total	De jure population
	Urban	Rural		
Electricity				
Yes	85.7	1.9	14.0	12.0
No	14.3	98.0	85.9	87.9
Missing	0.0	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0
Flooring material				
Earth/sand	32.8	70.6	65.2	65.7
Dung	12.8	27.5	25.4	25.7
Wood planks	1.1	0.1	0.3	0.3
Reed/bamboo	1.9	0.4	0.7	0.7
Parquet or polished wood	4.7	0.0	0.7	0.6
Vinyl	17.7	0.1	2.7	2.4
Ceramic tiles	1.8	0.0	0.3	0.2
Cement/bricks	23.3	0.5	3.8	3.5
Carpet	3.6	0.6	1.0	0.8
Other/missing	0.2	0.1	0.1	0.2
Total	100.0	100.0	100.0	100.0
Rooms for sleeping				
No bedrooms or only one	67.4	78.4	76.8	71.5
Two	25.3	18.2	19.2	22.8
Three or more	7.1	2.7	3.4	5.0
Missing	0.1	0.7	0.6	0.7
Total	100.0	100.0	100.0	100.0
Cooking fuel				
Electricity	1.0	0.0	0.2	0.2
LPG	0.4	0.0	0.1	0.0
Natural gas	0.6	0.0	0.1	0.1
Biogas	0.3	0.0	0.0	0.0
Kerosene	25.9	0.2	3.9	3.0
Charcoal	18.1	0.2	2.8	2.2
Wood	48.5	89.9	83.9	85.7
Straw/shrubs/grass	0.2	1.2	1.1	1.1
Animal dung	2.1	8.3	7.4	7.5
Other/missing	3.0	0.2	0.6	0.2
Total	100.0	100.0	100.0	100.0
Place for cooking				
In the house	31.1	74.1	67.9	66.4
In a separate building	53.5	21.0	25.7	27.6
Outdoors	12.4	4.8	5.9	5.8
Other/missing	2.8	0.1	0.5	0.2
Total	100.0	100.0	100.0	100.0
Number of households	1,974	11,747	13,721	68,981
Type of fire/stove among households using biomass fuel[1]				
Open fire or stove whithout a chimney/hood	91.5	97.5	96.6	96.8
Open fire or stove with chimney/hood	5.9	2.1	2.6	2.6
Closed stove with chimney	1.7	0.1	0.4	0.3
Other	0.8	0.1	0.2	0.2
Missing	0.1	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0
Number of households using biomass fuel	1,871	11,722	13,593	68,605

[1] Biomass fuel includes kerosene, coal/lignite, charcoal, wood/straw/shrubs, and animal dung.

Data were collected on the number of sleeping rooms per household. Slightly over three-fourths of households have no bedrooms or have only one room for sleeping. Nineteen percent of households have two rooms and only 3 percent have three or more rooms for sleeping. Urban households are more likely than rural households to have two or more rooms for sleeping.

The overwhelming majority of households (84 percent) use wood for cooking. Wood is the most common form of cooking fuel in rural areas (90 percent). In urban areas nearly half of the households use wood for cooking (49 percent), followed by kerosene (26 percent) and charcoal (18 percent). Slightly over two-thirds of households (68 percent) cook their meals in the house, while over a quarter use a separate building for cooking (26 percent). Slightly over half the households in urban areas (54 percent) use a separate building for cooking. Almost all households (99 percent) use a biomass fuel for cooking, that is, kerosene, charcoal, dung and wood/straw/shrubs, which generate smoke that is unhealthy when inhaled. In these households, almost all cooking is done over an open fire or stove with no chimney or hood to channel the smoke outside the house.

2.5 HOUSEHOLD POSSESSIONS

Information on ownership of durable goods and other possessions is presented in Table 2.11. In general, ownership of household effects, means of transportation and agricultural land and farm animals is indicative of a household's social and economic well-being. The survey results show that one-third of all households have a radio, about 5 percent have a television, 4 percent have a non-mobile telephone, 2 percent have a mobile telephone and 2 percent have a refrigerator. In general, households in rural Ethiopia are much less likely to possess consumer items like televisions, telephones, or refrigerators. Ethiopians in general are not very likely to own a means of transport, although urban households are more likely than rural households to own a means of transportation. Bicycles owned by 1 percent of households are the most commonly owned means of transportation. Most rural households in contrast to urban households own agricultural land (92 percent versus 11 percent) or farm animals (90 percent versus 24 percent).

Table 2.11 Household possessions

Percentage of households possessing various household effects, means of transportation, agricultural land, and farm animals, by residence, Ethiopia 2005

Possessions	Households		Total	De jure population
	Urban	Rural		
Household effects				
Radio	75.6	26.6	33.7	35.6
Television	33.1	0.1	4.9	4.9
Mobile telephone	11.4	0.0	1.7	1.8
Non-mobile telephone	28.2	0.1	4.2	4.4
Refrigerator	11.9	0.2	1.9	1.9
Means of transport				
Bicycle	5.5	0.5	1.2	1.5
Animal drawn cart	0.8	0.5	0.6	0.8
Motorcycle/scooter	0.2	0.0	0.0	0.1
Car/truck	3.0	0.0	0.5	0.6
Boat with a motor	0.2	0.0	0.0	0.0
Ownership of agricultural land	11.3	92.0	80.4	84.3
Ownership of farm animals[1]	23.8	89.5	80.1	85.4
Number of households	1,974	11,747	13,721	68,981

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

2.6 SOCIOECONOMIC STATUS INDEX

One of the background characteristics used throughout this report is an index of socio-economic status. The economic index used here was recently developed and tested in a large number of countries in relation to inequalities in household income, use of health services and health outcomes (Rutstein et al., 2000). It is an indicator of the level of wealth that is consistent with expenditure and income measures (Rutstein, 1999). The economic index was constructed using household asset data including ownership of a number of consumer items ranging from a television to a bicycle or car, as well as dwelling characteristics, such as source of drinking water, sanitation facilities and type of material used for flooring.

Each asset was assigned a weight (factor score) generated through principal components analysis, and the resulting asset scores were standardized in relation to a normal distribution with a mean of zero and standard deviation of one (Gwatkin et al., 2000). Each household was then assigned a score for each asset, and the scores were summed for each household; individuals were ranked according to the score of the household in which they resided. The sample was then divided into quintiles from one (lowest) to five (highest). A single asset index was developed for the whole sample; separate indices were not prepared for the urban and rural population.

Table 2.12 presents the wealth quintiles by residence and administrative regions. Ninety-three percent of the population in urban areas is in the highest wealth quintile in contrast to the rural areas where only 10 percent are in this category. The wealth quintile distribution among regions shows large variations, with a relatively high percentage of the population in the most urbanized regions in the highest wealth quintile—Addis Ababa (99 percent), Dire Dawa (66 percent), and Harari (65 percent). On the other hand, a significant proportion of the population in the more rural areas of the country such as in Somali (72 percent), Affar (67 percent) and Gambela (44 percent) are in the lowest wealth quintile.

Table 2.12 Wealth quintiles

Percent distribution of the de jure population by wealth quintiles, according to residence and region, Ethiopia 2005

Background characteristic	Wealth quintile					Total	De jure population
	Lowest	Second	Middle	Fourth	Highest		
Residence							
Urban	0.3	0.7	1.3	5.1	92.6	100.0	8,260
Rural	22.7	22.6	22.5	22.0	10.1	100.0	60,721
Region							
Tigray	31.6	23.5	17.5	10.2	17.2	100.0	4,410
Affar	67.3	8.2	7.8	3.3	13.5	100.0	738
Amhara	17.5	21.4	22.1	23.5	15.5	100.0	17,081
Oromiya	19.9	22.0	20.6	19.7	17.9	100.0	25,278
Somali	71.8	11.1	4.4	3.2	9.6	100.0	2,835
Benishangul-Gumuz	19.1	21.9	24.6	18.5	15.9	100.0	600
SNNP	10.7	19.5	24.2	26.9	18.6	100.0	15,110
Gambela	44.0	15.1	7.9	13.6	19.4	100.0	202
Harari	5.7	6.7	10.3	12.7	64.6	100.0	163
Addis Ababa	0.1	0.3	0.3	0.6	98.7	100.0	2,280
Dire Dawa	11.4	11.2	8.3	3.2	65.8	100.0	285
Total	20.0	20.0	20.0	20.0	20.0	100.0	68,981

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. Although Ethiopia does not have a legal and administrative structure that performs official registration of births according to standard procedures, there exists in the urban parts of the country a practice where certificates of birth are issued without the event being officially registered. Birth certificates may also be issued by hospitals where the birth occurred, but this event again may not be officially recorded in a civil registry. In addition, some regional capitals in the country may also issue birth certificates that are not officially recorded by a civil registry. Thus the information in Table 2.13 should be interpreted in the light of the situation in Ethiopia. Information on the registration of births was collected in the household interview where respondents were asked if their child under age five had a birth certificate. If they responded that the child did not have a birth certificate, an additional question was posed to ascertain if the child's birth had ever been registered with the municipal or local authorities. Seven percent of Ethiopian children under age five have had their births registered. However, most of these children (5 percent) did not have a birth certificate.

Table 2.13 Birth registration of children under age five

Percentage of de jure children under five years of age whose births are registered with the civil authorities, by background characteristics, Ethiopia 2005

Background characteristic	Percentage of children whose births are registered: Had a birth certificate	Did not have a birth certificate	Total registered	Number of children
Age				
< 2	1.5	5.6	7.2	4,287
2 - 4	1.1	5.2	6.3	6,545
Sex				
Male	1.4	5.0	6.4	5,486
Female	1.2	5.7	6.9	5,345
Residence				
Urban	10.1	18.9	28.9	783
Rural	0.6	4.3	4.9	10,048
Region				
Tigray	3.4	4.1	7.5	694
Affar	1.5	2.8	4.3	102
Amhara	0.6	3.6	4.2	2,479
Oromiya	1.0	3.9	4.9	4,285
Somali	0.9	2.7	3.6	460
Benishangul-Gumuz	0.6	3.2	3.8	104
SNNP	0.9	9.1	10.0	2,467
Gambela	0.9	5.2	6.1	30
Harari	10.6	6.6	17.3	23
Addis Ababa	16.6	28.9	45.5	150
Dire Dawa	7.5	16.3	23.8	38
Wealth quintile				
Lowest	0.3	2.2	2.6	2,366
Second	0.1	3.6	3.8	2,308
Middle	0.6	5.2	5.7	2,356
Fourth	0.9	5.7	6.6	2,184
Highest	5.9	12.2	18.1	1,617
Total	1.3	5.4	6.6	10,831

CHARACTERISTICS OF RESPONDENTS 3

This chapter provides a demographic and socioeconomic profile of respondents interviewed in the 2005 EDHS. Such background information is essential to the interpretation of findings and for understanding the results presented later in the report. Basic characteristics collected include age, level of education, marital status, religion, ethnicity, and wealth status. Exposure to mass media and literacy status was examined and detailed information was collected on employment status, occupation, and earnings.

3.1 CHARACTERISTICS OF SURVEY RESPONDENTS

The background characteristics of the 14,070 women age 15-49 and the 6,033 men age 15-59 interviewed in the 2005 EDHS are shown in Table 3.1. This table is important in that it provides the background for interpreting findings presented later in the report.

Three in five women (59 percent) and one in two men (52 percent) are under age 30. In general, the proportion of women and men in each age group declines as age increases, reflecting the comparatively young age structure of the population in Ethiopia as a result of past high fertility levels.

The majority of surveyed respondents (65 percent of women and 57 percent of men) are married or living together. The proportion not currently married varies by gender. One in four women has never married compared with two in five men. On the other hand, women are much more likely to be divorced, separated, or widowed (11 percent) than men (3 percent).

Place of residence is another characteristic that determines access to services and exposure to information pertaining to reproductive health and other aspects of life. As expected, the majority of respondents reside in rural areas, with only 18 percent of women and 15 percent of men residing in urban areas.

More than 80 percent of the respondents live in three major regions, namely: Amhara, Oromiya, and SNNP. Respondents from Tigray, Addis Ababa, and Somali constitute about 7 percent, 5 percent, and 3 percent, respectively, of the sample. One percent or less of respondents reside in other regions.

Education is an important factor influencing an individual's attitude and outlook on various aspects of life. Generally, educational attainment in Ethiopia is very low among both men and women, with women much more disadvantaged than men. Two-thirds of women compared with two-fifths of men do not have any formal education. The corresponding figures in the 2000 EDHS were 75 percent and 52 percent, respectively, indicating that the proportion of persons with no education has declined over the past five years. Nearly twice as many men as women have primary (37 percent of men compared with 22 percent of women) or secondary education (20 percent of men compared with 12 percent of women).

The distribution of respondents by religious affiliation shows that half are Orthodox Christians and nearly 30 percent are Muslims. Protestant women and men account for about 19 percent and 17 percent, respectively. The ethnic composition of respondents indicates that a third of respondents belong to the Oromo ethnic group and about three out of ten are Amharas. Tigraways constitute 7 percent of the population. While there are more than 80 ethnic groups in Ethiopia, most are small in number and, therefore, are not shown separately. They are grouped under the category "Other."

FERTILITY 4

Fertility is one of the three principal components of population dynamics that determine the size and structure of the population of a country. This chapter presents the 2005 EDHS results on the levels, trends, and differentials in fertility. The analysis is based on birth history information collected from women age 15-49 interviewed during the survey. Each eligible woman was asked a series of questions on the number of sons and daughters who were living with her, the number living elsewhere, and the number who had died, in order to obtain the total number of live births she had had in her lifetime. For each live birth, information was also collected on the name, sex, age and survival status of the child. For dead children, age at death was recorded. Information from the birth history is then used to assess current and completed fertility and factors related to fertility such as age at first birth, birth intervals, and adolescent childbearing.

4.1 CURRENT FERTILITY

Measures of current fertility are presented in Table 4.1 for the three-year period preceding the survey, corresponding to the calendar period 2003-2005. A three-year period was chosen because it reflects the most current information, while also allowing the rates to be calculated on a sufficient number of cases so as not to compromise the statistical precision of the estimate.

Several measures of current fertility are shown. Age-specific fertility rates (ASFRs), expressed as the number of births per thousand women in a specified age group, are calculated by dividing the number of live births to women in a specific age group by the number of woman-years lived in that age group The total fertility rate (TFR) is a common measure of current fertility and is defined as the total number of births a woman would have by the end of her childbearing period if she were to pass through those years bearing children at the currently observed age-specific fertility rates. The general fertility rate (GFR) is the number of live births occurring during a specified period per 1,000 women age 15-44. The crude birth rate (CBR) is the number of births per 1,000 population during a specified period.

Table 4.1 Current fertility

Age-specific and total fertility rate, the general fertility rate and the crude birth rate for the three years preceding the survey, by residence, Ethiopia 2005

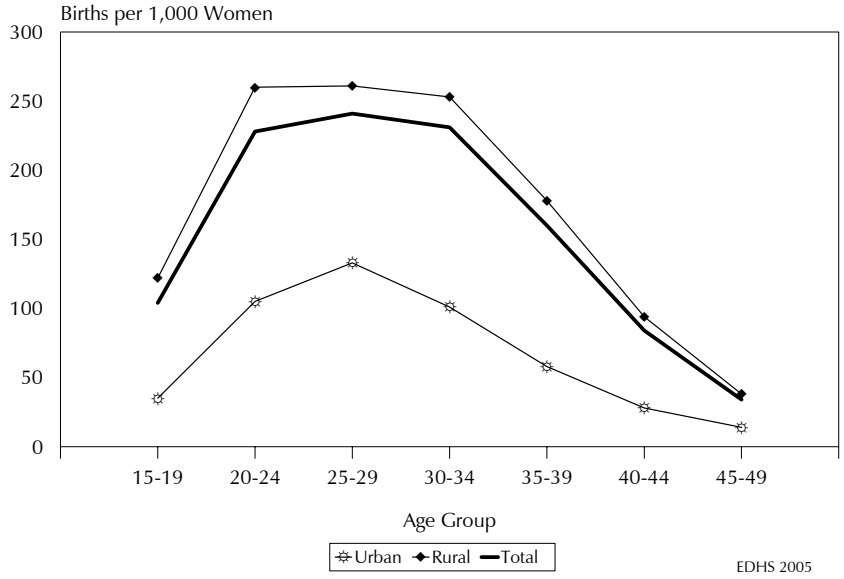
	Residence		
Age group	Urban	Rural	Total
15-19	35	122	104
20-24	105	260	228
25-29	133	261	241
30-34	101	253	231
35-39	58	178	160
40-44	28	94	84
45-49	14	38	34
TFR (15-49)	2.4	6.0	5.4
GFR	77	200	179
CBR	23.4	37.3	35.7

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

Table 4.1 shows current fertility levels for Ethiopia as a whole, and for urban and rural areas. The total fertility rate for Ethiopia is 5.4 births per woman. As expected, fertility is considerably higher in the rural areas than urban areas. The TFR in the rural areas is 6.0, two and half times higher than the TFR in the urban areas (2.4). As the ASFRs show, this pattern of higher rural fertility is prevalent in all age groups (Figure 4.1). The urban-rural difference in fertility is especially pronounced among women age 20-34.

The overall age pattern of fertility as reflected in the ASFRs indicates that childbearing begins early. Fertility is low among adolescents and increases to a peak of 241 births per 1,000 among women age 25-29 and declines thereafter.

Figure 4.1 **Age-specific Fertility Rates by Urban-Rural Residence**



4.2 FERTILITY DIFFERENTIALS

Table 4.2 and Figure 4.2 present differentials in the total fertility rates, the percentage of women who are currently pregnant and the mean number of children ever born (CEB) to women age 40-49, by residence, region, education and wealth quintile.

There are substantial differentials in fertility among regions, ranging from a low of 1.4 children per woman in Addis Ababa to a high of 6.2 children per woman in Oromiya. With the exception of Oromiya, Somali and SNNP, fertility levels in the other 8 regions are less than the national average. The level of fertility is inversely related to women's educational attainment, decreasing rapidly from 6.1 children among women with no education to 2.0 children among women who have at least some secondary education. Fertility is also associated with wealth quintile. Women in the lowest wealth quintile have a TFR of 6.6, twice as high as that of women in the highest quintile (3.2).

Table 4.2 also presents a crude assessment of trends in the various subgroups by comparing current fertility with a measure of completed fertility: the mean number of children ever born to women age 40-49. The mean number of children ever born to older women who are nearing the end of their reproductive period is an indicator of average completed fertility of women who began childbearing during the three decades preceding the survey. If fertility remained constant over time and the reported data on both children ever born and births during the three years preceding the survey are reasonably accurate, the TFR and the mean number of children ever born for women 40-49 are expected to be similar. When fertility levels have been falling, the TFR will be substantially lower than the mean number of children ever born among women age 40-49. The comparison suggests that fertility has fallen by more than one child during the past few decades, from 6.9 children per woman to 5.4. Fertility has declined in both rural and urban areas, in all regions, at all educational levels, and for all wealth quintiles. The difference between the level of current and completed fertility is highest in Addis Ababa (3 children), in all urban areas (2.7 children), and among women in the highest wealth quintile (2.7 children).

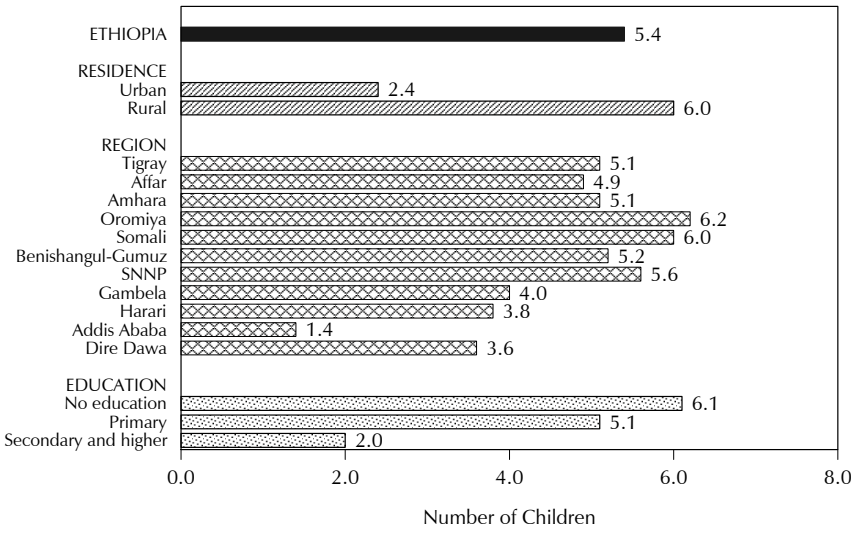
Table 4.2 Fertility by background characteristics

Total fertility rate for the three years preceding the survey, percentage of women currently pregnant, and mean number of children ever born to women age 40-49 years, by background characteristics, Ethiopia 2005

Background characteristic	Total fertility rate	Percentage currently pregnant[1]	Mean number of children ever born to women age 40-49
Residence			
Urban	2.4	2.5	5.1
Rural	6.0	9.7	7.3
Region			
Tigray	5.1	8.6	6.8
Affar	4.9	8.9	5.8
Amhara	5.1	7.2	7.0
Oromiya	6.2	9.0	7.1
Somali	6.0	10.0	6.7
Benishangul-Gumuz	5.2	10.2	6.7
SNNP	5.6	10.2	7.5
Gambela	4.0	8.3	5.3
Harari	3.8	6.7	5.2
Addis Ababa	1.4	1.5	4.4
Dire Dawa	3.6	3.9	5.6
Education			
No education	6.1	10.1	7.1
Primary	5.1	6.7	5.8
Secondary and higher	2.0	2.2	4.2
Wealth quintile			
Lowest	6.6	10.2	6.9
Second	6.0	11.0	7.0
Middle	6.2	10.5	7.4
Fourth	5.7	8.3	7.6
Highest	3.2	3.8	5.9
Total	5.4	8.4	6.9

[1] Women age 15-49 years

Figure 4.2 Total Fertility Rates by Background Characteristics



EDHS 2005

Table 4.2 shows the percentage of women who reported being pregnant at the time of the survey. This percentage may be underreported since women may not be aware of a pregnancy, especially at the very early stages, and some women who are early in their pregnancy may not want to reveal that they are pregnant. Eight percent of women were pregnant at the time of the survey. Rural women were almost four times as likely to be pregnant as urban women. The proportion of women currently pregnant declines as the level of education rises. Current pregnancy is highest in Benishangul-Gumuz, SNNP and Somali and lowest in Addis Ababa.

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, Ethiopia 2005

Mother's age at birth	Number of years preceding survey			
	0-4	5-9	10-14	15-19
15-19	109	160	186	168
20-24	242	304	311	288
25-29	253	321	309	298
30-34	240	281	290	[288]
35-39	166	220	[244]	
40-44	96	[141]		
45-49	[35]			

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

4.3 FERTILITY TRENDS

In addition to comparison of current and completed fertility, trends in fertility can be assessed in two other ways. First, the TFR from the 2005 EDHS can be compared with estimates obtained in earlier surveys. Second, fertility trends can be investigated using retrospective data from the birth histories collected in the same survey.

One way of examining trends in fertility over time is to compare age-specific fertility rates from the 2005 EDHS for successive five-year periods preceding the survey, as presented in Table 4.3. The numerators of the rates are classified by five-year segments of time preceding the survey and the mother's age at the time of survey. Because women 50 years and over were not interviewed in the survey, the rates for older age groups become progressively more truncated for periods more distant from the survey date. For example, rates cannot be calculated for women age 35-39 for the period 15-19 years before the survey because these women would have been over age 50 at the time of the survey and were not interviewed.

Fertility has fallen substantially among all age groups over the past two decades. This decline is most obvious in the 15 years preceding the survey, with the largest decline observed between the two most recent five-year periods. Fertility decline is steepest among the youngest cohort, with a 35 percent decline between the period 15-19 years before the survey and the period 0-4 years before the survey. The decline in fertility observed in Ethiopia can be attributed in part to increasing use of contraception, which will be discussed in the next chapter.

Another way to assess fertility trends is to compare estimates obtained in earlier surveys. Table 4.4 presents the ASFRs and TFRs from the 1990 NFFS, the 2000 EDHS, and the 2005 EDHS.

There has been a decline in fertility from 6.4 births per woman in the 1990 NFFS to 5.4 births in the 2005 EDHS, a one-child drop in the past 15 years. The decline in fertility was more pronounced in the 10 years between 1990 and 2000 than in the five years between 2000 and 2005 and more pronounced in urban than rural areas. A comparison of the three-year TFR calculated from the 2000 EDHS and the 2005 EDHS shows little change for the country as a whole

Table 4.4 Trends in age-specific and total fertility rates

Trends in age-specific and total fertility rates, Ethiopia

Age group	NFFS 1990[1]	EDHS 2000[2]	EDHS 2005
15-19	95	100	104
20-24	275	235	228
25-29	289	251	241
30-34	257	243	231
35-39	199	168	160
40-44	105	89	84
45-49	56	19	34
TFR	6.4	5.5	5.4

Note: Rates for NFFS 1990 are for the 12 months preceding the survey; rates for EDHS 2000 and EDHS 2005 are for the three years prior to the survey.
[1] CSA, 1993
[2] CSA and ORC Macro, 2001

(5.5 births in 2000 versus 5.4 births in 2005).[1] With the exception of the 15-19 age group, fertility has declined in every age group over the past 15 years, with the largest decline—nearly 40 percent—among the oldest cohort (age 45-49).

4.4 Children Ever Born and Surviving

Data on the number of children ever born reflect the accumulation of births over the past 30 years and therefore have limited relevance to current fertility levels, particularly when the country has experienced a decline in fertility. Moreover, the data are subject to recall error, which is typically greater for older than younger women. Nevertheless, the information on children ever born (or parity) is useful in looking at a number of issues. The parity data show how average family size varies across age groups. The percentage of women in their forties who have never had children also provides an indicator of the level of primary infertility or the inability to bear children.[2] Voluntary childlessness is rare in developing countries like Ethiopia, so that married women in their late forties with no live births are predominantly those involuntarily so. Comparison of the differences in the mean number of children ever born and surviving reflects the cumulative effects of mortality levels during the period in which women have been bearing children.

Table 4.5 shows the percent distribution of all women and currently married women by number of children ever born and mean number of children surviving. More than four-fifths of women age 15-19 (86 percent) have never given birth. However, this proportion declines to 13 percent for women age 25-29 and to 6 percent or less among women age 30 and above, indicating that childbearing among Ethiopian women is nearly universal. On the average, Ethiopian women nearing the end of their reproductive years have attained a parity of 7.3 children. This is 1.9 children more than the total fertility rate, a difference brought about by the dramatic decline in fertility during the 1980s and 1990s.

Table 4.5 Children ever born and living

Percent distribution of all women and currently married women by number of children ever born, and mean number of children ever born and mean number of living children, according to age group, Ethiopia 2005

	Number of children ever born														
Age	0	1	2	3	4	5	6	7	8	9	10+	Total	Number of women	Mean number of children ever born	Mean number of children living
ALL WOMEN															
15-19	86.4	9.9	3.1	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	100.0	3,266	0.18	0.15
20-24	39.7	26.2	19.6	9.6	3.8	0.8	0.3	0.0	0.0	0.0	0.0	100.0	2,547	1.15	1.01
25-29	12.8	11.4	17.2	22.5	18.7	10.5	4.6	1.5	0.6	0.1	0.0	100.0	2,517	2.85	2.50
30-34	5.9	4.7	7.8	12.6	16.8	18.9	16.5	9.3	4.4	2.2	0.8	100.0	1,808	4.48	3.81
35-39	2.7	3.0	4.8	7.3	11.4	13.0	17.9	13.9	14.2	6.0	5.7	100.0	1,602	5.78	4.74
40-44	2.7	2.3	4.5	4.6	6.0	9.3	13.4	17.7	14.9	11.5	13.0	100.0	1,187	6.63	5.25
45-49	1.6	2.5	4.0	3.6	5.2	9.8	11.3	12.4	13.9	12.2	23.6	100.0	1,143	7.25	5.50
Total	31.0	10.4	9.6	9.0	8.5	7.5	7.1	5.5	4.7	3.0	3.8	100.0	14,070	3.14	2.59
CURRENTLY MARRIED WOMEN															
15-19	45.1	38.4	13.9	1.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	100.0	711	0.75	0.64
20-24	12.7	35.0	29.5	15.1	5.9	1.3	0.4	0.0	0.0	0.0	0.0	100.0	1,574	1.72	1.52
25-29	3.1	10.0	18.4	25.7	21.9	12.6	5.6	1.8	0.8	0.1	0.0	100.0	2,066	3.28	2.90
30-34	2.2	3.3	7.1	12.2	17.5	20.2	18.3	10.7	5.0	2.5	1.0	100.0	1,551	4.82	4.13
35-39	1.0	1.4	2.9	6.7	10.5	13.2	19.6	15.8	15.8	6.4	6.7	100.0	1,343	6.18	5.10
40-44	2.5	2.3	3.9	3.4	4.7	8.1	12.6	18.7	15.8	12.4	15.6	100.0	960	6.92	5.54
45-49	1.3	2.3	3.8	2.5	4.3	8.6	11.4	11.6	14.8	13.0	26.6	100.0	862	7.54	5.81
Total	7.3	12.6	12.8	12.3	11.5	10.2	9.8	7.7	6.4	3.9	5.3	100.0	9,066	4.29	3.57

[1] A comparison of the five-year TFR shows a similar pattern. For the country as a whole (5.9 births in 2000 versus 5.7 births in 2005), there has been little change over the past five years.

[2] The data does not address the level of secondary infertility which refers to women who may have had one or more births but are unable to have more children.

The same pattern is replicated for currently married women, except that the mean number of children ever born is higher for currently married women (4.3 children) than for all women (3.1 children). The difference between all women and currently married women in the mean number of children ever born is due to a substantial proportion of young and unmarried women in the former category who exhibit lower fertility.

Consistent with expectations, the mean number of children ever born and mean number of children surviving rise monotonically with increasing age of women. Comparison of the mean children ever born with the mean number of living children reveals the experience of child loss among Ethiopian women. By the end of their reproductive years (age 45-49), women in Ethiopia have given birth, on average, to 7.3 children, with 5.5 surviving.

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

4.5 Birth Intervals

Birth interval is the length of time between two successive live births. Information on birth intervals provides insight into birth spacing patterns, which affect fertility as well as infant and childhood mortality. Studies have shown that children born too soon after a previous birth are at increased risk of dying at an early age, particularly when the interval between births is less than 24 months.

Table 4.6 shows the percent distribution of non-first births in the five years preceding the survey by number of months since the preceding birth, according to background characteristics. The median birth interval in Ethiopia is 33.8 months. The median number of months since a preceding birth increases significantly with age, from a low of 26.1 months among mothers age 15-19 to a high of 38.8 months among mothers age 40-49.

There is no substantial difference in the length of the median birth interval by birth order and sex of the preceding birth.

Studies have shown that the death of a preceding child leads to a shorter birth interval than when the preceding child survived. The median birth interval is more than eight months shorter for children whose previous sibling is dead than for children whose previous sibling is alive (26.1 months and 34.6 months, respectively). It is presumed that the difference in the birth intervals is related to the desire of parents to replace a dead child, as well as to the loss of the fertility-delaying effects of breastfeeding.

According to the 2005 EDHS data, urban women have slightly longer intervals between births (39.1 months) compared with rural women (33.6 months).

Regional variations in birth intervals range from a low of 29 months in Affar to a high of 45.2 months in Addis Ababa. The median birth interval is longer among births to women with at least some secondary education than among births to women with lower levels of education. The birth interval does not vary consistently by wealth quintile.

Table 4.6 Birth intervals

Percent distribution of non-first births in the five years preceding the survey by number of months since preceding birth, according to background characteristics, Ethiopia 2005

Background characteristic	Months since preceding birth							Total	Number of non-first births	Median number of months since preceding birth
	7-17	18-23	24-35	36-47	48-54	55-59	60+			
Age										
15-19	21.4	18.8	44.5	10.7	4.6	0.0	0.0	100.0	144	26.1
20-29	10.1	15.3	36.6	23.2	6.6	2.7	5.4	100.0	4,002	31.6
30-39	6.7	11.8	34.6	25.4	7.2	3.9	10.5	100.0	3,930	35.0
40-49	5.3	9.7	27.5	25.7	9.5	4.8	17.4	100.0	1,150	38.8
Birth order										
2-3	8.7	13.8	34.3	24.1	6.8	3.2	9.1	100.0	3,347	33.5
4-6	8.3	12.8	35.3	24.0	7.2	3.7	8.6	100.0	3,659	33.6
7+	7.5	12.6	34.4	25.0	7.7	3.4	9.5	100.0	2,220	34.3
Sex of preceding birth										
Male	8.2	13.0	34.9	24.4	7.4	3.2	8.9	100.0	4,711	33.7
Female	8.3	13.3	34.6	24.2	6.9	3.7	9.1	100.0	4,515	33.8
Survival of preceding birth										
Living	6.1	12.2	35.7	25.6	7.5	3.6	9.3	100.0	8,026	34.6
Dead	22.3	19.4	28.5	15.4	5.1	2.1	7.2	100.0	1,201	26.1
Residence										
Urban	9.0	11.5	24.6	16.9	8.9	2.7	26.5	100.0	551	39.1
Rural	8.2	13.2	35.4	24.8	7.1	3.5	7.9	100.0	8,675	33.6
Region										
Tigray	4.0	9.2	38.8	25.7	8.5	3.0	10.9	100.0	578	35.2
Affar	14.3	17.2	33.9	17.3	6.4	1.3	9.6	100.0	87	29.0
Amhara	5.4	8.5	31.5	30.4	8.4	4.0	11.7	100.0	2,109	37.0
Oromiya	9.3	16.3	37.4	21.7	5.5	2.9	7.0	100.0	3,719	31.0
Somali	13.4	19.0	31.4	18.5	6.7	2.3	8.8	100.0	402	29.6
Benishangul-Gumuz	9.8	14.2	35.8	22.7	6.2	3.1	8.2	100.0	83	32.2
SNNP	9.3	11.9	33.5	24.2	8.6	4.3	8.2	100.0	2,093	34.5
Gambela	6.0	10.1	27.4	23.6	11.1	5.6	16.2	100.0	25	38.2
Harari	10.8	17.1	31.4	18.9	5.4	2.1	14.2	100.0	16	31.4
Addis Ababa	5.0	12.3	19.4	17.3	10.4	3.6	32.1	100.0	86	45.2
Dire Dawa	8.9	17.0	32.5	20.9	6.3	0.3	14.0	100.0	28	31.5
Education										
No education	7.9	13.3	34.8	24.9	7.1	3.4	8.5	100.0	7,459	33.8
Primary	9.3	12.6	36.3	22.7	7.1	3.6	8.4	100.0	1,462	32.8
Secondary and higher	10.5	11.5	24.9	17.1	8.6	3.0	24.5	100.0	305	38.7
Wealth quintile										
Lowest	9.2	14.9	36.1	23.0	7.5	3.0	6.4	100.0	2,079	32.3
Second	7.4	12.1	35.7	25.2	6.7	3.7	9.2	100.0	1,956	34.0
Middle	7.8	13.3	34.1	24.8	7.2	4.4	8.3	100.0	2,070	34.1
Fourth	8.4	12.8	35.8	24.9	6.8	3.5	7.8	100.0	1,850	33.7
Highest	8.3	12.2	30.6	23.4	7.9	2.0	15.6	100.0	1,272	35.5
Total	8.2	13.1	34.7	24.3	7.2	3.4	9.0	100.0	9,226	33.8

Note: First-order births are excluded from this table. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth.

4.6 Age at First Birth

Early age at initiation of childbearing has a detrimental effect on the health of both mother and child. It also lengthens the reproductive period, thereby increasing the level of fertility. Table 4.7 shows the median age at first birth and the percentage of women who first gave birth by specific exact ages, by five-year age groups.

Table 4.7 Age at first birth

Percentage of women who gave birth by specific exact ages, and median age at first birth, by current age, Ethiopia 2005

Current age	Percentage who gave birth by exact age					Percentage who have never given birth	Number of women	Median age at first birth
	15	18	20	22	25			
15-19	1.7	na	na	na	na	86.4	3,266	a
20-24	5.4	28.4	46.1	na	na	39.7	2,547	a
25-29	8.5	38.0	58.1	73.0	83.3	12.8	2,517	19.2
30-34	10.0	40.9	59.7	74.9	87.6	5.9	1,808	18.9
35-39	9.9	40.3	58.3	75.2	89.1	2.7	1,602	19.0
40-44	11.2	41.2	60.3	74.7	86.8	2.7	1,187	19.0
45-49	10.5	45.4	60.3	73.4	86.7	1.6	1,143	18.7

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

Childbearing begins early in Ethiopia. The median age at first birth is 19.2 years for the younger cohort (age 25-29) of women for whom a median age can be computed and varies between 18.7 and 19.0 years for the older cohorts. This suggests a small, recent rise in the median age at first birth. An examination of the percentage of women in various age groups who had a first birth by specific exact age indicates that the percentage increases as the exact age increases, as expected. The proportion of women in the age group 20-24 who had their first birth by exact age 20 (46 percent), for instance, is higher than by exact age 15 (5 percent) and 18 (28 percent). The data also show some evidence of a trend toward delayed onset of childbearing among younger women; for example, 41 percent of women age 30 and above had their first birth by exact age 18 while 28 percent and 38 percent of women in the age groups 20-24 and 25-29, respectively, had started childbearing at the same age.

Table 4.8 shows median age at first birth by background characteristics and age at the time of the survey. The median age at first birth is higher in urban areas than in rural areas, with a difference of almost two years among women age 25-49. According to the data the urban-rural difference in median age at first birth is much wider among younger (25-29) than older women. Among regions, Addis Ababa has the highest median age at first birth (23.5 years) for women age 25-49, followed by Harari (21.0 years), while the Amhara Region has the lowest median age at first birth (18 years). This indicates that women in the Amhara Region initiated childbearing more than five years earlier on average than women in Addis Ababa.

There is a positive relationship between educational attainment and median age at first birth, but the impact seems more significant at secondary and higher levels of education. Women with at least secondary education begin their childbearing more than four years (22.9 years) later than women with no education (18.7 years). Although the median age at first birth is consistently the highest among the wealthiest women, there is no clear pattern between the onset of childbearing and women's wealth across age groups except among the younger cohort (25-29).

Table 4.8 Median age at first birth by background characteristics

Median age at first birth among women age 25-49 years, by current age and background characteristics, Ethiopia 2005

Background characteristic	Current age					Women age 25-49
	25-29	30-34	35-39	40-44	45-49	
Residence						
Urban	23.6	21.0	20.0	18.8	19.3	20.7
Rural	18.8	18.7	18.9	19.0	18.5	18.8
Region						
Tigray	19.5	19.0	18.6	18.7	18.9	19.0
Affar	18.8	17.9	19.2	21.1	20.3	19.5
Amhara	18.1	18.3	18.0	18.1	17.6	18.0
Oromiya	19.1	18.9	19.7	19.3	18.9	19.2
Somali	18.8	18.6	20.8	21.1	22.8	20.0
Benishangul-Gumuz	17.9	18.0	18.5	18.2	17.1	18.1
SNNP	19.6	19.2	19.0	19.1	19.2	19.3
Gambela	17.8	18.2	18.8	17.9	17.3	18.1
Harari	22.9	20.7	20.0	19.6	20.4	21.0
Addis Ababa	a	25.8	22.3	19.3	19.5	23.5
Dire Dawa	21.5	20.1	19.1	19.1	19.3	19.9
Education						
No education	18.8	18.6	18.7	18.9	18.6	18.7
Primary	18.7	18.6	19.9	19.9	18.8	18.9
Secondary and higher	a	22.2	22.1	19.8	20.5	22.9
Wealth quintile						
Lowest	18.7	18.7	18.9	19.6	20.5	19.0
Second	18.3	18.5	19.1	19.3	18.4	18.6
Middle	19.0	18.9	19.5	19.1	19.0	19.1
Fourth	19.0	18.7	18.0	18.4	17.8	18.5
Highest	21.5	19.8	19.2	18.7	18.7	19.8
Total	19.2	18.9	19.0	19.0	18.7	19.0

a = Omitted because less than 50 percent of the women had a birth before reaching the beginning of the age group

4.7 TEENAGE PREGNANCY AND MOTHERHOOD

In addition to the relatively high level of pregnancy complications among young mothers because of physiological immaturity, inexperience associated with child care practices also influences maternal and infant health. Moreover, an early start to childbearing greatly reduces the educational and employment opportunities of women and is associated with higher levels of fertility. Table 4.9 shows the proportion of women age 15-19 (teenagers) who are mothers or pregnant with their first child, by background characteristics.

Table 4.9 Teenage pregnancy and motherhood

Percentage of women age 15-19 who have had a live birth or who are pregnant with their first child, by background characteristics, Ethiopia 2005

Background characteristic	Percentage who: Have had a live birth	Are pregnant with first child	Percentage who have begun childbearing	Number of women
Age				
15	1.5	0.4	1.9	729
16	4.9	3.2	8.1	667
17	10.9	3.1	14.0	556
18	20.4	4.3	24.7	862
19	36.1	4.7	40.8	451
Residence				
Urban	6.0	0.6	6.6	703
Rural	15.6	3.7	19.4	2,562
Region				
Tigray	12.9	1.8	14.7	229
Affar	14.6	5.7	20.3	31
Amhara	16.7	3.6	20.3	811
Oromiya	15.8	3.2	19.0	1,206
Somali	16.8	2.6	19.5	78
Benishangul-Gumuz	20.8	6.4	27.1	27
SNNP	8.1	2.9	11.0	652
Gambela	24.8	6.0	30.8	8
Harari	18.2	3.7	21.9	11
Addis Ababa	3.4	0.9	4.3	199
Dire Dawa	11.9	1.8	13.7	16
Education				
No education	24.9	4.0	28.9	1,308
Primary	7.4	3.1	10.4	1,423
Secondary and higher	2.3	0.7	3.0	535
Wealth quintile				
Lowest	19.7	4.1	23.8	448
Second	17.3	3.5	20.8	566
Middle	15.9	4.0	19.8	627
Fourth	13.9	4.5	18.3	603
Highest	7.2	1.0	8.2	1,022
Total	13.6	3.1	16.6	3,266

Seventeen percent of women age 15-19 have already become mothers or are currently pregnant with their first child, which is similar to the pattern seen from data collected in the 2000 EDHS (16 percent). The percentage of women who have begun childbearing increases rapidly with age, from 2 percent among women age 15, to 41 percent among women age 19. Nearly three times as many teenagers residing in rural areas as in urban areas have begun childbearing. Childbearing among teenagers is lowest in Addis Ababa (4 percent) and highest in the Gambela Region (31 percent). The level of teenage parenthood among teenagers with no education is nearly three times that among teenagers with primary education, while it is nearly ten times that of teenagers with secondary and higher education. The percentage of teenagers who have begun childbearing is three times higher among those in the poorest households (24 percent) compared with those in the wealthiest households (8 percent).

Table 3.1 Background characteristics of respondents

Percent distribution of women and men by selected background characteristics, Ethiopia 2005

Background characteristic	Women			Men		
	Weighted percent	Weighted	Unweighted	Weighted percent	Weighted	Unweighted
Age						
15-19	23.2	3,266	3,252	22.1	1,335	1,278
20-24	18.1	2,547	2,617	17.6	1,064	1,039
25-29	17.9	2,517	2,557	12.3	741	830
30-34	12.8	1,808	1,754	12.5	754	759
35-39	11.4	1,602	1,629	10.8	651	650
40-44	8.4	1,187	1,181	8.2	497	496
45-49	8.1	1,143	1,080	7.0	422	420
50-54	na	na	na	5.5	335	339
55-59	na	na	na	3.9	235	222
Marital status						
Never married	25.0	3,516	3,830	40.1	2,419	2,460
Married	63.4	8,914	8,438	56.2	3,393	3,295
Living together	1.1	152	206	0.5	31	37
Divorced/separated	6.6	932	989	2.5	153	182
Widowed	4.0	556	607	0.6	37	59
Residence						
Urban	17.8	2,499	4,423	15.2	916	1,628
Rural	82.2	11,571	9,647	84.8	5,117	4,405
Region						
Tigray	6.5	919	1,257	6.1	366	512
Affar	1.0	146	789	1.1	65	314
Amhara	24.7	3,482	1,943	25.2	1,521	897
Oromiya	35.6	5,010	2,230	36.8	2,222	1,041
Somali	3.5	486	669	3.4	202	281
Benishangul-Gumuz	0.9	124	846	0.9	54	382
SNNP	21.3	2,995	2,087	20.6	1,244	880
Gambela	0.3	44	729	0.3	21	339
Harari	0.3	39	844	0.3	16	359
Addis Ababa	5.4	756	1,869	4.8	292	698
Dire Dawa	0.5	69	807	0.5	30	330
Education						
No education	65.9	9,271	8,454	42.9	2,589	2,434
Primary	22.2	3,123	2,966	37.3	2,252	1,946
Secondary	10.5	1,481	2,292	17.3	1,045	1,394
Higher	1.4	194	358	2.4	147	259
Religion						
Orthodox	49.2	6,920	6,809	49.3	2,974	2,916
Catholic	1.2	173	143	1.0	61	56
Protestant	18.9	2,654	2,301	17.2	1,038	876
Muslim	28.5	4,009	4,522	29.6	1,788	2,030
Other	2.2	313	295	2.9	172	155
Ethnicity						
Affar	0.7	104	603	0.8	46	249
Amhara	31.5	4,434	4,165	30.8	1,861	1,707
Guragie	4.6	648	786	4.4	268	343
Oromo	32.4	4,556	3,387	33.2	2,005	1,499
Sidamo	4.0	561	345	4.5	270	168
Somali	3.0	421	690	3.1	188	299
Tigraway	6.9	971	1,398	6.5	394	588
Welaita	2.6	361	266	2.2	132	103
Other	14.3	2,015	2,430	14.4	869	1,077
Total	100.0	14,070	14,070	100.0	6,033	6,033

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

3.2 EDUCATIONAL ATTAINMENT AND LITERACY

Tables 3.2.1 and 3.2.2 present detailed distribution of educational attainment, according to background characteristics. As can be seen from the table, most women with no education are older and reside primarily in rural areas. The urban-rural difference in level of education is pronounced at secondary or higher levels. For example, only 3 percent of women in rural areas have some secondary education, compared with nearly a third of their counterparts in urban areas. Regarding regional differentials in educational attainment, the highest proportions of women with no education are observed in the Somali and Affar regions (91 percent and 85 percent, respectively). The lowest proportion is observed in Addis Ababa, where only 18 percent of women have never attended formal education.

Table 3.2.1 Educational attainment by background characteristics: women

Percent distribution of women by highest level of schooling attained, and median number of years of schooling, according to background characteristics, Ethiopia 2005

	Highest level of schooling attended or completed								
Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Total	Number of women	Median years of schooling
Age									
15-19	40.1	36.4	7.2	15.5	0.4	0.5	100.0	3,266	1.2
20-24	60.2	19.8	2.7	11.4	3.8	2.1	100.0	2,547	0.0
25-29	68.9	17.4	1.6	6.6	3.8	1.7	100.0	2,517	0.0
30-34	73.0	15.5	1.7	5.0	3.2	1.6	100.0	1,808	0.0
35-39	80.1	11.3	1.5	3.4	2.3	1.5	100.0	1,602	0.0
40-44	87.0	6.0	1.1	2.6	1.8	1.6	100.0	1,187	0.0
45-49	92.8	3.5	0.9	1.5	0.5	0.8	100.0	1,143	0.0
Residence									
Urban	24.7	17.8	6.7	31.5	12.5	6.9	100.0	2,499	6.2
Rural	74.8	19.5	2.2	3.2	0.1	0.2	100.0	11,571	0.0
Region									
Tigray	63.5	16.4	3.7	12.0	2.0	2.4	100.0	919	0.0
Affar	84.8	6.7	1.7	6.1	0.7	0.0	100.0	146	0.0
Amhara	75.6	13.7	2.1	5.7	1.7	1.1	100.0	3,482	0.0
Oromiya	64.4	22.4	3.3	8.0	1.5	0.5	100.0	5,010	0.0
Somali	90.6	3.3	1.0	2.4	2.2	0.6	100.0	486	0.0
Benishangul-Gumuz	73.2	17.6	2.8	4.2	0.8	1.4	100.0	124	0.0
SNNP	65.7	24.6	3.0	5.6	0.7	0.3	100.0	2,995	0.0
Gambela	59.5	27.4	4.7	6.9	1.4	0.1	100.0	44	0.0
Harari	39.9	14.4	3.0	25.1	13.0	4.6	100.0	39	3.8
Addis Ababa	17.6	18.6	5.7	29.8	16.7	11.6	100.0	756	7.3
Dire Dawa	46.7	15.0	4.5	22.3	9.1	2.4	100.0	69	2.1
Wealth quintile									
Lowest	88.2	10.2	0.4	1.2	0.0	0.0	100.0	2,428	0.0
Second	83.5	14.3	1.0	1.2	0.0	0.0	100.0	2,643	0.0
Middle	73.2	21.8	2.4	2.5	0.0	0.0	100.0	2,732	0.0
Fourth	66.2	25.6	3.5	4.5	0.1	0.1	100.0	2,647	0.0
Highest	32.4	22.1	6.2	25.1	8.9	5.3	100.0	3,621	4.2
Total	65.9	19.2	3.0	8.2	2.3	1.4	100.0	14,070	0.0

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

Table 3.2.2 Educational attainment by background characteristics: men

Percent distribution of men by highest level of schooling attained, and median number of years of schooling, according to background characteristics, Ethiopia 2005

Background characteristic	Highest level of schooling attended or completed						Total	Number of men	Median years of schooling
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary			
Age									
15-19	21.2	43.3	11.4	22.9	0.6	0.7	100.0	1,335	3.5
20-24	32.7	30.4	7.7	22.0	4.4	2.8	100.0	1,064	3.1
25-29	42.2	31.4	5.2	12.5	5.2	3.5	100.0	741	1.4
30-34	44.6	32.1	7.4	9.5	4.8	1.6	100.0	754	1.3
35-39	49.1	28.1	6.3	8.8	5.0	2.7	100.0	651	0.2
40-44	57.0	22.2	3.6	8.6	3.2	5.3	100.0	497	0.0
45-49	66.9	16.8	3.1	6.6	2.5	4.1	100.0	422	0.0
50-54	73.0	16.8	2.7	3.3	2.1	2.1	100.0	335	0.0
55-59	77.0	19.7	0.3	1.7	0.7	0.6	100.0	235	0.0
Residence									
Urban	7.9	14.6	5.8	40.3	18.1	13.4	100.0	916	8.5
Rural	49.2	33.4	7.0	9.3	0.6	0.5	100.0	5,117	0.0
Region									
Tigray	46.9	24.0	6.1	14.2	4.2	4.7	100.0	366	0.7
Affar	71.4	14.2	2.9	6.4	4.0	1.2	100.0	65	0.0
Amhara	60.5	23.8	3.1	9.4	2.0	1.2	100.0	1,521	0.0
Oromiya	36.7	34.5	8.5	16.1	2.6	1.6	100.0	2,222	1.9
Somali	81.9	7.7	2.5	5.3	1.7	0.9	100.0	202	0.0
Benishangul-Gumuz	49.9	30.6	6.9	10.3	0.4	1.9	100.0	54	0.0
SNNP	32.6	42.7	9.4	12.5	1.6	1.2	100.0	1,244	2.3
Gambela	27.5	32.5	8.2	26.8	3.6	1.3	100.0	21	3.7
Harari	20.5	21.7	6.2	31.8	12.2	7.6	100.0	16	6.3
Addis Ababa	7.2	12.7	6.9	33.0	21.5	18.7	100.0	292	9.2
Dire Dawa	22.8	18.0	6.7	33.9	11.8	6.8	100.0	30	6.3
Wealth quintile									
Lowest	69.6	21.9	4.3	4.2	0.0	0.0	100.0	1,100	0.0
Second	55.4	34.2	4.8	5.4	0.2	0.1	100.0	1,184	0.0
Middle	47.4	35.9	7.2	9.4	0.1	0.1	100.0	1,081	0.3
Fourth	37.0	39.2	9.7	13.0	1.0	0.1	100.0	1,200	2.1
Highest	14.5	22.9	7.7	32.6	12.5	9.8	100.0	1,469	6.7
Total	42.9	30.5	6.8	14.0	3.3	2.4	100.0	6,033	1.3

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

Not surprisingly, access to wealth equates with access to education. An analysis of the variation in the level of education by wealth quintile indicates that only those in the highest wealth quintile have the opportunity to complete secondary or higher levels of education. Likewise, only a third of the women in the highest quintile have never attended school, compared with 88 percent of women in the lowest quintile.

The pattern of educational attainment among men is similar to that of women. However, men are more educated than women at every level. This gender disparity is more marked at higher than at lower levels, indicating the government's recognition and successful intervention to address gender disparity in recent years.

Literacy is widely acknowledged as benefiting the individual and the society and is associated with a number of positive outcomes for health and nutrition. In the 2005 EDHS, literacy status was determined based on the respondents' ability to read all or part of a sentence. During data collection, interviewers carried a set of cards on which simple sentences were printed in five of the major languages for testing a respondent's reading ability. Only those who had never been to school and those who had not completed primary level were asked to read the cards in the language they were most likely able to read; those who had attained middle school or above were assumed to be literate.

Table 3.3.1 indicates that only 3 of 10 women in Ethiopia are literate and that literacy status varies greatly by place of residence. Three-fourths of women residing in urban areas are literate compared with only a fifth of their rural counterparts. The level of literacy by age exhibits a consistent decrease with increasing age, suggesting that the younger generation has had more opportunity for learning than the older generation. Half of the women age 15-19 are literate compared with only 8 percent of the women age 45-49.

Table 3.3.1 Literacy: women

Percent distribution of women by level of schooling attended and level of literacy, and percent literate, according to background characteristics, Ethiopia 2005

		No schooling or primary school								
Background characteristic	Secondary school or higher	Can read a whole sentence	Can read part of a sentence	Cannot read at all	No card with required language	Blind/ visually impaired	Missing	Total	Number of women	Percent literate[1]
Age										
15-19	16.4	22.4	10.7	47.5	2.7	0.0	0.2	100.0	3,266	49.5
20-24	17.3	7.8	6.4	66.1	2.3	0.0	0.1	100.0	2,547	31.5
25-29	12.1	7.1	6.9	73.2	0.5	0.1	0.1	100.0	2,517	26.1
30-34	9.8	6.1	8.9	74.2	1.0	0.1	0.0	100.0	1,808	24.8
35-39	7.2	5.2	7.3	78.8	1.6	0.0	0.0	100.0	1,602	19.6
40-44	5.9	2.7	5.7	84.0	1.6	0.0	0.0	100.0	1,187	14.4
45-49	2.8	1.2	4.0	90.9	1.1	0.0	0.0	100.0	1,143	8.0
Residence										
Urban	50.9	14.3	8.3	26.0	0.3	0.0	0.1	100.0	2,499	73.6
Rural	3.5	8.6	7.5	78.4	2.0	0.0	0.1	100.0	11,571	19.6
Region										
Tigray	16.5	10.0	7.2	66.3	0.0	0.0	0.0	100.0	919	33.7
Affar	6.8	4.6	4.1	84.3	0.1	0.0	0.0	100.0	146	15.6
Amhara	8.5	9.6	6.9	74.8	0.0	0.0	0.1	100.0	3,482	25.1
Oromiya	10.0	10.7	8.8	68.6	1.9	0.1	0.0	100.0	5,010	29.5
Somali	5.2	1.8	2.8	89.5	0.2	0.0	0.5	100.0	486	9.8
Benishangul-Gumuz	6.4	9.2	7.6	74.7	1.9	0.0	0.2	100.0	124	23.2
SNNP	6.7	8.4	7.3	73.0	4.5	0.1	0.0	100.0	2,995	22.4
Gambela	8.4	5.4	9.1	73.2	3.8	0.0	0.1	100.0	44	22.8
Harari	42.7	6.6	5.7	44.4	0.1	0.0	0.5	100.0	39	54.9
Addis Ababa	58.1	12.7	9.0	19.8	0.2	0.0	0.2	100.0	756	79.9
Dire Dawa	33.7	9.9	9.4	46.7	0.0	0.2	0.0	100.0	69	53.0
Wealth quintile										
Lowest	1.2	3.1	5.2	88.7	1.7	0.1	0.0	100.0	2,428	9.5
Second	1.2	5.7	5.2	85.3	2.5	0.0	0.0	100.0	2,643	12.1
Middle	2.6	9.3	8.8	77.8	1.5	0.1	0.0	100.0	2,732	20.6
Fourth	4.6	12.5	9.4	71.5	1.9	0.0	0.1	100.0	2,647	26.5
Highest	39.3	14.9	8.9	35.7	1.0	0.0	0.2	100.0	3,621	63.1
Total	11.9	9.6	7.6	69.1	1.7	0.0	0.1	100.0	14,070	29.2

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

Regional differences in literacy are marked, with literacy being highest among women in predominantly urban Addis Ababa, (80 percent) and lowest in the predominantly rural Somali Region (10 percent). There is also a marked difference in literacy levels by women's wealth status, ranging from a low of 10 percent among women in the lowest wealth quintile to a high of 63 percent among women in the highest wealth quintile.

In general, men are more likely to be literate than women (Table 3.3.2). The urban-rural differential in literacy among men is smaller compared with women, suggesting that men in the rural areas have much greater opportunity for learning than women.

Table 3.3.2 Literacy: men

Percent distribution of men by level of schooling attended and level of literacy, and percent literate, according to background characteristics, Ethiopia 2005

		No schooling or primary school								
Background characteristic	Secondary school or higher	Can read a whole sentence	Can read part of a sentence	Cannot read at all	No card with required language	Blind/ visually impaired	Missing	Total	Number of men	Percent literate[1]
Age										
15-19	24.2	33.8	12.9	25.4	3.7	0.0	0.0	100.0	1,335	70.9
20-24	29.3	22.4	11.0	35.3	1.7	0.2	0.1	100.0	1,064	62.7
25-29	21.2	22.0	13.9	41.6	1.4	0.0	0.0	100.0	741	57.0
30-34	15.9	30.0	14.4	38.5	1.0	0.2	0.0	100.0	754	60.3
35-39	16.5	25.7	20.5	36.7	0.6	0.0	0.0	100.0	651	62.7
40-44	17.2	21.9	13.2	47.1	0.6	0.0	0.0	100.0	497	52.3
45-49	13.2	16.7	17.0	52.3	0.8	0.0	0.0	100.0	422	46.9
50-54	7.5	20.9	9.3	61.9	0.4	0.1	0.0	100.0	335	37.7
55-59	3.0	11.8	15.6	67.9	0.7	1.0	0.0	100.0	235	30.4
Residence										
Urban	71.8	15.7	6.2	6.0	0.2	0.0	0.1	100.0	916	93.7
Rural	10.4	27.0	15.3	45.3	1.9	0.1	0.0	100.0	5,117	52.7
Region										
Tigray	23.1	31.4	13.0	32.5	0.0	0.0	0.0	100.0	366	67.5
Affar	11.5	8.1	7.4	71.2	1.2	0.5	0.0	100.0	65	27.0
Amhara	12.6	30.0	11.5	45.6	0.2	0.1	0.0	100.0	1,521	54.0
Oromiya	20.3	22.7	18.6	37.8	0.6	0.1	0.0	100.0	2,222	61.5
Somali	7.9	7.8	6.3	77.1	0.9	0.0	0.0	100.0	202	22.0
Benishangul-Gumuz	12.6	25.6	9.2	51.5	0.8	0.0	0.3	100.0	54	47.4
SNNP	15.3	28.6	13.2	36.5	6.4	0.1	0.0	100.0	1,244	57.0
Gambela	31.7	15.9	9.8	41.3	1.2	0.0	0.0	100.0	21	57.5
Harari	51.6	22.5	4.3	20.6	0.6	0.0	0.3	100.0	16	78.4
Addis Ababa	73.2	16.5	3.9	6.1	0.0	0.0	0.3	100.0	292	93.6
Dire Dawa	52.5	13.4	10.6	22.7	0.4	0.4	0.0	100.0	30	76.6
Wealth quintile										
Lowest	4.2	16.2	13.5	64.9	0.9	0.3	0.0	100.0	1,100	33.9
Second	5.7	21.2	17.7	53.1	2.3	0.0	0.0	100.0	1,184	44.5
Middle	9.5	30.8	14.1	43.3	2.2	0.0	0.0	100.0	1,081	54.5
Fourth	14.1	37.1	15.1	31.5	2.0	0.2	0.0	100.0	1,200	66.3
Highest	54.9	21.5	9.9	12.5	1.0	0.0	0.1	100.0	1,469	86.4
Total	19.8	25.3	13.9	39.3	1.7	0.1	0.0	100.0	6,033	58.9

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

3.3 ACCESS TO MASS MEDIA

Exposure to mass media provides the opportunity to be acquainted with new ideas and knowledge that is useful in various aspects of everyday life. In the 2005 EDHS, exposure to media was assessed by asking respondents how often they listened to a radio, watched television, or read newspapers or magazines. This information is useful in determining which media may be more effective for disseminating health information to targeted audiences. The results are presented in Tables 3.4.1 and 3.4.2 by background characteristics.

Table 3.4.1 Exposure to mass media: women

Percentage of women who are exposed to specific media on a weekly basis, according to background characteristics, Ethiopia 2005

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	All three media at least once a week	No media at least once a week	Number of women
Age						
15-19	5.3	11.0	19.9	1.3	72.6	3,266
20-24	2.7	10.3	19.6	1.1	76.2	2,547
25-29	1.9	6.8	15.2	0.7	81.2	2,517
30-34	1.4	5.4	13.0	0.7	84.3	1,808
35-39	0.9	4.8	13.4	0.3	84.4	1,602
40-44	1.3	5.0	11.2	0.7	86.6	1,187
45-49	0.7	5.7	11.6	0.6	85.3	1,143
Residence						
Urban	8.8	39.5	40.4	4.6	41.9	2,499
Rural	1.2	0.9	10.7	0.0	88.1	11,571
Region						
Tigray	2.8	7.3	13.4	0.9	82.2	919
Affar	0.5	4.4	8.3	0.0	88.4	146
Amhara	1.2	3.5	14.6	0.4	83.8	3,482
Oromiya	2.3	6.5	16.6	0.6	79.4	5,010
Somali	0.6	6.5	5.0	0.3	90.9	486
Benishangul-Gumuz	1.6	1.4	13.2	0.3	86.1	124
SNNP	1.6	2.5	11.3	0.2	86.6	2,995
Gambela	1.7	3.6	7.6	0.0	89.1	44
Harari	6.1	42.2	39.1	4.0	46.3	39
Addis Ababa	14.1	55.8	45.9	7.4	29.2	756
Dire Dawa	4.1	37.2	38.3	3.0	53.1	69
Education						
No education	0.0	1.5	8.1	0.0	91.0	9,271
Primary	3.6	7.4	21.2	0.3	72.8	3,123
Secondary and higher	14.3	43.5	50.1	6.6	31.6	1,675
Wealth quintile						
Lowest	0.3	0.2	2.2	0.0	97.2	2,428
Second	0.5	0.3	5.1	0.1	94.4	2,643
Middle	1.5	0.4	10.1	0.0	88.6	2,732
Fourth	1.5	1.1	15.6	0.0	82.8	2,647
Highest	6.9	28.7	37.9	3.3	48.9	3,621
Total	2.5	7.8	16.0	0.9	79.9	14,070

Table 3.4.2 Exposure to mass media: men

Percentage of men who are exposed to specific media on a weekly basis, according to background characteristics, Ethiopia 2005

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	All three media at least once a week	No media at least once a week	Number of men
Age						
15-19	8.6	13.3	26.5	2.9	65.6	1,335
20-24	9.9	14.9	37.1	4.0	57.0	1,064
25-29	7.8	12.4	33.5	3.8	61.7	741
30-34	6.2	8.2	34.0	3.2	63.8	754
35-39	6.2	8.2	30.1	2.4	66.6	651
40-44	6.6	7.8	33.4	3.1	64.0	497
45-49	5.6	8.0	31.4	2.3	65.4	422
50-54	5.3	6.4	23.3	2.1	73.9	335
55-59	3.4	4.3	27.6	1.2	71.0	235
Residence						
Urban	27.3	49.9	62.8	17.6	21.9	916
Rural	3.9	3.7	25.7	0.5	71.6	5,117
Region						
Tigray	13.7	18.4	37.0	4.1	54.1	366
Affar	1.4	13.1	29.1	1.2	67.1	65
Amhara	4.6	5.7	24.9	1.4	71.4	1,521
Oromiya	6.5	10.2	35.6	2.9	61.0	2,222
Somali	2.0	3.4	22.0	1.2	77.0	202
Benishangul-Gumuz	1.9	6.8	35.0	0.3	61.9	54
SNNP	4.6	5.6	24.6	1.2	72.3	1,244
Gambela	5.4	8.4	33.4	1.6	62.6	21
Harari	22.2	41.8	70.9	15.0	22.1	16
Addis Ababa	37.5	54.7	55.7	20.7	21.4	292
Dire Dawa	17.5	34.2	51.9	9.7	38.9	30
Education						
No education	0.6	1.4	16.1	0.0	82.9	2,589
Primary	5.5	7.7	33.4	0.9	61.8	2,252
Secondary and higher	25.8	36.5	60.5	13.9	27.2	1,192
Wealth quintile						
Lowest	2.8	1.0	10.4	0.2	87.8	1,100
Second	1.7	2.9	18.6	0.4	79.5	1,184
Middle	6.3	3.6	25.0	0.3	70.3	1,081
Fourth	4.1	4.4	35.9	0.5	61.5	1,200
Highest	19.0	34.6	58.1	11.4	31.2	1,469
Total	7.4	10.7	31.3	3.1	64.0	6,033

The survey shows that exposure to media in Ethiopia is low, especially with regards to the print media. Respondents are more likely to be exposed to the radio than any other media. Men have greater access to mass media, particularly radio, than women. Specifically, men are twice as likely to listen to the radio as women (31 percent and 16 percent, respectively).

Young women under 25 years of age are more likely to be exposed to mass media than older women, primarily because of their higher level of education. There is also a wide gap in exposure to mass media by place of residence. For example, the proportion of newspaper readers is highest among urban residents and those with some secondary or higher levels of education. When looking into the regional variation, women in Addis Ababa are more likely to read newspapers or magazines on a weekly basis than other women.

There has been an increase in exposure to the media since 2000. The proportion of women who listen to the radio at least once a week has increased by 43 percent, from 11 percent in 2000 to 16 percent in 2005, while the proportion among men rose from 24 percent to 31 percent. There was also an increase in exposure to television, from 4 to 8 percent among women and from 8 to 11 percent among men.

3.4 EMPLOYMENT

3.4.1 Employment Status

In the 2005 EDHS, respondents were asked a number of questions regarding their employment status, including whether they were working in the seven days preceding the survey and, if not, whether they had worked in the 12 months before the survey. The results for women and men are presented in Tables 3.5.1 and 3.5.2. At the time of the survey, about 3 of 10 women were currently employed and an additional 5 percent were not employed but had worked sometime during the preceding 12 months.

Current employment generally increases with increasing age and women who are divorced, separated, or widowed are more likely to be employed than other women. Women who have four or less children are more likely to be employed than those with five or more children.

There are notable variations in the proportion currently employed by place of residence and region. Urban women are more likely to be currently employed than rural women (40 percent compared with 27 percent).Women in Addis Ababa and Harari are most likely to be employed (44 percent and 41 percent, respectively), while Affar and Somali regions have the lowest proportions of employed women (11 percent each).

Current employment increases with an increase in level of education; the proportion of employed women increases from 27 percent among uneducated women to 38 percent among those with some secondary education. There is also an increase in the percentage of employed persons by wealth quintile, with those in the highest quintile much more likely to be employed than those in the other four quintiles.

A marked difference was observed in the level of employment by gender. The proportion currently employed is much higher among men than women. As can be seen from Table 3.5.2, the majority of men (86 percent) were employed at the time of survey. The majority of employed men are in rural areas and have little or no education. This is probably because the EDHS data collection took place during the peak agricultural season when most men in rural areas are likely to be engaged in farm work.

Although the level of female employment is lower in 2005 than in 2000, the patterns for men are very similar. The marked difference in the percentage of women currently employed between 2000 (57 percent) and 2005 (29 percent) can be attributed to the difference in the way the data on current employment were collected for women in the two DHS surveys. There was no difference in the wording of the question on current employment for men between the two surveys.

Table 3.5.1 Employment status: women

Percent distribution of women by employment status, according to background characteristics, Ethiopia 2005

Background characteristic	Employed in the 12 months preceding the survey		Not employed in the 12 months preceding the survey	Missing	Total	Number of women
	Currently employed[1]	Not currently employed				
Age						
15-19	24.0	4.2	65.8	6.0	100.0	3,266
20-24	29.6	5.9	60.5	3.9	100.0	2,547
25-29	28.8	6.1	60.5	4.6	100.0	2,517
30-34	30.2	5.7	60.6	3.5	100.0	1,808
35-39	31.2	4.6	59.2	4.9	100.0	1,602
40-44	33.0	6.6	56.0	4.4	100.0	1,187
45-49	31.6	5.1	60.6	2.8	100.0	1,143
Marital status						
Never married	31.2	3.4	60.2	5.2	100.0	3,516
Married or living together	25.5	6.0	63.9	4.6	100.0	9,066
Divorced/separated/widowed	44.3	6.0	47.2	2.5	100.0	1,488
Number of living children						
0	30.4	4.7	60.0	4.9	100.0	4,554
1-2	29.5	6.4	60.1	4.0	100.0	3,226
3-4	29.7	5.7	60.2	4.4	100.0	2,981
5+	25.5	5.0	64.8	4.6	100.0	3,309
Residence						
Urban	39.6	3.8	53.5	3.1	100.0	2,499
Rural	26.6	5.7	62.9	4.8	100.0	11,571
Region						
Tigray	27.6	16.8	51.5	4.1	100.0	919
Affar	11.3	0.6	82.5	5.6	100.0	146
Amhara	27.9	8.4	59.9	3.8	100.0	3,482
Oromiya	32.0	3.3	59.9	4.7	100.0	5,010
Somali	11.4	0.1	73.1	15.4	100.0	486
Benishangul-Gumuz	34.3	9.1	51.1	5.5	100.0	124
SNNP	24.5	3.0	68.3	4.2	100.0	2,995
Gambela	26.7	6.2	59.8	7.3	100.0	44
Harari	41.1	1.0	53.5	4.4	100.0	39
Addis Ababa	44.2	4.7	49.4	1.7	100.0	756
Dire Dawa	33.7	0.9	64.5	0.9	100.0	69
Education						
No education	27.2	5.6	62.5	4.6	100.0	9,271
Primary	29.1	4.9	60.9	5.1	100.0	3,123
Secondary and higher	38.0	4.6	54.5	2.9	100.0	1,675
Wealth quintile						
Lowest	23.5	5.7	64.4	6.4	100.0	2,428
Second	26.6	6.3	62.0	5.1	100.0	2,643
Middle	25.9	5.2	64.0	4.8	100.0	2,732
Fourth	29.6	5.3	61.9	3.2	100.0	2,647
Highest	35.9	4.6	55.9	3.7	100.0	3,621
Total	28.9	5.4	61.2	4.5	100.0	14,070

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

Table 3.5.2 Employment status: men

Percent distribution of men by employment status, according to background characteristics, Ethiopia 2005

Background characteristic	Employed in the 12 months preceding the survey: Currently employed[1]	Employed in the 12 months preceding the survey: Not currently employed	Not employed in the 12 months preceding the survey	Missing	Total	Number of men
Age						
15-19	63.0	2.0	34.3	0.6	100.0	1,335
20-24	79.8	3.4	16.5	0.4	100.0	1,064
25-29	91.9	2.8	5.3	0.0	100.0	741
30-34	97.6	0.7	1.5	0.2	100.0	754
35-39	97.3	0.6	2.1	0.0	100.0	651
40-44	96.3	1.6	2.0	0.0	100.0	497
45-49	95.5	0.9	3.5	0.0	100.0	422
50-54	96.6	0.8	2.5	0.0	100.0	335
55-59	93.4	0.8	5.8	0.0	100.0	235
Marital status						
Never married	69.0	3.1	27.4	0.5	100.0	2,419
Married or living together	97.0	0.9	2.1	0.0	100.0	3,424
Divorced/separated/widowed	92.0	1.0	7.1	0.0	100.0	190
Number of living children						
0	72.5	2.9	24.2	0.4	100.0	2,766
1-2	95.8	1.1	2.9	0.1	100.0	993
3-4	97.6	0.4	1.9	0.0	100.0	967
5+	96.7	1.1	2.1	0.0	100.0	1,307
Residence						
Urban	62.1	5.5	32.0	0.4	100.0	916
Rural	89.8	1.2	8.8	0.2	100.0	5,117
Region						
Tigray	80.5	6.2	13.2	0.2	100.0	366
Affar	92.0	2.1	5.9	0.0	100.0	65
Amhara	91.3	0.7	8.0	0.0	100.0	1,521
Oromiya	84.1	1.2	14.5	0.1	100.0	2,222
Somali	87.2	1.9	10.5	0.3	100.0	202
Benishangul-Gumuz	91.0	1.6	7.5	0.0	100.0	54
SNNP	86.4	1.5	11.5	0.7	100.0	1,244
Gambela	82.1	6.1	11.8	0.0	100.0	21
Harari	81.0	3.1	15.7	0.2	100.0	16
Addis Ababa	68.9	7.3	23.6	0.1	100.0	292
Dire Dawa	68.8	6.1	25.2	0.0	100.0	30
Education						
No education	97.4	1.0	1.6	0.0	100.0	2,589
Primary	83.9	1.4	14.5	0.2	100.0	2,252
Secondary and higher	63.2	4.4	31.8	0.6	100.0	1,192
Wealth quintile						
Lowest	92.8	1.4	5.6	0.1	100.0	1,100
Second	91.8	1.2	6.9	0.1	100.0	1,184
Middle	90.7	0.9	7.9	0.5	100.0	1,081
Fourth	86.4	1.6	11.9	0.1	100.0	1,200
Highest	70.8	3.5	25.4	0.3	100.0	1,469
Total	85.6	1.8	12.4	0.2	100.0	6,033

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

3.4.2 OCCUPATION

Respondents who were currently employed or had worked in the 12 months preceding the survey were further asked to specify their occupation. Tables 3.6.1 and 3.6.2 show data on employed women and men, respectively, by occupation according to background characteristics. Most employed persons are engaged in the agricultural sector. Specifically, more than half of employed women and 84 percent of employed men are engaged in agricultural jobs. Sales and service is an important occupation category, especially for women, employing nearly a third of the women and about 7 percent of the men.

Table 3.6.1 Occupation: women

Percent distribution of women employed in the 12 months preceding the survey by occupation, according to background characteristics, Ethiopia 2005

Background characteristic	Professional/ technical/ managerial	Clerical	Sales and services	Manual labour		Agriculture	Missing	Total	Number of women
				Skilled	Unskilled				
Age									
15-19	0.3	0.3	35.6	4.9	5.0	52.2	1.6	100.0	922
20-24	3.9	2.0	35.4	4.6	6.4	45.6	2.1	100.0	905
25-29	6.1	1.1	33.6	5.7	6.1	47.0	0.5	100.0	879
30-34	5.8	1.8	28.3	6.3	4.8	51.8	1.3	100.0	648
35-39	4.6	1.1	28.2	7.6	3.8	54.1	0.6	100.0	574
40-44	3.4	1.2	24.7	8.1	2.4	58.4	1.6	100.0	470
45-49	2.1	0.4	24.7	7.2	3.6	61.0	1.0	100.0	419
Marital status									
Never married	5.1	2.7	43.6	5.5	6.9	35.0	1.3	100.0	1,217
Married or living together	3.6	0.6	24.8	5.0	3.1	61.8	1.2	100.0	2,854
Divorced/separated/widowed	2.2	1.0	36.3	10.8	8.8	39.5	1.5	100.0	748
Number of living children									
0	4.4	2.1	40.6	5.9	6.2	39.3	1.5	100.0	1,596
1-2	5.8	1.4	29.1	5.6	6.2	50.6	1.2	100.0	1,157
3-4	3.2	0.3	25.5	6.5	3.8	59.8	0.9	100.0	1,056
5+	1.0	0.3	25.2	6.2	2.6	63.4	1.3	100.0	1,010
Residence									
Urban	14.2	5.0	57.5	12.2	9.0	1.2	1.0	100.0	1,084
Rural	0.7	0.1	23.7	4.2	3.8	66.2	1.3	100.0	3,734
Region									
Tigray	5.5	1.6	15.3	4.5	20.1	52.1	0.9	100.0	408
Affar	8.1	3.5	37.0	10.3	19.7	20.8	0.5	100.0	17
Amhara	3.4	0.5	15.3	6.5	4.7	68.4	1.2	100.0	1,265
Oromiya	2.3	0.7	25.2	4.1	2.5	63.7	1.5	100.0	1,771
Somali	14.9	2.8	74.8	2.4	0.0	4.0	1.2	100.0	56
Benishangul-Gumuz	4.2	0.7	18.0	2.8	0.3	73.2	0.8	100.0	54
SNNP	1.0	0.4	58.8	9.5	2.0	27.5	0.8	100.0	824
Gambela	3.0	1.9	31.9	17.5	7.2	38.2	0.3	100.0	15
Harari	14.4	5.5	64.9	5.7	5.1	2.6	1.8	100.0	16
Addis Ababa	13.7	6.0	62.7	7.9	7.4	0.3	2.1	100.0	370
Dire Dawa	7.0	4.0	73.9	3.3	11.1	0.0	0.7	100.0	24
Education									
No education	0.1	0.0	25.8	5.6	4.4	62.8	1.3	100.0	3,042
Primary	0.0	0.4	37.8	6.4	6.0	48.1	1.4	100.0	1,063
Secondary and higher	25.0	7.3	45.1	7.3	5.7	8.5	1.2	100.0	714
Wealth quintile									
Lowest	0.0	0.0	19.0	3.0	5.3	70.3	2.3	100.0	709
Second	0.2	0.0	18.9	6.3	5.0	68.3	1.3	100.0	870
Middle	0.0	0.0	22.8	5.0	3.3	68.1	0.9	100.0	851
Fourth	0.0	0.2	28.8	3.7	3.7	62.4	1.2	100.0	924
Highest	12.2	3.7	51.2	9.3	6.5	16.0	1.1	100.0	1,465
Total	3.8	1.2	31.3	6.0	4.9	51.5	1.3	100.0	4,819

Table 3.6.2 Occupation: men

Percent distribution of men employed in the 12 months preceding the survey by occupation, according to background characteristics, Ethiopia 2005

Background characteristic	Professional/ technical/ managerial	Clerical	Sales and services	Manual labour		Agriculture	Missing	Total	Number of men
				Skilled	Unskilled				
Age									
15-19	0.1	0.1	6.4	2.0	2.6	88.3	0.6	100.0	869
20-24	1.9	0.2	9.8	4.2	3.8	79.6	0.6	100.0	884
25-29	2.7	0.3	8.0	4.3	3.6	80.3	0.7	100.0	702
30-34	1.8	0.0	5.1	5.7	1.9	84.5	0.9	100.0	741
35-39	3.9	0.4	7.5	2.1	1.4	84.0	0.6	100.0	637
40-44	5.8	0.1	5.9	3.2	1.5	82.1	1.4	100.0	487
45-49	4.7	0.1	4.4	2.2	2.0	85.8	0.7	100.0	407
50-54	3.2	0.1	2.8	1.4	1.7	90.3	0.6	100.0	326
55-59	1.7	0.2	7.2	1.3	2.5	87.1	0.0	100.0	221
Marital status									
Never married	1.9	0.2	9.2	5.0	3.9	79.3	0.5	100.0	1,745
Married or living together	2.9	0.2	5.5	2.2	1.7	86.7	0.8	100.0	3,353
Divorced/separated/widowed	4.4	0.0	5.6	5.6	4.0	79.9	0.5	100.0	177
Number of living children									
0	1.8	0.2	8.6	4.6	3.6	80.9	0.4	100.0	2,084
1-2	3.9	0.2	8.9	4.9	2.5	78.3	1.3	100.0	963
3-4	4.1	0.3	5.0	1.2	2.0	86.5	1.0	100.0	948
5+	1.8	0.1	3.5	1.5	1.0	91.7	0.5	100.0	1,279
Residence									
Urban	15.8	1.4	37.0	24.4	14.5	6.3	0.7	100.0	620
Rural	0.8	0.0	2.7	0.5	0.9	94.4	0.7	100.0	4,655
Region									
Tigray	4.0	0.8	8.0	3.3	5.1	78.4	0.5	100.0	317
Affar	4.6	1.1	15.2	4.7	4.4	67.9	2.2	100.0	61
Amhara	1.1	0.0	3.5	2.0	1.1	91.7	0.6	100.0	1,400
Oromiya	2.2	0.1	5.3	1.9	2.5	87.2	0.7	100.0	1,896
Somali	3.8	0.0	6.7	0.4	2.0	86.9	0.2	100.0	180
Benishangul-Gumuz	2.0	0.0	3.3	1.8	0.8	91.3	0.7	100.0	50
SNNP	1.6	0.0	5.4	1.5	1.7	89.0	0.9	100.0	1,093
Gambela	5.3	0.4	10.5	2.0	6.8	74.4	0.5	100.0	18
Harari	11.5	0.4	23.7	9.7	10.3	42.2	2.2	100.0	14
Addis Ababa	14.9	1.5	39.0	32.5	10.1	1.2	0.9	100.0	222
Dire Dawa	9.4	1.3	29.3	13.2	11.6	34.7	0.5	100.0	22
Education									
No education	0.1	0.0	3.0	0.5	1.1	94.8	0.6	100.0	2,547
Primary	0.3	0.0	6.1	2.0	2.6	88.2	0.7	100.0	1,922
Secondary and higher	15.9	1.1	20.1	15.1	6.6	40.1	1.1	100.0	806
Wealth quintile									
Lowest	0.0	0.0	1.9	0.0	0.7	96.8	0.5	100.0	1,037
Second	0.3	0.0	2.0	0.4	0.5	96.3	0.5	100.0	1,101
Middle	0.0	0.0	1.9	0.4	0.2	96.4	0.9	100.0	991
Fourth	0.7	0.0	3.2	0.7	1.7	93.2	0.5	100.0	1,055
Highest	11.4	0.8	24.0	14.4	8.9	39.4	1.0	100.0	1,091
Total	2.6	0.2	6.8	3.3	2.5	84.0	0.7	100.0	5,274

Six percent of employed women are skilled manual workers, while 5 percent are engaged as unskilled manual workers. Only 4 percent of employed women work in the professional, technical, and managerial fields. Women are less likely to be highly educated and less likely to have attended vocational or technical schools. Therefore, their employment in the professional, technical, and managerial sector is somewhat low compared with men.

The analysis of occupation by background characteristics suggests that the proportion of women with jobs in sales and services decreases as age increases and that married women are more likely to be employed in agricultural work than other women. Never-married women, on the other hand, are more likely to be employed in sales and services and in clerical work.

Residence has a significant effect on the type of occupation. As expected, two-thirds of employed women and 94 percent of employed men in rural areas are engaged in agricultural work. Most educated women are employed in sales and services and professional, technical, and managerial occupations, whereas women with little or no education tend to be employed in the agricultural sector. Agriculture is by far the most important occupation for working women in the lower wealth quintiles. Employment outside the agricultural sector is greatest among men with secondary or higher education and men in the highest wealth quintile.

3.4.3 Earnings, Employers and Continuity of Employment

Table 3.7.1 shows the percent distribution of employed women by type of earnings and employment characteristics. The table takes into account whether women are involved in agricultural or nonagricultural occupations, because all of the employment variables in the table are strongly influenced by the sector in which a woman is employed.

An overwhelming majority (81 percent) of women engaged in agricultural work are unpaid workers most likely employed by family members at the peak of the agricultural season. Women are more likely to be paid in cash if they are employed in the nonagricultural sector; about three-fourths of the women employed in this sector are paid in cash. Overall, more than half (52 percent) of employed women are not paid at all and only 40 percent earn cash for their work.

Six out of 10 employed women work for a family member, and about 27 percent are self-employed. Only 14 percent of employed women work for someone outside the family.

Table 3.7.1 Type of employment: women

Percent distribution of women employed in the 12 months preceding the survey by type of earnings, type of employer, and continuity of employment, according to type of employment (agricultural or nonagricultural), Ethiopia 2005

Employment characteristic	Agricultural work	Nonagricultural work	Total
Type of earnings			
Cash only	2.5	73.8	36.4
Cash and in-kind	3.6	2.7	3.1
In-kind only	12.6	2.7	7.8
Not paid	81.1	20.6	52.3
Missing	0.1	0.2	0.4
Total	100.0	100.0	100.0
Type of employer			
Employed by family member	75.4	42.5	59.5
Employed by nonfamily member	3.1	25.0	13.6
Self-employed	21.5	32.4	26.7
Missing	0.0	0.1	0.2
Total	100.0	100.0	100.0
Continuity of employment			
All year	5.8	63.0	33.2
Seasonal	88.5	14.1	52.6
Occasional	5.5	22.9	13.9
Missing	0.2	0.0	0.3
Total	100.0	100.0	100.0
Number of women	2,484	2,273	4,819

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

Three-quarters of women working in the agricultural sector are working for a family member compared with 43 percent working in the nonagricultural sector. In addition, the proportion of women employed by someone outside the family is higher among those working in the nonagricultural sector than those in the agricultural sector (25 percent versus 3 percent).

Generally, a third of employed women work all year round while 53 percent work seasonally. Those who work occasionally account for 14 percent. As in the case of type of earning and employer, continuity of employment also varies by sector of employment. Around 9 in 10 women employed in the agricultural sector are seasonal workers compared with only 14 percent among those working in the nonagricultural sector. On the other hand, continuity of employment is more assured for women engaged in nonagricultural work than those in agricultural work. For example, 63 percent of women working in the nonagricultural sector work all year compared with only 6 percent of women engaged in agricultural work.

Male respondents were only asked questions on type of earning. Table 3.7.2 shows that only 3 in 10 employed men are paid in cash. Eighty-four percent of men employed in nonagricultural work are paid in cash compared with 18 percent among those engaged in agricultural work.

Table 3.7.2 Type of employment: men

Percent distribution of men employed in the 12 months preceding the survey by type of earnings, according to type of employment (agricultural or nonagricultural), Ethiopia 2005

Type of earnings	Agricultural work	Nonagricultural work	Total
Cash only	7.7	82.4	19.3
Cash and in-kind	10.5	1.9	9.2
In-kind only	23.6	1.1	20.1
Not paid	58.2	14.4	51.4
Missing	0.0	0.2	0.0
Total	100.0	100.0	100.0
Number of men	4,432	806	5,274

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

FERTILITY 4

Fertility is one of the three principal components of population dynamics that determine the size and structure of the population of a country. This chapter presents the 2005 EDHS results on the levels, trends, and differentials in fertility. The analysis is based on birth history information collected from women age 15-49 interviewed during the survey. Each eligible woman was asked a series of questions on the number of sons and daughters who were living with her, the number living elsewhere, and the number who had died, in order to obtain the total number of live births she had had in her lifetime. For each live birth, information was also collected on the name, sex, age and survival status of the child. For dead children, age at death was recorded. Information from the birth history is then used to assess current and completed fertility and factors related to fertility such as age at first birth, birth intervals, and adolescent childbearing.

4.1 CURRENT FERTILITY

Measures of current fertility are presented in Table 4.1 for the three-year period preceding the survey, corresponding to the calendar period 2003-2005. A three-year period was chosen because it reflects the most current information, while also allowing the rates to be calculated on a sufficient number of cases so as not to compromise the statistical precision of the estimate.

Several measures of current fertility are shown. Age-specific fertility rates (ASFRs), expressed as the number of births per thousand women in a specified age group, are calculated by dividing the number of live births to women in a specific age group by the number of woman-years lived in that age group The total fertility rate (TFR) is a common measure of current fertility and is defined as the total number of births a woman would have by the end of her childbearing period if she were to pass through those years bearing children at the currently observed age-specific fertility rates. The general fertility rate (GFR) is the number of live births occurring during a specified period per 1,000 women age 15-44. The crude birth rate (CBR) is the number of births per 1,000 population during a specified period.

Table 4.1 Current fertility

Age-specific and total fertility rate, the general fertility rate and the crude birth rate for the three years preceding the survey, by residence, Ethiopia 2005

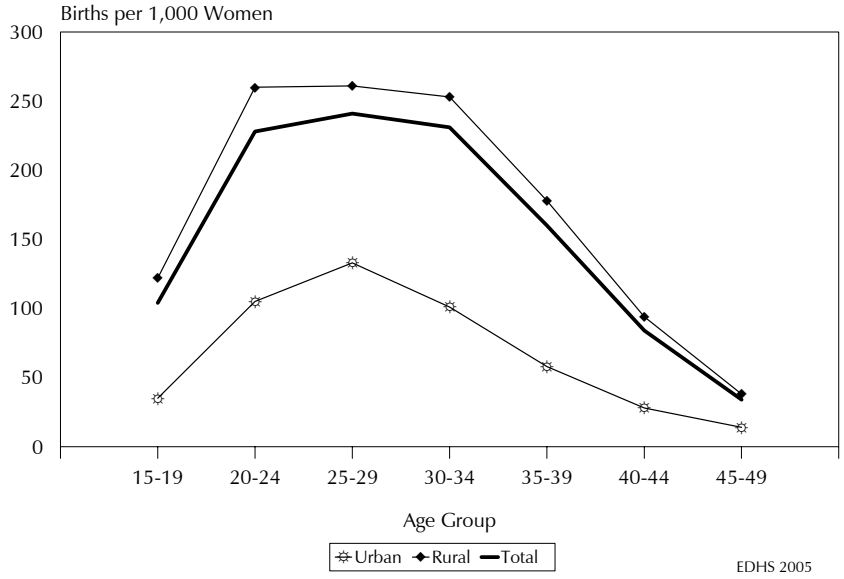
	Residence		
Age group	Urban	Rural	Total
15-19	35	122	104
20-24	105	260	228
25-29	133	261	241
30-34	101	253	231
35-39	58	178	160
40-44	28	94	84
45-49	14	38	34
TFR (15-49)	2.4	6.0	5.4
GFR	77	200	179
CBR	23.4	37.3	35.7

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

Table 4.1 shows current fertility levels for Ethiopia as a whole, and for urban and rural areas. The total fertility rate for Ethiopia is 5.4 births per woman. As expected, fertility is considerably higher in the rural areas than urban areas. The TFR in the rural areas is 6.0, two and half times higher than the TFR in the urban areas (2.4). As the ASFRs show, this pattern of higher rural fertility is prevalent in all age groups (Figure 4.1). The urban-rural difference in fertility is especially pronounced among women age 20-34.

The overall age pattern of fertility as reflected in the ASFRs indicates that childbearing begins early. Fertility is low among adolescents and increases to a peak of 241 births per 1,000 among women age 25-29 and declines thereafter.

Figure 4.1 **Age-specific Fertility Rates by Urban-Rural Residence**



4.2 FERTILITY DIFFERENTIALS

Table 4.2 and Figure 4.2 present differentials in the total fertility rates, the percentage of women who are currently pregnant and the mean number of children ever born (CEB) to women age 40-49, by residence, region, education and wealth quintile.

There are substantial differentials in fertility among regions, ranging from a low of 1.4 children per woman in Addis Ababa to a high of 6.2 children per woman in Oromiya. With the exception of Oromiya, Somali and SNNP, fertility levels in the other 8 regions are less than the national average. The level of fertility is inversely related to women's educational attainment, decreasing rapidly from 6.1 children among women with no education to 2.0 children among women who have at least some secondary education. Fertility is also associated with wealth quintile. Women in the lowest wealth quintile have a TFR of 6.6, twice as high as that of women in the highest quintile (3.2).

Table 4.2 also presents a crude assessment of trends in the various subgroups by comparing current fertility with a measure of completed fertility: the mean number of children ever born to women age 40-49. The mean number of children ever born to older women who are nearing the end of their reproductive period is an indicator of average completed fertility of women who began childbearing during the three decades preceding the survey. If fertility remained constant over time and the reported data on both children ever born and births during the three years preceding the survey are reasonably accurate, the TFR and the mean number of children ever born for women 40-49 are expected to be similar. When fertility levels have been falling, the TFR will be substantially lower than the mean number of children ever born among women age 40-49. The comparison suggests that fertility has fallen by more than one child during the past few decades, from 6.9 children per woman to 5.4. Fertility has declined in both rural and urban areas, in all regions, at all educational levels, and for all wealth quintiles. The difference between the level of current and completed fertility is highest in Addis Ababa (3 children), in all urban areas (2.7 children), and among women in the highest wealth quintile (2.7 children).

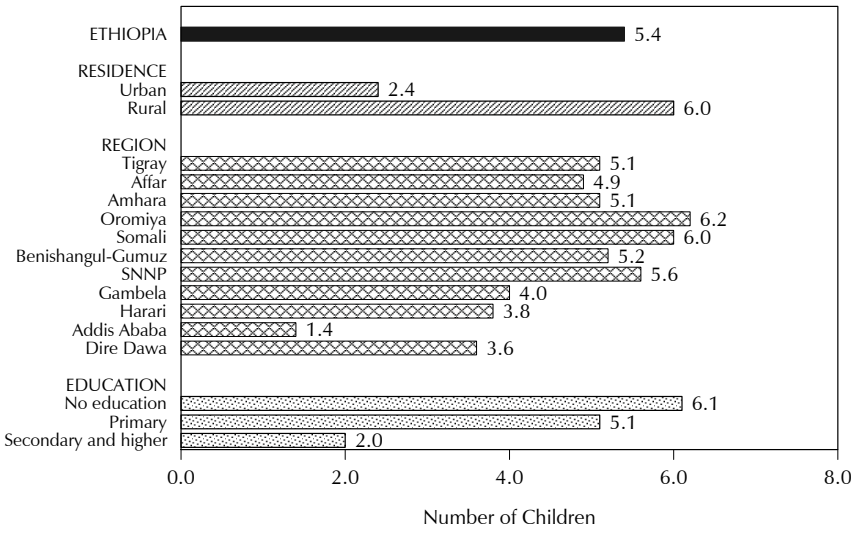
Table 4.2 Fertility by background characteristics

Total fertility rate for the three years preceding the survey, percentage of women currently pregnant, and mean number of children ever born to women age 40-49 years, by background characteristics, Ethiopia 2005

Background characteristic	Total fertility rate	Percentage currently pregnant[1]	Mean number of children ever born to women age 40-49
Residence			
Urban	2.4	2.5	5.1
Rural	6.0	9.7	7.3
Region			
Tigray	5.1	8.6	6.8
Affar	4.9	8.9	5.8
Amhara	5.1	7.2	7.0
Oromiya	6.2	9.0	7.1
Somali	6.0	10.0	6.7
Benishangul-Gumuz	5.2	10.2	6.7
SNNP	5.6	10.2	7.5
Gambela	4.0	8.3	5.3
Harari	3.8	6.7	5.2
Addis Ababa	1.4	1.5	4.4
Dire Dawa	3.6	3.9	5.6
Education			
No education	6.1	10.1	7.1
Primary	5.1	6.7	5.8
Secondary and higher	2.0	2.2	4.2
Wealth quintile			
Lowest	6.6	10.2	6.9
Second	6.0	11.0	7.0
Middle	6.2	10.5	7.4
Fourth	5.7	8.3	7.6
Highest	3.2	3.8	5.9
Total	5.4	8.4	6.9

[1] Women age 15-49 years

Figure 4.2 Total Fertility Rates by Background Characteristics



EDHS 2005

Table 4.2 shows the percentage of women who reported being pregnant at the time of the survey. This percentage may be underreported since women may not be aware of a pregnancy, especially at the very early stages, and some women who are early in their pregnancy may not want to reveal that they are pregnant. Eight percent of women were pregnant at the time of the survey. Rural women were almost four times as likely to be pregnant as urban women. The proportion of women currently pregnant declines as the level of education rises. Current pregnancy is highest in Benishangul-Gumuz, SNNP and Somali and lowest in Addis Ababa.

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, Ethiopia 2005

Mother's age at birth	Number of years preceding survey			
	0-4	5-9	10-14	15-19
15-19	109	160	186	168
20-24	242	304	311	288
25-29	253	321	309	298
30-34	240	281	290	[288]
35-39	166	220	[244]	
40-44	96	[141]		
45-49	[35]			

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

4.3 FERTILITY TRENDS

In addition to comparison of current and completed fertility, trends in fertility can be assessed in two other ways. First, the TFR from the 2005 EDHS can be compared with estimates obtained in earlier surveys. Second, fertility trends can be investigated using retrospective data from the birth histories collected in the same survey.

One way of examining trends in fertility over time is to compare age-specific fertility rates from the 2005 EDHS for successive five-year periods preceding the survey, as presented in Table 4.3. The numerators of the rates are classified by five-year segments of time preceding the survey and the mother's age at the time of survey. Because women 50 years and over were not interviewed in the survey, the rates for older age groups become progressively more truncated for periods more distant from the survey date. For example, rates cannot be calculated for women age 35-39 for the period 15-19 years before the survey because these women would have been over age 50 at the time of the survey and were not interviewed.

Fertility has fallen substantially among all age groups over the past two decades. This decline is most obvious in the 15 years preceding the survey, with the largest decline observed between the two most recent five-year periods. Fertility decline is steepest among the youngest cohort, with a 35 percent decline between the period 15-19 years before the survey and the period 0-4 years before the survey. The decline in fertility observed in Ethiopia can be attributed in part to increasing use of contraception, which will be discussed in the next chapter.

Another way to assess fertility trends is to compare estimates obtained in earlier surveys. Table 4.4 presents the ASFRs and TFRs from the 1990 NFFS, the 2000 EDHS, and the 2005 EDHS.

There has been a decline in fertility from 6.4 births per woman in the 1990 NFFS to 5.4 births in the 2005 EDHS, a one-child drop in the past 15 years. The decline in fertility was more pronounced in the 10 years between 1990 and 2000 than in the five years between 2000 and 2005 and more pronounced in urban than rural areas. A comparison of the three-year TFR calculated from the 2000 EDHS and the 2005 EDHS shows little change for the country as a whole

Table 4.4 Trends in age-specific and total fertility rates

Trends in age-specific and total fertility rates, Ethiopia

Age group	NFFS 1990[1]	EDHS 2000[2]	EDHS 2005
15-19	95	100	104
20-24	275	235	228
25-29	289	251	241
30-34	257	243	231
35-39	199	168	160
40-44	105	89	84
45-49	56	19	34
TFR	6.4	5.5	5.4

Note: Rates for NFFS 1990 are for the 12 months preceding the survey; rates for EDHS 2000 and EDHS 2005 are for the three years prior to the survey.
[1] CSA, 1993
[2] CSA and ORC Macro, 2001

(5.5 births in 2000 versus 5.4 births in 2005).[1] With the exception of the 15-19 age group, fertility has declined in every age group over the past 15 years, with the largest decline—nearly 40 percent—among the oldest cohort (age 45-49).

4.4 Children Ever Born and Surviving

Data on the number of children ever born reflect the accumulation of births over the past 30 years and therefore have limited relevance to current fertility levels, particularly when the country has experienced a decline in fertility. Moreover, the data are subject to recall error, which is typically greater for older than younger women. Nevertheless, the information on children ever born (or parity) is useful in looking at a number of issues. The parity data show how average family size varies across age groups. The percentage of women in their forties who have never had children also provides an indicator of the level of primary infertility or the inability to bear children.[2] Voluntary childlessness is rare in developing countries like Ethiopia, so that married women in their late forties with no live births are predominantly those involuntarily so. Comparison of the differences in the mean number of children ever born and surviving reflects the cumulative effects of mortality levels during the period in which women have been bearing children.

Table 4.5 shows the percent distribution of all women and currently married women by number of children ever born and mean number of children surviving. More than four-fifths of women age 15-19 (86 percent) have never given birth. However, this proportion declines to 13 percent for women age 25-29 and to 6 percent or less among women age 30 and above, indicating that childbearing among Ethiopian women is nearly universal. On the average, Ethiopian women nearing the end of their reproductive years have attained a parity of 7.3 children. This is 1.9 children more than the total fertility rate, a difference brought about by the dramatic decline in fertility during the 1980s and 1990s.

Table 4.5 Children ever born and living

Percent distribution of all women and currently married women by number of children ever born, and mean number of children ever born and mean number of living children, according to age group, Ethiopia 2005

	Number of children ever born														
Age	0	1	2	3	4	5	6	7	8	9	10+	Total	Number of women	Mean number of children ever born	Mean number of children living
ALL WOMEN															
15-19	86.4	9.9	3.1	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	100.0	3,266	0.18	0.15
20-24	39.7	26.2	19.6	9.6	3.8	0.8	0.3	0.0	0.0	0.0	0.0	100.0	2,547	1.15	1.01
25-29	12.8	11.4	17.2	22.5	18.7	10.5	4.6	1.5	0.6	0.1	0.0	100.0	2,517	2.85	2.50
30-34	5.9	4.7	7.8	12.6	16.8	18.9	16.5	9.3	4.4	2.2	0.8	100.0	1,808	4.48	3.81
35-39	2.7	3.0	4.8	7.3	11.4	13.0	17.9	13.9	14.2	6.0	5.7	100.0	1,602	5.78	4.74
40-44	2.7	2.3	4.5	4.6	6.0	9.3	13.4	17.7	14.9	11.5	13.0	100.0	1,187	6.63	5.25
45-49	1.6	2.5	4.0	3.6	5.2	9.8	11.3	12.4	13.9	12.2	23.6	100.0	1,143	7.25	5.50
Total	31.0	10.4	9.6	9.0	8.5	7.5	7.1	5.5	4.7	3.0	3.8	100.0	14,070	3.14	2.59
CURRENTLY MARRIED WOMEN															
15-19	45.1	38.4	13.9	1.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	100.0	711	0.75	0.64
20-24	12.7	35.0	29.5	15.1	5.9	1.3	0.4	0.0	0.0	0.0	0.0	100.0	1,574	1.72	1.52
25-29	3.1	10.0	18.4	25.7	21.9	12.6	5.6	1.8	0.8	0.1	0.0	100.0	2,066	3.28	2.90
30-34	2.2	3.3	7.1	12.2	17.5	20.2	18.3	10.7	5.0	2.5	1.0	100.0	1,551	4.82	4.13
35-39	1.0	1.4	2.9	6.7	10.5	13.2	19.6	15.8	15.8	6.4	6.7	100.0	1,343	6.18	5.10
40-44	2.5	2.3	3.9	3.4	4.7	8.1	12.6	18.7	15.8	12.4	15.6	100.0	960	6.92	5.54
45-49	1.3	2.3	3.8	2.5	4.3	8.6	11.4	11.6	14.8	13.0	26.6	100.0	862	7.54	5.81
Total	7.3	12.6	12.8	12.3	11.5	10.2	9.8	7.7	6.4	3.9	5.3	100.0	9,066	4.29	3.57

[1] A comparison of the five-year TFR shows a similar pattern. For the country as a whole (5.9 births in 2000 versus 5.7 births in 2005), there has been little change over the past five years.

[2] The data does not address the level of secondary infertility which refers to women who may have had one or more births but are unable to have more children.

The same pattern is replicated for currently married women, except that the mean number of children ever born is higher for currently married women (4.3 children) than for all women (3.1 children). The difference between all women and currently married women in the mean number of children ever born is due to a substantial proportion of young and unmarried women in the former category who exhibit lower fertility.

Consistent with expectations, the mean number of children ever born and mean number of children surviving rise monotonically with increasing age of women. Comparison of the mean children ever born with the mean number of living children reveals the experience of child loss among Ethiopian women. By the end of their reproductive years (age 45-49), women in Ethiopia have given birth, on average, to 7.3 children, with 5.5 surviving.

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

4.5 Birth Intervals

Birth interval is the length of time between two successive live births. Information on birth intervals provides insight into birth spacing patterns, which affect fertility as well as infant and childhood mortality. Studies have shown that children born too soon after a previous birth are at increased risk of dying at an early age, particularly when the interval between births is less than 24 months.

Table 4.6 shows the percent distribution of non-first births in the five years preceding the survey by number of months since the preceding birth, according to background characteristics. The median birth interval in Ethiopia is 33.8 months. The median number of months since a preceding birth increases significantly with age, from a low of 26.1 months among mothers age 15-19 to a high of 38.8 months among mothers age 40-49.

There is no substantial difference in the length of the median birth interval by birth order and sex of the preceding birth.

Studies have shown that the death of a preceding child leads to a shorter birth interval than when the preceding child survived. The median birth interval is more than eight months shorter for children whose previous sibling is dead than for children whose previous sibling is alive (26.1 months and 34.6 months, respectively). It is presumed that the difference in the birth intervals is related to the desire of parents to replace a dead child, as well as to the loss of the fertility-delaying effects of breastfeeding.

According to the 2005 EDHS data, urban women have slightly longer intervals between births (39.1 months) compared with rural women (33.6 months).

Regional variations in birth intervals range from a low of 29 months in Affar to a high of 45.2 months in Addis Ababa. The median birth interval is longer among births to women with at least some secondary education than among births to women with lower levels of education. The birth interval does not vary consistently by wealth quintile.

Table 4.6 Birth intervals

Percent distribution of non-first births in the five years preceding the survey by number of months since preceding birth, according to background characteristics, Ethiopia 2005

Background characteristic	Months since preceding birth							Total	Number of non-first births	Median number of months since preceding birth
	7-17	18-23	24-35	36-47	48-54	55-59	60+			
Age										
15-19	21.4	18.8	44.5	10.7	4.6	0.0	0.0	100.0	144	26.1
20-29	10.1	15.3	36.6	23.2	6.6	2.7	5.4	100.0	4,002	31.6
30-39	6.7	11.8	34.6	25.4	7.2	3.9	10.5	100.0	3,930	35.0
40-49	5.3	9.7	27.5	25.7	9.5	4.8	17.4	100.0	1,150	38.8
Birth order										
2-3	8.7	13.8	34.3	24.1	6.8	3.2	9.1	100.0	3,347	33.5
4-6	8.3	12.8	35.3	24.0	7.2	3.7	8.6	100.0	3,659	33.6
7+	7.5	12.6	34.4	25.0	7.7	3.4	9.5	100.0	2,220	34.3
Sex of preceding birth										
Male	8.2	13.0	34.9	24.4	7.4	3.2	8.9	100.0	4,711	33.7
Female	8.3	13.3	34.6	24.2	6.9	3.7	9.1	100.0	4,515	33.8
Survival of preceding birth										
Living	6.1	12.2	35.7	25.6	7.5	3.6	9.3	100.0	8,026	34.6
Dead	22.3	19.4	28.5	15.4	5.1	2.1	7.2	100.0	1,201	26.1
Residence										
Urban	9.0	11.5	24.6	16.9	8.9	2.7	26.5	100.0	551	39.1
Rural	8.2	13.2	35.4	24.8	7.1	3.5	7.9	100.0	8,675	33.6
Region										
Tigray	4.0	9.2	38.8	25.7	8.5	3.0	10.9	100.0	578	35.2
Affar	14.3	17.2	33.9	17.3	6.4	1.3	9.6	100.0	87	29.0
Amhara	5.4	8.5	31.5	30.4	8.4	4.0	11.7	100.0	2,109	37.0
Oromiya	9.3	16.3	37.4	21.7	5.5	2.9	7.0	100.0	3,719	31.0
Somali	13.4	19.0	31.4	18.5	6.7	2.3	8.8	100.0	402	29.6
Benishangul-Gumuz	9.8	14.2	35.8	22.7	6.2	3.1	8.2	100.0	83	32.2
SNNP	9.3	11.9	33.5	24.2	8.6	4.3	8.2	100.0	2,093	34.5
Gambela	6.0	10.1	27.4	23.6	11.1	5.6	16.2	100.0	25	38.2
Harari	10.8	17.1	31.4	18.9	5.4	2.1	14.2	100.0	16	31.4
Addis Ababa	5.0	12.3	19.4	17.3	10.4	3.6	32.1	100.0	86	45.2
Dire Dawa	8.9	17.0	32.5	20.9	6.3	0.3	14.0	100.0	28	31.5
Education										
No education	7.9	13.3	34.8	24.9	7.1	3.4	8.5	100.0	7,459	33.8
Primary	9.3	12.6	36.3	22.7	7.1	3.6	8.4	100.0	1,462	32.8
Secondary and higher	10.5	11.5	24.9	17.1	8.6	3.0	24.5	100.0	305	38.7
Wealth quintile										
Lowest	9.2	14.9	36.1	23.0	7.5	3.0	6.4	100.0	2,079	32.3
Second	7.4	12.1	35.7	25.2	6.7	3.7	9.2	100.0	1,956	34.0
Middle	7.8	13.3	34.1	24.8	7.2	4.4	8.3	100.0	2,070	34.1
Fourth	8.4	12.8	35.8	24.9	6.8	3.5	7.8	100.0	1,850	33.7
Highest	8.3	12.2	30.6	23.4	7.9	2.0	15.6	100.0	1,272	35.5
Total	8.2	13.1	34.7	24.3	7.2	3.4	9.0	100.0	9,226	33.8

Note: First-order births are excluded from this table. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth.

4.6 Age at First Birth

Early age at initiation of childbearing has a detrimental effect on the health of both mother and child. It also lengthens the reproductive period, thereby increasing the level of fertility. Table 4.7 shows the median age at first birth and the percentage of women who first gave birth by specific exact ages, by five-year age groups.

Table 4.7 Age at first birth

Percentage of women who gave birth by specific exact ages, and median age at first birth, by current age, Ethiopia 2005

Current age	Percentage who gave birth by exact age					Percentage who have never given birth	Number of women	Median age at first birth
	15	18	20	22	25			
15-19	1.7	na	na	na	na	86.4	3,266	a
20-24	5.4	28.4	46.1	na	na	39.7	2,547	a
25-29	8.5	38.0	58.1	73.0	83.3	12.8	2,517	19.2
30-34	10.0	40.9	59.7	74.9	87.6	5.9	1,808	18.9
35-39	9.9	40.3	58.3	75.2	89.1	2.7	1,602	19.0
40-44	11.2	41.2	60.3	74.7	86.8	2.7	1,187	19.0
45-49	10.5	45.4	60.3	73.4	86.7	1.6	1,143	18.7

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

Childbearing begins early in Ethiopia. The median age at first birth is 19.2 years for the younger cohort (age 25-29) of women for whom a median age can be computed and varies between 18.7 and 19.0 years for the older cohorts. This suggests a small, recent rise in the median age at first birth. An examination of the percentage of women in various age groups who had a first birth by specific exact age indicates that the percentage increases as the exact age increases, as expected. The proportion of women in the age group 20-24 who had their first birth by exact age 20 (46 percent), for instance, is higher than by exact age 15 (5 percent) and 18 (28 percent). The data also show some evidence of a trend toward delayed onset of childbearing among younger women; for example, 41 percent of women age 30 and above had their first birth by exact age 18 while 28 percent and 38 percent of women in the age groups 20-24 and 25-29, respectively, had started childbearing at the same age.

Table 4.8 shows median age at first birth by background characteristics and age at the time of the survey. The median age at first birth is higher in urban areas than in rural areas, with a difference of almost two years among women age 25-49. According to the data the urban-rural difference in median age at first birth is much wider among younger (25-29) than older women. Among regions, Addis Ababa has the highest median age at first birth (23.5 years) for women age 25-49, followed by Harari (21.0 years), while the Amhara Region has the lowest median age at first birth (18 years). This indicates that women in the Amhara Region initiated childbearing more than five years earlier on average than women in Addis Ababa.

There is a positive relationship between educational attainment and median age at first birth, but the impact seems more significant at secondary and higher levels of education. Women with at least secondary education begin their childbearing more than four years (22.9 years) later than women with no education (18.7 years). Although the median age at first birth is consistently the highest among the wealthiest women, there is no clear pattern between the onset of childbearing and women's wealth across age groups except among the younger cohort (25-29).

Table 4.8 Median age at first birth by background characteristics

Median age at first birth among women age 25-49 years, by current age and background characteristics, Ethiopia 2005

Background characteristic	Current age					Women age 25-49
	25-29	30-34	35-39	40-44	45-49	
Residence						
Urban	23.6	21.0	20.0	18.8	19.3	20.7
Rural	18.8	18.7	18.9	19.0	18.5	18.8
Region						
Tigray	19.5	19.0	18.6	18.7	18.9	19.0
Affar	18.8	17.9	19.2	21.1	20.3	19.5
Amhara	18.1	18.3	18.0	18.1	17.6	18.0
Oromiya	19.1	18.9	19.7	19.3	18.9	19.2
Somali	18.8	18.6	20.8	21.1	22.8	20.0
Benishangul-Gumuz	17.9	18.0	18.5	18.2	17.1	18.1
SNNP	19.6	19.2	19.0	19.1	19.2	19.3
Gambela	17.8	18.2	18.8	17.9	17.3	18.1
Harari	22.9	20.7	20.0	19.6	20.4	21.0
Addis Ababa	a	25.8	22.3	19.3	19.5	23.5
Dire Dawa	21.5	20.1	19.1	19.1	19.3	19.9
Education						
No education	18.8	18.6	18.7	18.9	18.6	18.7
Primary	18.7	18.6	19.9	19.9	18.8	18.9
Secondary and higher	a	22.2	22.1	19.8	20.5	22.9
Wealth quintile						
Lowest	18.7	18.7	18.9	19.6	20.5	19.0
Second	18.3	18.5	19.1	19.3	18.4	18.6
Middle	19.0	18.9	19.5	19.1	19.0	19.1
Fourth	19.0	18.7	18.0	18.4	17.8	18.5
Highest	21.5	19.8	19.2	18.7	18.7	19.8
Total	19.2	18.9	19.0	19.0	18.7	19.0

a = Omitted because less than 50 percent of the women had a birth before reaching the beginning of the age group

4.7 TEENAGE PREGNANCY AND MOTHERHOOD

In addition to the relatively high level of pregnancy complications among young mothers because of physiological immaturity, inexperience associated with child care practices also influences maternal and infant health. Moreover, an early start to childbearing greatly reduces the educational and employment opportunities of women and is associated with higher levels of fertility. Table 4.9 shows the proportion of women age 15-19 (teenagers) who are mothers or pregnant with their first child, by background characteristics.

Table 4.9 Teenage pregnancy and motherhood

Percentage of women age 15-19 who have had a live birth or who are pregnant with their first child, by background characteristics, Ethiopia 2005

Background characteristic	Percentage who: Have had a live birth	Are pregnant with first child	Percentage who have begun childbearing	Number of women
Age				
15	1.5	0.4	1.9	729
16	4.9	3.2	8.1	667
17	10.9	3.1	14.0	556
18	20.4	4.3	24.7	862
19	36.1	4.7	40.8	451
Residence				
Urban	6.0	0.6	6.6	703
Rural	15.6	3.7	19.4	2,562
Region				
Tigray	12.9	1.8	14.7	229
Affar	14.6	5.7	20.3	31
Amhara	16.7	3.6	20.3	811
Oromiya	15.8	3.2	19.0	1,206
Somali	16.8	2.6	19.5	78
Benishangul-Gumuz	20.8	6.4	27.1	27
SNNP	8.1	2.9	11.0	652
Gambela	24.8	6.0	30.8	8
Harari	18.2	3.7	21.9	11
Addis Ababa	3.4	0.9	4.3	199
Dire Dawa	11.9	1.8	13.7	16
Education				
No education	24.9	4.0	28.9	1,308
Primary	7.4	3.1	10.4	1,423
Secondary and higher	2.3	0.7	3.0	535
Wealth quintile				
Lowest	19.7	4.1	23.8	448
Second	17.3	3.5	20.8	566
Middle	15.9	4.0	19.8	627
Fourth	13.9	4.5	18.3	603
Highest	7.2	1.0	8.2	1,022
Total	13.6	3.1	16.6	3,266

Seventeen percent of women age 15-19 have already become mothers or are currently pregnant with their first child, which is similar to the pattern seen from data collected in the 2000 EDHS (16 percent). The percentage of women who have begun childbearing increases rapidly with age, from 2 percent among women age 15, to 41 percent among women age 19. Nearly three times as many teenagers residing in rural areas as in urban areas have begun childbearing. Childbearing among teenagers is lowest in Addis Ababa (4 percent) and highest in the Gambela Region (31 percent). The level of teenage parenthood among teenagers with no education is nearly three times that among teenagers with primary education, while it is nearly ten times that of teenagers with secondary and higher education. The percentage of teenagers who have begun childbearing is three times higher among those in the poorest households (24 percent) compared with those in the wealthiest households (8 percent).

FAMILY PLANNING 5

This chapter presents information from the 2005 EDHS on contraceptive knowledge, attitudes and behaviour. Although the focus is on women, some results from the male survey are also presented because men play an important role in the realization of reproductive goals. Comparisons are also made, where appropriate, with findings from the 2000 EDHS to evaluate changes over the past five years.

5.1 KNOWLEDGE OF CONTRACEPTIVE METHODS

Acquiring knowledge about family planning is an important step towards gaining access to and using a suitable contraceptive method in a timely and effective manner. Individuals who have adequate information about the available methods of contraception are better able to make choices about planning their families. Thus, one of the main objectives of the 2005 EDHS was to obtain information on knowledge of family planning methods among women and men in the reproductive age. Data on knowledge of contraception was collected in two ways. First, respondents were asked to mention all the methods of contraception that they had heard of spontaneously. For methods not mentioned spontaneously, the interviewer described and probed for whether the respondent recognized it.

Information was collected for 10 modern contraceptive methods: female and male sterilization, the pill, the IUD, injectables, implants, condoms, diaphragm/foam/jelly, standard days method and lactational amenorrhoea method (LAM), and two traditional methods (periodic abstinence and withdrawal). In addition, provision was made in the questionnaire to record any other method named spontaneously by the respondents.

Table 5.1 shows knowledge of contraception among all women age 15-49 and men age 15-59, as well as among those who are currently married and those unmarried and sexually active. Knowledge of contraceptive methods is high with 88 percent of currently married women and 93 percent of currently married men knowing at least one method of contraception. Modern methods are more widely known than traditional methods. For example, 87 percent of currently married women know of a modern method, and only 17 percent know of a traditional method. The pill is the most widely known method (84 percent), followed closely by injectables (83 percent). Currently married men are more than twice as likely to recognize the condom as a method of family planning as currently married women (41 percent versus 84 percent).

The mean number of methods known is a rough indicator of the breadth of knowledge of family planning methods. Using this as a measure, contraceptive knowledge is highest among sexually active unmarried men (5.6 methods) and women (4.7 methods).

Overall, knowledge of contraception has remained high in Ethiopia over the past five years. For example, knowledge of any modern method among currently married women was 85 percent in 2000 and 87 percent in 2005. Similarly, knowledge of any modern method among currently married men was 90 percent in 2000 and 91 percent in 2005. The most notable increases in knowledge of specific methods among currently married women are with respect to injectables and condoms—from 70 percent to 83 percent for injectables and from 29 percent to 41 percent for condoms between 2000 and 2005. Men also had significant gains in knowledge for these two methods.

Table 5.1 Knowledge of contraceptive methods

Percentage of all women and men, currently married women and men, and sexually active unmarried women and men who know any contraceptive method, by specific method, Ethiopia 2005

	Women			Men		
Method	All women	Currently married women	Sexually active unmarried women[1]	All men	Currently married men	Sexually active unmarried men[1]
Any method	86.1	87.5	91.2	91.0	93.0	95.3
Any modern method	86.0	87.4	91.2	90.7	92.6	93.1
Female sterilisation	18.4	17.2	30.4	26.4	28.2	45.7
Male sterilisation	6.6	5.5	12.5	15.3	14.0	24.1
Pill	82.6	84.2	86.8	81.2	84.7	87.4
IUD	14.8	12.2	33.0	14.3	12.0	22.0
Injectables	80.9	82.6	87.4	79.0	82.9	89.5
Implants	22.4	20.0	47.3	23.0	22.3	40.0
Condom	46.1	40.6	69.8	84.2	84.2	90.1
Diaphragm/foam/jelly	5.9	4.4	4.5	8.8	6.3	16.3
Standard days method	4.3	3.4	4.7	6.3	5.3	11.6
Lactational amenorrhoea method (LAM)	9.2	8.9	20.9	7.9	8.2	14.6
Any traditional method	20.6	17.0	53.2	39.2	39.3	70.6
Rhythm	18.0	14.4	48.2	34.9	34.2	69.9
Withdrawal	11.8	9.3	28.6	21.3	19.8	50.9
Folk method	0.6	0.6	0.0	1.5	1.9	0.7
Mean number of methods known	3.2	3.0	4.7	4.0	4.0	5.6
Number	14,070	9,066	52	6,033	3,424	72

[1] Had sexual intercourse in the month preceding the survey

Table 5.2 shows the correspondence between the contraceptive knowledge of husbands and wives among the 2,972 couples interviewed in the 2005 EDHS. Knowledge of at least one method of contraception by both spouses is relatively high (84 percent). Among couples in which only one partner knows of a method, husbands are more likely to know the method than their wives. The discordance in knowledge with respect to specific modern methods is most noticeable for the condom—which is twice as likely to be known by men as women—and sterilization, especially male sterilization. Among married couples, men are also more likely to mention knowing a traditional method than women (38 percent and 17 percent, respectively).

Table 5.2 Couples' knowledge of contraceptive methods

Percent distribution of couples by contraceptive knowledge, according to specific methods, Ethiopia 2005

Method	Both know method	Husband knows method, wife doesn't	Wife knows method, husband doesn't	Neither knows method	Total
Any method	84.3	8.6	4.5	2.6	100.0
Any modern method	84.0	8.5	4.6	3.0	100.0
Female sterilisation	6.9	20.5	11.1	61.5	100.0
Male sterilisation	1.7	11.3	3.2	83.9	100.0
Pill	75.4	9.1	9.9	5.6	100.0
IUD	4.3	7.2	7.6	81.0	100.0
Injectables	73.6	9.2	10.5	6.8	100.0
Implants	7.6	14.1	13.0	65.4	100.0
Condom	41.9	42.2	4.0	11.8	100.0
Diaphragm/foam/jelly	0.6	5.4	3.4	90.7	100.0
Standard days method	0.3	4.6	2.7	92.5	100.0
Lactational amenorrhoea method (LAM)	2.0	5.9	6.5	85.6	100.0
Any traditional method	10.6	27.8	6.2	55.5	100.0
Rhythm	8.0	25.3	6.3	60.4	100.0
Withdrawal	4.8	14.3	3.5	77.3	100.0
Other methods	0.0	1.5	0.7	97.8	100.0

Note: Table is based on 2,972 couples.

5.2 EVER USE OF CONTRACEPTIVE METHODS

Ever use of contraception provides a measure of the cumulative experience of a population with family planning. The EDHS 2005 collected data on ever use of family planning methods from women by asking respondents whether they had ever used each of the methods that they have heard about.

Table 5.3.1 presents ever use of contraception among three groups of women: all women; currently married women, and unmarried, sexually active women, by current age. The data indicate that 18 percent of all women and 24 percent of currently married women have used a method at some time. Women are much more likely to have used a modern method than a traditional method. For example, 23 percent of currently married women have used a modern method at some time compared with 2 percent who have used a traditional method. Injectables have been the most commonly used modern method (18 percent) among currently married women. Rhythm has been the most widely employed traditional method.

Among currently married women ever use of any method rises from 16 percent among those age 15-19, peaks at 27 percent among those age 25-29, and remains consistently high until age 40-44, before falling markedly to 14 percent among the oldest age group.

Although based on a small number of cases, ever use of any method is highest among sexually active unmarried women. Sixty-five percent of sexually active unmarried women have used a contraceptive method at some time in the past.

Table 5.3.1 Ever use of contraception: women

Percentage of all women, currently married women, and sexually active unmarried women who have ever used any contraceptive method, by specific method and age, Ethiopia 2005

			Modern method								Any tradi-tional method	Traditional method			
Age	Any method	Any modern method	Female sterili-sation	Pill	IUD	Inject-ables	Implants	Condom	Standard days method	LAM		Rhythm	With-drawal	Folk method	Number of women
ALL WOMEN															
15-19	4.7	4.5	0.0	1.4	0.0	3.2	0.0	0.7	0.0	0.0	0.5	0.4	0.1	0.0	3,266
20-24	18.9	17.7	0.0	9.3	0.2	13.2	0.3	1.5	0.0	0.0	2.7	2.4	0.6	0.0	2,547
25-29	25.6	24.4	0.1	11.7	0.2	18.7	0.4	0.9	0.0	0.6	2.8	2.1	1.0	0.2	2,517
30-34	24.7	23.9	0.2	12.4	0.6	18.1	0.2	1.4	0.0	0.6	2.3	1.7	0.8	0.1	1,808
35-39	24.5	23.9	0.2	13.9	1.0	16.7	0.6	0.5	0.0	0.5	1.8	1.2	0.7	0.1	1,602
40-44	23.9	23.2	0.6	12.6	0.9	16.3	0.3	0.8	0.0	0.6	2.1	1.5	0.7	0.2	1,187
45-49	13.8	12.6	0.5	7.2	0.9	7.7	0.1	0.4	0.0	0.1	1.9	1.1	0.7	0.4	1,143
Total	18.2	17.4	0.2	8.9	0.4	12.7	0.2	0.9	0.0	0.3	1.9	1.5	0.6	0.1	14,070
CURRENTLY MARRIED WOMEN															
15-19	16.1	15.6	0.0	5.4	0.0	11.6	0.0	1.0	0.0	0.0	1.3	0.9	0.4	0.0	711
20-24	25.7	24.3	0.0	13.3	0.3	19.1	0.2	0.9	0.1	0.0	3.7	3.3	0.9	0.0	1,574
25-29	27.1	26.1	0.0	12.7	0.2	20.6	0.4	0.4	0.0	0.7	2.4	1.8	0.9	0.2	2,066
30-34	25.4	24.8	0.0	12.9	0.7	18.8	0.2	1.1	0.0	0.6	2.3	1.7	0.9	0.1	1,551
35-39	25.2	24.8	0.2	14.1	1.2	18.0	0.6	0.5	0.0	0.5	1.6	1.0	0.8	0.1	1,343
40-44	26.5	25.8	0.6	13.6	0.9	19.2	0.4	0.6	0.0	0.5	2.1	1.5	0.6	0.2	960
45-49	13.8	12.8	0.6	6.8	1.0	8.8	0.2	0.3	0.0	0.1	1.7	1.1	0.7	0.2	862
Total	24.1	23.2	0.2	12.0	0.6	17.7	0.3	0.7	0.0	0.4	2.3	1.7	0.8	0.1	9,066
SEXUALLY ACTIVE UNMARRIED WOMEN[1]															
15-24	62.2	51.7	0.0	16.8	0.0	12.9	0.0	42.3	0.0	0.0	15.0	13.5	1.5	0.0	28
25-49	68.7	55.5	0.0	25.8	0.0	37.7	0.4	29.7	0.0	0.0	16.7	16.7	0.4	0.0	25
Total	65.3	53.5	0.0	21.1	0.0	24.6	0.2	36.4	0.0	0.0	15.8	15.0	1.0	0.0	52

LAM = Lactational amenorrhoea method

[1] Had sexual intercourse in the month preceding the survey

The 2005 EDHS collected information on ever use of contraception from men as well as women, but with respect to the four male methods only, namely male sterilization, condoms, the rhythm method, and withdrawal. Table 5.3.2 shows that 19 percent of currently married men have used a male method of contraception at some time. Men have been more likely to use a traditional method, particularly rhythm (14 percent), than a modern method. Five percent of currently married men have used a condom at some time. Ever use of any method among currently married men rises from 14 percent among the youngest men to a peak of 23 percent among men 25-29 and then falls steadily to a low of 10 percent among those in the oldest cohort.

Table 5.3.2 Ever use of contraception: men

Percentage of all men, currently married men, and sexually active unmarried men who have ever used any contraceptive method, by specific method and age, Ethiopia 2005

Age	Ever used any of four male methods	Ever used condom or male sterilisation	Modern method		Ever used rhythm or withdrawal	Traditional method		Number of men
			Male sterilisation	Condom		Rhythm	Withdrawal	
ALL MEN								
15-19	3.1	2.3	0.1	2.2	1.2	0.9	0.3	1,335
20-24	13.3	9.7	0.2	9.5	7.2	5.7	2.8	1,064
25-29	21.9	10.8	0.2	10.6	16.2	14.5	6.2	741
30-34	23.9	10.0	0.1	9.9	18.7	15.6	7.5	754
35-39	20.7	7.0	0.6	6.6	16.7	14.7	3.9	651
40-44	20.2	6.9	0.4	6.5	17.3	14.6	4.8	497
45-49	15.2	4.1	0.3	3.8	13.1	11.8	2.5	422
50-54	10.9	1.9	0.5	1.3	10.6	8.8	4.1	335
55-59	9.9	1.9	0.8	1.1	8.1	6.7	2.1	235
Total	14.7	6.6	0.3	6.3	10.9	9.3	3.6	6,033
CURRENTLY MARRIED MEN								
15-19	13.5	3.5	0.0	3.5	11.7	10.2	6.7	28
20-24	19.6	7.8	0.0	7.7	16.3	13.2	5.6	255
25-29	23.2	7.7	0.2	7.5	20.2	18.4	7.5	482
30-34	22.6	7.1	0.0	7.1	19.3	16.6	7.1	646
35-39	20.1	5.7	0.4	5.3	17.0	15.0	3.8	610
40-44	19.3	5.2	0.4	4.8	16.7	13.9	4.3	468
45-49	14.8	3.7	0.3	3.4	12.8	11.6	2.2	399
50-54	11.1	1.6	0.6	1.1	11.0	9.4	4.2	310
55-59	9.6	2.0	0.8	1.2	7.8	6.3	2.2	225
Total	18.7	5.5	0.3	5.2	16.1	14.0	4.9	3,424
SEXUALLY ACTIVE UNMARRIED MEN[1]								
15-24	46.6	34.3	0.9	34.3	21.0	18.4	7.6	46
25-59	72.9	68.0	0.2	68.0	42.8	23.2	33.3	26
Total	56.2	46.5	0.6	46.5	28.9	20.2	16.9	72

[1] Had sexual intercourse in the month preceding the survey

5.3 CURRENT USE OF CONTRACEPTIVE METHODS

The current level of contraceptive use is a measure of actual contraceptive practice at the time of the survey. It takes into account all use of contraception, whether the concern of the user is permanent cessation of childbearing or a desire to space births. Current use of family planning services provides insight into one of the principal determinants of fertility. It also serves to assess the success of family planning programmes. This section focuses on the levels, differentials, and trends in current use of family planning methods in Ethiopia.

Contraceptive use among all women, currently married women, and sexually active unmarried women, is presented in Table 5.4 by age group. The contraceptive prevalence rate for married Ethiopian women who are currently using a method of family planning is 15 percent. Almost all of these users are using modern methods. The most widely used method is injectables (10 percent) followed by the pill (3 percent).

Table 5.4 Current use of contraception

Percent distribution of all women, currently married women, and sexually active unmarried women by contraceptive method currently used, according to age, Ethiopia 2005

			Modern method							Any tradi-tional method	Traditional method				
Age	Any method	Any modern method	Female sterili-sation	Pill	IUD	Inject-ables	Implants	Condom	LAM		Rhythm	With-drawal	Not currently using	Total	Number of women
ALL WOMEN															
15-19	2.5	2.5	0.0	0.3	0.0	1.8	0.0	0.3	0.0	0.1	0.0	0.1	97.5	100.0	3,266
20-24	11.4	10.4	0.0	2.3	0.1	7.3	0.1	0.5	0.0	1.1	0.9	0.2	88.6	100.0	2,547
25-29	15.2	14.4	0.1	3.3	0.1	10.0	0.2	0.3	0.4	0.8	0.6	0.2	84.8	100.0	2,517
30-34	13.2	12.6	0.2	2.4	0.1	9.4	0.2	0.2	0.0	0.7	0.5	0.1	86.8	100.0	1,808
35-39	15.3	14.4	0.2	3.9	0.5	9.1	0.4	0.2	0.2	0.9	0.6	0.3	84.7	100.0	1,602
40-44	11.9	11.1	0.6	1.9	0.3	8.0	0.1	0.2	0.0	0.8	0.6	0.2	88.1	100.0	1,187
45-49	6.3	5.7	0.5	1.0	0.3	3.9	0.0	0.0	0.0	0.5	0.5	0.0	93.7	100.0	1,143
Total	10.3	9.7	0.2	2.1	0.1	6.8	0.1	0.3	0.1	0.7	0.5	0.2	89.7	100.0	14,070
CURRENTLY MARRIED WOMEN															
15-19	8.9	8.6	0.0	1.3	0.0	7.0	0.0	0.3	0.0	0.3	0.0	0.3	91.1	100.0	711
20-24	16.7	15.4	0.0	3.7	0.1	11.2	0.2	0.1	0.0	1.3	1.0	0.3	83.3	100.0	1,574
25-29	16.9	16.2	0.0	3.9	0.1	11.3	0.2	0.2	0.5	0.7	0.4	0.3	83.1	100.0	2,066
30-34	14.4	13.7	0.0	2.8	0.1	10.3	0.2	0.2	0.0	0.7	0.5	0.2	85.6	100.0	1,551
35-39	17.2	16.4	0.2	4.3	0.5	10.5	0.4	0.1	0.3	0.9	0.5	0.4	82.8	100.0	1,343
40-44	14.2	13.2	0.6	2.1	0.4	9.8	0.2	0.1	0.0	1.0	0.7	0.3	85.8	100.0	960
45-49	8.1	7.4	0.6	1.3	0.4	5.0	0.0	0.0	0.0	0.7	0.7	0.0	91.9	100.0	862
Total	14.7	13.9	0.2	3.1	0.2	9.9	0.2	0.2	0.2	0.8	0.6	0.3	85.3	100.0	9,066
SEXUALLY ACTIVE UNMARRIED WOMEN[1]															
15-24	60.7	48.9	0.0	4.4	0.0	8.4	0.0	36.1	0.0	11.8	11.8	0.0	39.3	100.0	28
25-49	48.3	36.9	0.0	1.7	0.0	26.4	0.0	8.8	0.0	11.4	11.4	0.0	51.7	100.0	25
Total	54.9	43.3	0.0	3.1	0.0	16.9	0.0	23.3	0.0	11.6	11.6	0.0	45.1	100.0	52

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

Use of contraception among the small number of sexually active unmarried women is higher than among all women and currently married women. Fifty-five percent of sexually active unmarried women are currently using contraception, with 43 percent using modern methods and 12 percent using traditional methods. The difference in use of modern methods among unmarried sexually active women and all other women may be attributed primarily to the greater use of condoms and injectables.

As shown in Table 5.5, there are marked differences in the contraceptive prevalence rate among currently married women by background characteristics. Contraceptive use is associated with the number of living children a woman has; it is highest among currently married women with one or two children (17 percent) and lowest among women with no children (12 percent).

As expected, contraceptive prevalence is more than four times higher in urban than in rural areas (47 percent versus 11 percent). There is also substantial variation in current use by region. Current use is highest in Addis Ababa (57 percent) and lowest in the Somali Region (3 percent). Urbanized areas like Dire Dawa and Harari also have much higher levels of current use (34 percent each) than the other regions.

Table 5.5 Current use of contraception by background characteristics

Percent distribution of currently married women by contraceptive method currently used, according to background characteristics, Ethiopia 2005

Background characteristic	Any method	Any modern method	Modern method: Female sterilisation	Pill	IUD	Injectables	Implants	Male condom	LAM	Any traditional method	Traditional method: Rhythm	Withdrawal	Not currently using	Total	Number of women
Number of living children															
0	11.7	10.1	0.0	3.5	0.0	5.5	0.0	1.1	0.0	1.6	1.6	0.0	88.3	100.0	600
1-2	16.5	15.4	0.2	3.7	0.3	10.8	0.2	0.2	0.1	1.0	0.7	0.4	83.5	100.0	2,662
3-4	14.8	14.1	0.1	3.4	0.2	10.1	0.1	0.0	0.2	0.8	0.6	0.2	85.2	100.0	2,645
5+	13.7	13.2	0.3	2.3	0.2	9.8	0.3	0.1	0.3	0.5	0.3	0.3	86.3	100.0	3,159
Residence															
Urban	46.7	42.2	1.3	10.7	1.8	25.9	0.7	1.4	0.4	4.5	3.7	0.8	53.3	100.0	959
Rural	10.9	10.6	0.0	2.2	0.0	8.0	0.1	0.0	0.1	0.4	0.2	0.2	89.1	100.0	8,107
Region															
Tigray	16.5	16.2	0.0	2.9	0.0	13.1	0.1	0.1	0.0	0.3	0.3	0.0	83.5	100.0	570
Affar	6.6	6.0	0.0	1.3	0.0	4.5	0.0	0.2	0.0	0.6	0.6	0.0	93.4	100.0	109
Amhara	16.1	15.7	0.1	3.6	0.2	11.6	0.1	0.1	0.0	0.4	0.3	0.1	83.9	100.0	2,330
Oromiya	13.6	12.9	0.2	3.4	0.2	8.6	0.1	0.1	0.3	0.7	0.4	0.4	86.4	100.0	3,300
Somali	3.1	2.7	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.4	0.4	0.0	96.9	100.0	363
Benishangul-Gumuz	11.1	10.4	0.3	1.3	0.0	8.5	0.0	0.1	0.0	0.7	0.6	0.1	88.9	100.0	92
SNNP	11.9	11.4	0.0	1.9	0.0	8.9	0.3	0.1	0.2	0.4	0.3	0.2	88.1	100.0	1,988
Gambela	15.9	15.8	0.0	2.5	0.0	12.9	0.0	0.5	0.0	0.1	0.1	0.0	84.1	100.0	31
Harari	33.5	29.1	0.0	5.8	1.6	20.1	0.0	0.8	0.8	4.4	4.2	0.2	66.5	100.0	22
Addis Ababa	56.9	45.2	1.8	10.6	3.9	23.5	2.0	2.1	1.3	11.7	9.2	2.5	43.1	100.0	224
Dire Dawa	34.0	31.5	0.3	6.7	0.6	21.4	1.0	1.5	0.0	2.4	2.2	0.2	66.0	100.0	37
Education															
No education	10.0	9.8	0.1	2.0	0.0	7.3	0.1	0.0	0.1	0.2	0.1	0.1	90.0	100.0	7,094
Primary	23.4	21.9	0.0	5.7	0.5	15.1	0.2	0.1	0.2	1.5	0.8	0.7	76.6	100.0	1,402
Secondary and higher	52.6	45.9	0.7	11.0	1.7	28.7	1.0	2.2	0.6	6.7	5.9	0.8	47.4	100.0	570
Wealth quintile															
Lowest	4.2	4.0	0.0	0.8	0.0	3.0	0.1	0.0	0.1	0.1	0.0	0.1	95.8	100.0	1,759
Second	6.6	6.5	0.0	1.1	0.0	5.4	0.0	0.0	0.0	0.1	0.1	0.0	93.4	100.0	1,892
Middle	12.0	11.6	0.1	2.7	0.0	8.5	0.1	0.0	0.2	0.4	0.3	0.1	88.0	100.0	1,903
Fourth	15.5	15.2	0.0	3.1	0.0	11.7	0.2	0.0	0.1	0.3	0.1	0.2	84.5	100.0	1,823
Highest	37.0	33.7	0.8	8.2	1.2	21.7	0.5	0.9	0.4	3.3	2.4	0.9	63.0	100.0	1,689
Total	14.7	13.9	0.2	3.1	0.2	9.9	0.2	0.2	0.2	0.8	0.6	0.3	85.3	100.0	9,066

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

Contraceptive use differs significantly across educational categories. Current use increases five-fold from 10 percent among women with no education to 53 percent among those with secondary and higher levels of education.

Wealth has a positive effect on women's contraceptive use, with use increasing markedly as wealth increases, from 4 percent among married women in the lowest wealth quintile to 37 percent among those in the highest wealth quintile.

5.3.1 Trends in Contraceptive Use

Results on contraceptive use from the 2005 EDHS are compared with similar surveys in Table 5.6 and Figure 5.1. Use of contraceptive methods tripled in the 15-year period between the 1990 NFFS and the 2005 EDHS from 5 percent to 15 percent. The increase is especially marked for modern methods in the five years between 2000 and 2005. This increase is attributed primarily to the rapid rise in the use of injectables from 3 percent in 2000 to 10 percent in 2005.

Table 5.6 Trends in current use of contraception

Percentage of currently married women who are currently using a contraceptive method, Ethiopia 2005

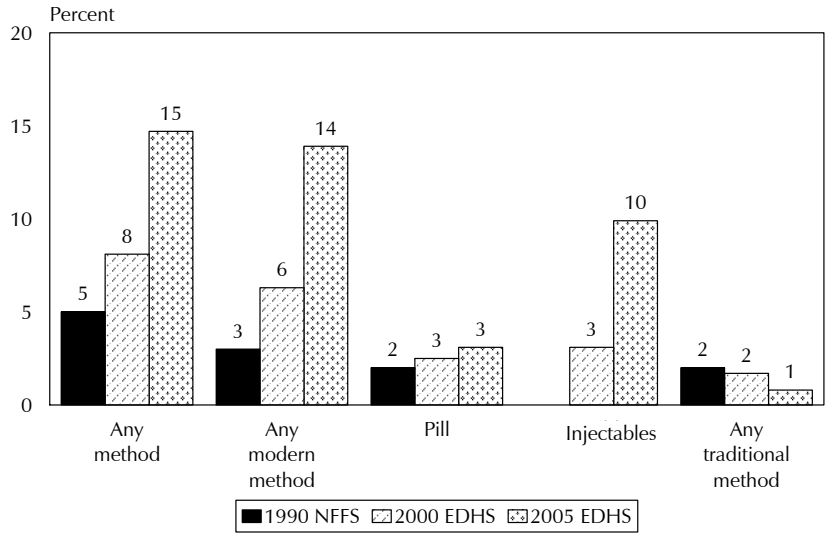
Method	1990 NFFS[1]	2000 EDHS[2]	2005 EDHS
Any method	4.8	8.1	14.7
Any modern method	2.9	6.3	13.9
Pill	2.2	2.5	3.1
IUD	0.3	0.1	0.2
Injectables	0.0	3.1	9.9
Condom	0.1	0.3	0.2
Implants	na	0.0	0.2
Lactational amenorrhoea (LAM)	na	na	0.2
Any traditional method	1.9	1.7	0.8
Rhythm	0.5	1.5	0.6
Withdrawal	0.1	0.2	0.3
Sexual abstinence[3]	1.2	na	na
Number	5,048	9,789	9,066

na = Not applicable
[1] CSA, 1993
[2] CSA and ORC Macro, 2001
[3] Sexual abstinence was included as a method of contraception in the 1990 NFFS.

5.3.2 Number of Children at First Use of Contraception

Family planning may be used to either limit family size or delay the next birth. Couples using family planning to limit family size adopt contraception when they have already had the number of children they want. When contraception is used to space births, couples may start using family planning earlier, with the intention of delaying a possible pregnancy. This may be done even before a couple has had their desired number of children.

Figure 5.1 **Trends in Current Use of Contraception, Ethiopia 1990-2005**



Women interviewed in the 2005 EDHS were asked how many children they had at the time they first used a contraceptive method. Table 5.7 shows the percent distribution of women by the number of living children at the time of first use of contraception, according to current age.

The data show that one-third of users (6 percent of all women) first used a method of family planning when they had four or more children. Nearly one-fifth of users (3 percent of all the women) first used at the time they had no children, and 4 percent first used after the birth of their first child.

The age pattern of first use of contraception shows that younger women are more likely to start using contraception at lower parities than older women. For example, most women below age 30 started using contraception after they had one child, suggesting the intention of younger women to space births at earlier parities than older women.

Table 5.7 Number of living children at first use of contraception

Percent distribution of women by number of living children at time of first use of contraception, Ethiopia 2005

Current age	Never used	Number of living children at time of first use of contraception						Total	Number of women
		0	1	2	3	4+	Missing		
15-19	95.3	3.1	1.4	0.1	0.0	0.0	0.1	100.0	3,266
20-24	81.1	6.5	7.1	3.9	1.3	0.0	0.0	100.0	2,547
25-29	74.4	3.8	6.9	6.2	4.2	4.5	0.1	100.0	2,517
30-34	75.3	2.6	4.1	3.1	4.3	10.4	0.1	100.0	1,808
35-39	75.5	1.9	2.8	3.3	2.4	14.2	0.0	100.0	1,602
40-44	76.1	1.2	2.1	2.4	1.2	17.0	0.0	100.0	1,187
45-49	86.2	0.3	1.0	1.2	0.6	10.7	0.0	100.0	1,143
Total	81.8	3.3	3.9	2.9	2.0	6.1	0.1	100.0	14,070

5.4 USE OF SOCIAL MARKETING BRANDS

Current users of the pills and condoms were asked for the brand name of the pills and condoms they last used. This information is useful in monitoring the success of social marketing programmes that promote a specific brand. In Ethiopia, "Prudence" and "Choice" are the two brands of pills that are socially marketed, and "Hiwot" and "Sensation" are two brands of condoms that are socially marketed.

Table 5.8.1 indicates that nearly one-third (29 percent) of users said that they use Prudence. This is much higher than the level reported in the 2000 EDHS (13 percent). Forty-one percent of pill users reported that they did not know the brand of pills they were using.

Table 5.8.2 shows the percentage of men currently using condoms by brand used. About 39 percent of men use Hiwot, and 19 percent use Sensation. Nearly, one-third of condom users (30 percent) do not know the brand of condoms they are using.

Table 5.8.1 Pill brands

Percent distribution of women currently using the pill by brand used, Ethiopia 2005

Pill brand	Pill users
Microgynon	7.2
Lo-Feminol	1.7
Prudence	29.1
Choice	0.5
Other	2.6
Don't know	40.6
Missing	18.2
Total	100.0
Number	292

Table 5.8.2 Condom brands

Percent distribution of men currently using condoms by brand used, Ethiopia 2005

Condom brand	Condom users
Hiwot	38.7
Sensation	18.7
Durex	0.2
Other	0.1
Don't know	30.2
Missing	12.0
Total	100.0
Number	40

5.5 KNOWLEDGE OF FERTILE PERIOD

A basic knowledge of the physiology of reproduction is especially useful for the successful practice of coitus-related methods such as periodic abstinence. The successful use of such methods depends in part on an understanding of when during the ovulatory cycle a woman is most likely to conceive. All women and men in the survey were asked about their knowledge of a woman's fertile period. Specifically, they were asked whether there are certain days between two menstrual periods when a woman is more likely to become pregnant if she has sexual intercourse. Those who answered in the affirmative were further asked if this time is just before the period begins, during the period, right after the period ends, or halfway between the two periods.

Table 5.9 shows that only 11 percent of women and 8 percent of men, interviewed in the EDHS, know that a woman is most likely to conceive halfway between her menstrual periods. Slightly over one-fifth of all women (22 percent) wrongly believe that the fertile period is just before her period begins or during her period or right after her period has ended. However, the great majority of women either do not know when the fertile period falls (35 percent) or believe that there is no specific time (32 percent). Regarding men, 43 percent say that they do not know when the fertile period falls and 27 percent believe that there is no specific time when a woman is more likely to conceive.

As expected, users of the rhythm method are more likely than nonusers to know that the fertile time in a women's menstrual cycle is halfway between periods. In addition, there has been a slight increase in knowledge of the fertile period over the past five years among users of the rhythm method (from 53 percent in 2000 to 62 percent in 2005).

Table 5.9 Knowledge of fertile period

Percent distribution of women currently using periodic abstinence, women not using periodic abstinence, and all women and all men by knowledge of the fertile period during the ovulatory cycle, Ethiopia 2005

Perceived fertile period	Users of rhythm method	Nonusers of rhythm method	All women	All men
Just before her period begins	5.6	2.2	2.2	3.5
During her period	0.7	1.8	1.8	1.9
Right after her period has ended	20.1	17.8	17.8	16.2
Halfway between two periods	61.8	11.1	11.4	8.1
Other	3.2	32.0	31.9	27.1
Don't know	6.4	35.1	34.9	43.0
Missing	2.2	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0
Number	69	14,001	14,070	6,033

5.6 SOURCE OF FAMILY PLANNING METHODS

Information on sources of modern contraceptives is useful for family planning managers and implementers. Women who reported using a modern method of contraception at the time of the survey were asked where they obtained the method the last time and interviewers recorded the name and location of the source. To ensure accuracy in reporting, supervisors and editors were asked to verify the type of source from the written response.

Table 5.10 shows that four-fifths of current users (80 percent) obtain methods from the public sector, 17 percent from the private medical sector, and 3 percent from other sources. The most important source of contraceptives in the public sector is the government health centre, providing methods to 37 percent of current users. Government health stations or clinics and government health

posts also play a major role in distributing contraceptives, being the source of 19 percent and 16 percent, of modern methods, respectively. The public sector is the leading source of injectables and the pill, distributed mainly through government health centres (39 percent and 36 percent, respectively). More than half of condom users get their supply from other sources, predominantly shops (42 percent).

Over the years, the public sector has been the major source of family planning methods, particularly for injectables and the pill. While the overall contribution from other private sources has declined from 6 percent in 2000 to 3 percent in 2005, the contribution of shops in supplying condoms has increased substantially, from 23 percent in 2000 to 42 percent in 2005.

The 2005 EDHS also gathered information on the cost of modern contraceptive methods. The data show that the majority of users who obtained a method from the public sector obtained it for free compared with 16 percent of users who obtained their method from the private medical sector (data not shown).

Table 5.10 Source of modern contraceptive methods

Percent distribution of users of modern contraceptive methods by most recent source of the method, Ethiopia 2005

Most recent source of method	Pill	IUD	Injectables	Condom	Total
Public sector	70.5	(64.9)	85.2	17.3	79.5
Government hospital	3.2	(47.1)	5.2	5.4	5.8
Government health centre	36.0	(14.1)	39.3	10.0	36.8
Government health post	11.8	(0.0)	18.6	0.1	16.1
Government health station/clinic	15.7	(0.0)	20.6	0.2	18.6
CBD worker	3.1	(3.6)	1.3	1.6	1.7
Other public	0.6	(0.0)	0.2	0.0	0.4
Private medical sector	27.0	(35.1)	13.5	20.3	17.1
Private hospital/clinic/doctor	6.4	(17.7)	5.0	0.4	5.5
Pharmacy	12.7	(0.0)	3.3	16.8	5.7
NGO Health facility	4.8	(6.8)	3.6	2.7	3.9
CBD worker/CBRHA	2.1	(10.6)	1.0	0.3	1.4
Other NGO	1.0	(0.0)	0.0	0.0	0.2
Other private medical	0.0	(0.0)	0.6	0.0	0.4
Other source	2.5	(0.0)	1.0	51.7	2.8
Drug vendor	0.8	(0.0)	0.5	0.0	0.5
Shop	1.3	(0.0)	0.4	42.4	1.9
Friends relatives	0.3	(0.0)	0.0	9.3	0.4
Other	0.0	(0.0)	0.3	10.7	0.6
Total	100.0	100.0	100.0	100.0	100.0
Number of women	292	20	954	40	1,324

Note: Table excludes female sterilisation and lactational amenorrhoea method (LAM). Total includes 24 users of implants who are not shown separately. Figures in parentheses are based on 25-49 unweighted cases.
CBD = Community-based distribution
CBRHA = Community-based reproductive health agent

5.7 INFORMED CHOICE

Current users of modern methods who are well informed about the side effects and problems associated with methods and know of a range of method options are in a better position to make an informed choice about the method they would like to use. Current users of various modern contraceptive methods were asked whether, at the time they were adopting a particular method, they were informed about the possible side effects or problems they might have with the method and what to do if they experienced side effects. Table 5.11 shows the percentage of current users of modern methods who were informed about the side effects or problems with the method used, informed about what to do if they experienced side effects, and informed of other methods they could use, according to the type of method used and initial source of the method.

Four percent of users were informed about the side effects or problems associated with the method, 30 percent were informed about what to do if they experienced side effects, and 7 percent were informed of the availability of other methods.

Table 5.11 Informed choice

Among current users of modern contraceptive methods 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, about what to do if they experienced side effects, and about other methods they could use, by method and initial source, Ethiopia 2005

Method/source/ background characteristic	Percentage who were informed about side effects or problems of method used	Percentage who were informed about what to do if experienced side effects	Percentage who were informed by a health or family planning worker of other methods that could be used	Number of women
Method				
Female sterilisation	(2.8)	(84.7)	(42.8)	6
Pill	1.9	31.5	2.8	265
IUD	(0.0)	(90.1)	(4.0)	10
Injectables	3.9	28.1	7.7	914
Implants	*	*	*	16
Total[1]	3.5	30.1	6.7	1,249
Initial source of method[2]				
Public sector	3.7	30.0	7.0	972
Government hospital	7.2	41.6	13.2	65
Government health centre	2.6	33.2	8.0	452
Family planning clinic	2.8	28.2	5.2	209
Mobile clinic	5.7	21.2	5.4	231
Fieldworker	*	*	*	14
Private medical sector	4.4	27.8	7.3	102
Private doctor	1.7	26.0	6.4	47
Private hospital or clinic	(17.9)	(59.8)	(4.3)	16
Pharmacy	*	*	*	3
Shop	*	*	*	7
Church	(0.0)	(0.0)	(0.0)	24
Friends relatives	*	*	*	5
Other	*	*	*	9
Missing	0.0	24.1	12.4	24

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
na = Not applicable
[1] Among users of female sterilisation, pill, IUD, injectables and implants
[2] Source at start of current episode of use

5.8 CONTRACEPTIVE DISCONTINUATION

Couples can realize their reproductive goals only when they use contraceptive methods continuously. A major concern for family planning programme managers is discontinuation of methods. In the 2005 EDHS "calendar" section, all segments of contraceptive use between September 2000 and the date of the interview were recorded, along with the reasons for any discontinuation. One-year contraceptive discontinuation rates based on the data from the calendar are presented in Table 5.12.[1]

Table 5.12 First-year contraceptive discontinuation rates

Percentage of contraceptive users who discontinued use of a method within 12 months after beginning its use, by reason for discontinuation and specific method, Ethiopia 2005

	Reason for discontinuation				
Method	Method failure	Desire to become pregnant	Switched to another method	Other reason	Total
Pill	2.4	11.6	21.8	25.1	60.9
Injectables	0.3	8.6	7.1	15.9	32.0
Male condom	1.3	9.5	13.7	17.3	41.8
Periodic abstinence	5.4	18.8	8.0	7.0	39.2
All methods	1.2	10.2	11.9	17.6	40.9

Note: Table is based on episodes of contraceptive use that began 3-59 months prior to the survey.
LAM = Lactational amenorrhoea method
[1]Used a different method in the month following discontinuation or said they wanted a more effective method and started another method within two months of discontinuation

It can be seen from the table that four in ten contraceptive users discontinue using a method within 12 months of starting its use. About 10 percent of users discontinued to become pregnant and 12 percent switched to other methods. Just 1 percent of users stopped as a result of method failure, suggesting that this is not a major problem in Ethiopia. The discontinuation rate is highest among pill users (61 percent) and lowest among users of injectables (32 percent).

Table 5.13 also presents reasons for contraceptive discontinuation, but from a different perspective. All of the 1,686 contraceptive discontinuations occurring in the five years preceding the survey, regardless of duration of use, are distributed by the main reason for discontinuation, according to method. The desire to become pregnant is the most prominent reason for contraceptive discontinuation (30 percent), followed by health concerns (26 percent).

[1] The discontinuation rates presented here include only those segments of contraceptive use that began since September 2000. The rates apply to the period 3-59 months preceding the survey; exposure during the month of interview and the two months before the interview are excluded to avoid the biases that may be introduced by unrecognized pregnancies. These cumulative discontinuation rates represent the proportion of users discontinuing a method within 12 months after the start of use. The rates are calculated by dividing the number of women discontinuing a method by the number exposed at that duration. The single-month rates are then cumulated to produce a one-year rate. In calculating the rate, the various reasons for discontinuation are treated as competing risks.

Table 5.13 Reasons for discontinuation

Percent distribution of discontinuations of contraceptive methods in the five years preceding the survey by main reason for discontinuation, according to specific method, Ethiopia 2005 FINAL

Reason	Pill	IUD	Injection	Condom	Rhythm	With-drawal	All methods
Became pregnant while using	5.6	0.0	2.2	14.7	16.8	10.4	5.0
Wanted to become pregnant	23.8	14.2	33.1	25.4	47.6	46.6	30.2
Husband/partner disapproved	2.9	0.0	2.6	2.5	0.1	0.0	2.6
Side effects	3.4	4.2	4.5	3.8	0.9	0.0	3.7
Health concerns	33.2	51.7	25.3	2.1	2.0	0.0	26.0
Lack of access/too far	0.0	0.0	0.0	1.6	0.4	0.0	0.1
Wanted more effective method	6.9	11.9	2.3	6.7	14.7	32.3	5.6
Inconvenient to use	6.1	0.0	4.2	6.4	7.8	1.8	5.1
Infrequent sex/husband away	3.9	8.8	2.3	14.7	5.1	0.2	3.6
Cost too much	0.2	0.0	0.9	0.0	0.0	0.0	0.5
Fatalistic	0.1	0.0	0.2	0.0	1.0	0.0	0.2
Method not available	2.5	0.0	6.2	0.0	0.0	0.0	3.9
Difficult to get pregnant/menopausal	0.5	7.3	0.3	0.0	0.0	0.0	0.4
Marital dissolution/separation	2.7	2.0	4.1	3.1	0.0	0.0	3.2
Other	8.2	0.0	11.8	18.1	3.6	8.6	9.8
Missing	0.0	0.0	0.0	0.7	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of discontinuations	680	17	786	60	89	23	1,686

5.9 FUTURE USE OF CONTRACEPTION

Intention to use a method of contraception is an important indicator of the potential demand for family planning services. Currently married women who were not using contraception at the time of the survey were asked about their intention to use family planning methods in the future. The results are presented in Table 5.14.

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, Ethiopia 2005

Intention to use in the future	Number of living children[1]					Total
	0	1	2	3	4+	
Intends to use	44.0	60.0	56.4	51.8	49.5	52.0
Unsure	5.6	1.9	4.4	5.1	3.9	4.0
Does not intend to use	50.4	37.8	38.9	43.0	46.4	43.9
Missing	0.0	0.3	0.3	0.0	0.1	0.1
Total	100.0	100.0	100.0	99.9	100.0	100.0
Number of women	530	1,091	1,133	1,098	3,880	7,732

[1] Includes current pregnancy

More than half (52 percent) of currently married women who were not using any contraception at the time of the survey say that they intend to use a family planning method some time in the future. Forty-four percent do not intend to use any method, while 4 percent are unsure of their intention. The proportion of women who intend to use in the future varies by the number of living children, increasing from 44 percent for those with no living children to a peak at 60 percent among those with one child. These women are likely interested in spacing subsequent births. Over the past five years, there has been an increase in the proportion of married women not using at the time of the survey but who intend to use in the future (from 46 percent in 2000 to 52 percent in 2005).

5.10 Reasons for Not Intending to Use A Contraceptive Method in the Future

An understanding of the reasons why people do not use family planning methods is critical in designing programmes that are effective in reaching women with unmet need and to improve the quality of family planning services. Table 5.15 shows currently married nonusers who do not intend to use a contraceptive method in the future by the main reasons for not intending to use family planning. Around 40 percent cited fertility-related reasons for not intending to use contraception. In particular, 18 percent cited the desire for as many children as possible as the main reason for not intending to use. The proportion of women who cited a desire for more children has dropped markedly from 42 percent in 2000 to 18 percent in 2005, suggesting that women are realizing the disadvantages of large family sizes.

Table 5.15 Reason for not intending to use contraception in the future

Percent of currently married women who are not using contraception and who do not intend to use in the future by main reason for not intending to use, Ethiopia 2005

Reason	Nonusers who do not intend to use contraception
Fertility-related reasons	37.5
Infrequent sex/no sex	2.9
Menopausal/had hysterectomy	6.3
Subfecund/infecund	10.4
Wants as many children as possible	17.8
Opposition to use	23.6
Respondent opposed	5.5
Husband/partner opposed	4.1
Others opposed	0.1
Religious prohibition	13.8
Lack of knowledge	11.2
Knows no method	8.6
Knows no source	2.6
Method-related reasons	13.6
Health concerns	10.2
Fear of side effects	2.6
Lack of access/too far	0.1
Costs too much	0.2
Inconvenient to use	0.1
Interferes with body's normal processes	0.2
Method not available	0.3
Other	11.1
Don't know/missing	3.0
Total	100.0
Number of women	3,394

Nearly a quarter of women reported disapproval or opposition to use as the reason for not intending to use in the future. The majority of these women specifically cited religious prohibition as the main reason for not using in the future. Method-related reasons, largely health concerns, was cited by about 14 percent of nonusers not intending to use in the future, and lack of knowledge of method or source was cited by 11 percent.

5.11 Preferred Method of Contraception for Future Use

Demand for specific methods can be assessed by asking nonusers which methods they intend to use in the future. Table 5.16 presents information on method preference among currently married women who are not using a contraceptive method but say they intend to use in the future. The majority (72 percent) of prospective users prefer to use injectables, while a sizable proportion (19 percent) cite the pill as their preferred method. In the 2000 EDHS, the corresponding figures for injectables and pills are 46 percent and 38 percent, respectively. The data indicates a convergence in preference of methods to injectables, largely because of the convenience of use and duration of effectiveness.

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, Ethiopia 2005

Preferred method	Nonusers who intend to use contraception in future
Modern method	
Female sterilisation	0.2
Pill	18.7
IUD	0.3
Injectables	71.9
Implants	1.7
Condom	0.1
Lactation amenorrhoea method (LAM)	0.1
Traditional method	
Rhythm	0.5
Withdrawal	0.1
Folk method	3.3
Unsure of method	3.0
Total	100.0
Number of women	4,017

5.12 Exposure to Family Planning Messages

Exposure to family planning messages widens the horizon of understanding on issues related to contraceptive use and helps in the realization of its importance in achieving desired family size. Additionally, it contributes to the enhancement of the health of both children and mothers. Measuring the extent of exposure to such information helps programme managers and planners to effectively target population subgroups for information, education, and communication (IEC) activities. In the 2005 EDHS, both women and men were asked if they have heard or seen family planning messages on the radio or television or read about family planning in a newspaper or magazine in the few months prior to the survey.

Family planning information is largely disseminated through radio with limited dissemination through television or the print media. For example, 29 percent of women heard about family planning on the radio compared with only 11 percent of women who got family planning information from the television and 8 percent who got such information from newspapers or magazines (Table 5.17).

Consistent with the level of exposure to mass media, exposure to family planning messages varies by the gender of respondents. As can be seen from Table 5.17, men are more likely to be exposed to family planning messages than women for all media types. Nearly 4 out of 10 men compared with 3 out of 10 women heard family planning messages on the radio or seen them on television or read about family planning in newspapers or magazines.

Significant variation is also observed in exposure to family planning messages by other characteristics. Younger women are more likely to be exposed to family planning messages than older women. Because of the limited infrastructural development in most rural communities, women and men in these parts of the country have little opportunity to be exposed to essential information on health and family planning. For example, women in urban areas are three times more likely to have heard family planning messages on the radio than their rural counterparts. The regional differential also suggests that women and men in relatively urbanized areas, namely, Addis Ababa, Dire Dawa and Harari, are more likely than other women and men to have been exposed to family planning

messages from all three media sources. Interestingly, women in these three urbanized areas are more likely than men to be exposed to family planning messages on the radio and television. Women in Somali and Gambela regions have the lowest level of exposure to family planning messages.

There is a marked difference in exposure to family planning messages by level of education. Three-quarters of men and 84 percent of women with some secondary education were exposed to family planning messages in at least one of the three media compared with only one-fourth of men and 18 percent of women with no education. The results also show that exposure to family planning messages varies by wealth quintile and is greatest among respondents in the wealthiest quintile.

Table 5.17 Exposure to family planning messages

Percentage of women who heard or saw a family planning message on the radio or television, or in a newspaper or magazine in the past few months, according to background characteristics, Ethiopia 2005

	Women					Men				
Background characteristic	Radio	Television	Newspaper/ magazine	None of the three media sources	Number of women	Radio	Television	Newspaper/ magazine	None of the three media sources	Number of men
Age										
15-19	34.5	15.0	13.6	61.4	3,266	32.3	14.4	16.0	64.1	1,335
20-24	33.0	15.1	11.5	65.1	2,547	42.9	21.1	19.4	54.4	1,064
25-29	28.9	10.8	7.5	70.0	2,517	40.0	14.8	15.3	58.4	741
30-34	25.2	8.8	5.4	73.8	1,808	46.5	15.3	14.2	51.8	754
35-39	25.5	8.3	4.8	73.2	1,602	39.6	12.5	14.1	59.1	651
40-44	25.4	7.5	3.9	73.7	1,187	36.8	13.9	14.8	61.5	497
45-49	24.2	6.2	2.3	75.3	1,143	36.8	11.2	8.0	61.3	422
50-54	na	na	na	na	na	31.8	8.1	11.5	66.8	335
55-59	na	na	na	na	na	32.0	4.5	6.3	67.8	235
Residence										
Urban	66.7	54.6	32.6	26.2	2,499	67.8	57.8	42.1	25.9	916
Rural	21.3	2.0	3.1	77.9	11,571	33.0	6.8	9.9	65.5	5,117
Region										
Tigray	34.8	13.9	11.5	63.1	919	36.9	17.6	18.9	60.1	366
Affar	20.2	11.3	4.7	78.9	146	35.4	18.0	10.3	63.1	65
Amhara	24.9	6.2	6.3	73.7	3,482	34.6	8.1	15.8	63.8	1,521
Oromiya	34.5	11.1	8.0	63.9	5,010	42.7	13.7	12.0	55.0	2,222
Somali	10.2	6.3	4.8	89.1	486	29.6	3.7	3.1	70.4	202
Benishangul-Gumuz	15.8	2.7	3.2	83.8	124	33.0	10.3	11.2	64.5	54
SNNP	18.2	3.7	4.5	80.6	2,995	30.0	13.0	12.1	68.8	1,244
Gambela	11.7	4.5	3.7	87.1	44	42.4	17.1	13.3	55.3	21
Harari	70.6	53.3	36.2	27.9	39	65.0	48.1	37.8	30.7	16
Addis Ababa	67.4	63.4	32.2	23.8	756	65.2	60.2	44.4	26.2	292
Dire Dawa	58.2	53.6	26.0	38.0	69	56.1	43.4	29.9	36.9	30
Education										
No education	17.9	2.4	0.4	81.6	9,271	23.3	1.9	2.3	76.3	2,589
Primary	38.1	12.3	11.5	58.5	3,123	39.0	10.9	14.5	58.4	2,252
Secondary and higher	76.6	59.3	46.4	16.3	1,675	69.6	48.8	42.5	25.1	1,192
Wealth quintile										
Lowest	10.2	0.5	0.7	89.7	2,428	17.0	2.0	4.1	81.5	1,100
Second	15.4	1.0	1.4	84.0	2,643	28.7	4.2	8.0	70.2	1,184
Middle	20.5	1.4	2.9	78.8	2,732	34.3	6.9	10.9	63.9	1,081
Fourth	27.9	1.8	4.2	70.9	2,647	41.3	8.4	12.6	57.0	1,200
Highest	60.4	40.7	25.6	34.2	3,621	62.6	42.9	33.0	33.3	1,469
Total	29.4	11.4	8.3	68.7	14,070	38.3	14.5	14.8	59.5	6,033

na = Not applicable

5.13 Contact of Nonusers with Family Planning Providers

Given the importance of family planning services to the improvement of mother's and children's health, it is critical that every opportunity be fully exploited to inform potential users. In reality, however, even though there is ample opportunity to inform nonusers there are also many "missed opportunities." Information on missed opportunities was gathered by asking female nonusers

if they had visited a health facility in the 12 months preceding the survey. Those who visited a health facility were asked whether anyone at the facility had discussed family planning with them during any of their visits. Women who were not using a family planning method were also asked whether they had been visited by a fieldworker who talked with them about family planning in the 12 months preceding the survey.

The results are presented in Table 5.18. The majority of nonusers (90 percent) did not have any contact with health providers or fieldworkers with whom family planning was discussed. Only 6 percent of nonusers reported being visited by fieldworkers who discussed family planning issues. Though this seems low, it is still an improvement over the 2000 level which was practically nil. Only 5 percent of nonusers who visited a facility discussed family planning with a health worker, compared with 16 percent who visited a facility but did not discuss family planning. Variations across subgroups in the proportions of nonusers who had some contact with family planning providers are minor.

Table 5.18 Contact of nonusers with family planning providers

Percentage who were visited by a fieldworker who discussed family planning, the percentage who visited a health facility and discussed family planning, the percentage who visited a health facility but did not discuss family planning, and the percentage who did not discuss family planning with a fieldworker or with someone at a health facility in the 12 months preceding the survey, by background characteristics, Ethiopia 2005

Background characteristic	Women who were visited by a fieldworker who discussed family planning	Women who visited a health facility and: Discussed family planning	Women who visited a health facility and: Did not discuss family planning	Women who did not discuss family planning with a field-worker or at a health facility	Number of women
Age					
15-19	3.3	2.1	11.9	95.2	3,182
20-24	6.1	5.4	19.1	89.9	2,256
25-29	7.8	5.9	19.6	87.7	2,135
30-34	9.2	8.2	17.6	85.3	1,569
35-39	7.4	6.6	17.1	87.3	1,357
40-44	7.4	6.2	17.4	88.3	1,046
45-49	5.4	4.9	13.8	91.1	1,071
Residence					
Urban	4.9	8.1	24.1	88.7	1,968
Rural	6.5	4.6	14.9	90.2	10,648
Region					
Tigray	6.7	9.5	13.8	86.5	816
Affar	3.9	1.7	22.3	95.0	137
Amhara	6.6	5.4	17.5	90.1	3,080
Oromiya	6.0	4.6	16.0	90.5	4,520
Somali	1.0	0.3	5.6	98.7	475
Benishangul-Gumuz	3.3	3.7	17.2	93.6	113
SNNP	7.9	5.3	14.2	88.2	2,750
Gambela	1.8	2.7	10.1	96.0	39
Harari	8.8	4.5	17.4	88.7	31
Addis Ababa	4.1	7.2	34.2	89.2	601
Dire Dawa	2.5	4.3	12.4	94.5	55
Education					
No education	6.1	4.4	15.5	90.7	8,526
Primary	7.0	6.1	14.8	88.2	2,769
Secondary and higher	5.4	7.8	25.1	88.8	1,321
Wealth quintile					
Lowest	6.2	3.8	11.9	91.2	2,352
Second	5.1	3.7	15.1	91.8	2,514
Middle	6.8	4.9	15.9	90.0	2,492
Fourth	7.4	5.0	15.6	89.3	2,351
Highest	5.9	7.9	22.1	88.0	2,907
Total	6.2	5.2	16.4	90.0	12,616

5.14 HUSBAND'S KNOWLEDGE OF WIFE'S USE OF CONTRACEPTION

Concealment of use of contraception is an indication of absence of communication or disagreement on use of family planning. To shed light on the extent of communication on the use of contraception among married couples, married women who were using contraception at the time of the survey were asked whether their husband knew of their use. An overwhelming majority (87 percent) of users reported that their husbands know about their use of contraception (Table 5.19). On the other hand, 8 percent of women mentioned that their husband did not know of their use of family planning.

Husbands' lack of knowledge of wives' family planning use is relatively higher in Tigray, SNNP and Benishangul-Gumuz regions. Uneducated women are three times as likely to conceal the use of a method of family planning as women with secondary or higher levels of education. Concealment of use is also higher among women in the two lowest wealth quintiles and among those residing in rural areas.

Table 5.19 Husbands/partners knowledge of women's use of contraception

Percent distribution of currently married women who are using a contraceptive method by whether their husband/partner knows about their use of contraception, according to background characteristics, Ethiopia 2005

Background characteristic	Husband/ partner knows about use	Husband/ partner does not know about use	Unsure whether husband/ partner knows	Missing	Total	Number of women
Age						
15-19	88.0	8.7	0.0	3.3	100.0	63
20-24	85.9	7.3	0.0	6.8	100.0	262
25-29	89.0	6.0	0.2	4.9	100.0	348
30-34	87.3	7.8	0.0	4.9	100.0	223
35-39	89.2	6.8	0.3	3.7	100.0	231
40-44	79.5	12.9	0.0	7.7	100.0	136
45-49	81.6	13.8	0.0	4.5	100.0	70
Education						
No education	83.2	9.9	0.2	6.7	100.0	706
Primary	86.5	8.5	0.0	5.0	100.0	328
Secondary and higher	95.2	2.6	0.0	2.2	100.0	300
Wealth quintile						
Lowest	84.0	10.8	0.0	5.2	100.0	73
Second	81.2	14.0	0.0	4.9	100.0	126
Middle	84.8	8.0	0.3	6.9	100.0	228
Fourth	86.8	8.1	0.0	5.1	100.0	283
Highest	88.9	6.3	0.1	4.8	100.0	625
Residence						
Urban	91.8	4.7	0.2	3.3	100.0	448
Rural	84.2	9.5	0.1	6.2	100.0	887
Region						
Tigray	81.8	13.8	0.7	3.7	100.0	94
Affar	(88.7)	(0.0)	(0.0)	(11.3)	(100.0)	7
Amhara	86.7	7.4	0.0	5.9	100.0	374
Oromiya	87.6	6.1	0.0	6.3	100.0	450
Somali	*	*	*	*	*	11
Benishangul-Gumuz	80.2	10.0	0.0	9.8	100.0	10
SNNP	82.8	12.3	0.0	4.9	100.0	236
Gambela	92.3	1.5	0.0	6.2	100.0	5
Harari	83.0	2.5	0.5	14.0	100.0	7
Addis Ababa	94.2	5.1	0.0	0.7	100.0	127
Dire Dawa	90.6	7.0	0.0	2.4	100.0	12
Total	86.7	7.9	0.1	5.2	100.0	1,334

Note: Women who report use of male sterilisation, condoms, or withdrawal are included in the column, husband/partner knows about use. 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.

5.15 MEN'S ATTITUDE ABOUT CONTRACEPTION

Men's attitude towards contraceptive use exerts an important influence on their partner's attitude and eventual adoption of a method. In the 2005 EDHS men were asked if they agreed or disagreed with three stereotypical statements about contraceptive use in general.

As shown in Table 5.20 nearly 15 percent of men who know about contraception think that contraception is women's business and that it does not concern them. A similar proportion of men also believe that women should be the ones to get sterilized, as they are the ones who get pregnant. Thirteen percent of men believe that women who use contraception may become promiscuous.

Table 5.20 Men's attitude about contraception

Among men who know a family planning method, percentage who agree with three stereotypical statements about contraceptive use, by background characteristics, Ethiopia 2005

Background characteristic	Contraception is women's business	Women who use contraception may become promiscuous	The woman is the one who becomes pregnant, so she should be the one to get sterilised	Number of men
Age				
15-19	12.6	13.0	14.0	1,149
20-24	14.7	14.0	16.0	988
25-29	15.9	13.1	12.5	687
30-34	18.0	12.5	18.1	720
35-39	17.3	10.2	14.2	609
40-44	14.1	11.5	14.3	454
45-49	15.4	14.6	16.1	378
50-54	19.4	10.7	17.6	296
55-59	14.9	13.3	14.9	209
Marital status				
Never married	12.0	13.4	13.5	2,133
Married or living together	17.8	12.1	16.3	3,185
Divorced/separated/ widowed	13.0	15.7	14.4	172
Residence				
Urban	7.6	9.0	7.3	910
Rural	16.9	13.4	16.7	4,580
Region				
Tigray	7.3	6.9	8.6	359
Affar	8.5	7.9	6.8	58
Amhara	14.4	13.4	24.4	1,408
Oromiya	19.4	16.9	16.1	2,072
Somali	9.5	6.5	6.2	109
Benishangul-Gumuz	19.1	12.0	23.5	44
SNNP	14.9	7.3	7.0	1,089
Gambela	10.2	12.4	14.4	18
Harari	16.9	10.4	25.2	16
Addis Ababa	6.2	10.5	5.1	288
Dire Dawa	19.6	8.8	11.1	29
Education				
No education	17.2	13.2	18.3	2,195
Primary	16.9	13.3	15.7	2,104
Secondary and higher	9.3	10.5	8.3	1,191
Wealth quintile				
Lowest	15.9	11.0	13.2	895
Second	16.9	13.3	17.9	1,063
Middle	17.1	15.1	17.4	987
Fourth	17.8	14.0	18.3	1,118
Highest	10.8	10.7	10.2	1,427
Total	15.4	12.7	15.1	5,490

Misconceptions about contraceptive use are relatively more widespread among men with little or no education and men residing in rural areas. Men in Dire Dawa, Oromiya and Benishangul-Gumuz are most likely to think that contraception is women's business, men in Oromiya are also most likely to believe that using contraception might make a woman promiscuous, and men in Harari, Amhara and Benishangul-Gumuz are more likely than those in other regions to believe that women should be the ones to get sterilized, since they are the ones who get pregnant.

OTHER PROXIMATE DETERMINANTS OF FERTILITY 6

This chapter addresses the principal factors other than contraception, that influence fertility. Marriage is the principal indicator of women's exposure to the risk of pregnancy in Ethiopia. Early age at marriage in a population is usually associated with a longer period of exposure to the risk of pregnancy and higher fertility levels. The early initiation of childbearing associated with early marriage may also adversely affect the health of both women and children. The duration of postpartum amenorrhoea and postpartum abstinence affect the length of time a woman is insusceptible to pregnancy and thus, determine the interval between births. The onset of menopause marks the end of a woman's reproductive life cycle. These factors taken together determine the duration of a woman's reproductive life and the pace of childbearing, making them important in understanding fertility levels and differentials.

6.1 CURRENT MARITAL STATUS

Table 6.1 shows the percent distribution of women and men by current marital status. The term "married" refers to both legal or formal marriage, while "living together" refers to informal unions in which a man and a woman live together, even if a formal civil or religious ceremony has not taken place. In later tables in this report, the term "currently married" includes those living together, if it is not listed as a separate category. Respondents who are widowed, divorced or separated are referred to as "formerly married." The term "ever married" refers to respondents who are currently married or formerly married.

The data indicate that 25 percent of Ethiopian women age 15-49 have never been married. Sixty-three percent are married, 1 percent live together, and 11 percent are separated, divorced or widowed. The low proportion (less than half a percent) of women age 45-49 that have never been married indicates that marriage is universal in Ethiopia.

Compared with women, the proportion of men who have never been married is considerably higher (40 percent). Fifty-six percent of men are formally married, less than 1 percent are living together with a woman, and 3 percent are either divorced, separated or widowed. A significant proportion of men marry when they are age 25 or older, unlike women who tend to marry at younger ages.

There has been little change over the past five years in the proportions of Ethiopian women and men who have never married, who are married, who are living together, or who are widowed. However, the proportion divorced among both women and men has nearly doubled, and there has been a substantial decline in the proportion separated. The increase in the proportion divorced may be attributed somewhat to greater urbanization and its effects on support from the extended family. The anomaly in the proportion divorced and the proportion separated may be due to larger proportions of women and men formalizing their separation and obtaining a divorce.

Table 6.1 Current marital status

Percent distribution of women and men by current marital status, according to age, Ethiopia 2005

Age	Never married	Married	Living together	Divorced	Separated	Widowed	Total	Number
				WOMEN				
15-19	73.3	21.1	0.7	4.0	0.6	0.2	100.0	3,266
20-24	30.3	60.1	1.7	5.6	1.8	0.6	100.0	2,547
25-29	9.7	81.0	1.0	4.1	2.1	2.0	100.0	2,517
30-34	3.5	84.6	1.2	4.7	2.2	3.8	100.0	1,808
35-39	1.9	82.8	1.0	5.0	2.3	7.0	100.0	1,602
40-44	0.8	79.4	1.4	4.0	3.0	11.4	100.0	1,187
45-49	0.4	74.9	0.6	7.3	2.4	14.5	100.0	1,143
Total	25.0	63.4	1.1	4.8	1.8	4.0	100.0	14,070
				MEN				
15-19	97.6	2.0	0.1	0.3	0.0	0.0	100.0	1,335
20-24	73.1	23.4	0.6	1.9	0.7	0.3	100.0	1,064
25-29	31.2	64.2	0.9	2.5	0.8	0.4	100.0	741
30-34	10.2	85.0	0.6	1.9	1.6	0.7	100.0	754
35-39	2.2	93.4	0.4	3.1	0.8	0.0	100.0	651
40-44	2.1	93.1	1.0	3.0	0.2	0.6	100.0	497
45-49	0.8	94.7	0.0	1.6	1.5	1.4	100.0	422
50-54	0.6	91.4	1.1	2.2	1.8	2.9	100.0	335
55-59	0.0	95.8	0.0	1.0	0.4	2.8	100.0	235
Total	40.1	56.2	0.5	1.8	0.8	0.6	100.0	6,033

6.2 POLYGYNY

Polygyny (the practice of having more than one wife) has implications for the frequency of exposure to sexual activity and therefore fertility. The extent of polygyny is ascertained from responses of currently married women to questions on whether their husband or partner has other wives and if so how many. Similarly, currently married men are asked for the number of wives or partners they have.

Table 6.2 shows the proportion of currently married women and men who are in polygynous unions by background characteristics. The data show that 12 percent of married women in Ethiopia are in polygynous unions. Seven percent say they have only one co-wife, while 5 percent say they have 2 or more co-wives. The percentage of women in polygynous unions tends to increase with age, from 4 percent among women age 15-19 to 17 percent among women age 45-49. Rural women are more likely to be in polygynous unions (13 percent) than urban women (7 percent).

The regional distribution shows substantial variation. The prevalence of polygyny is highest in Gambela (27 percent) and lowest in Amhara and Addis Ababa (3 percent each). Polygyny is also high in Affar, Somali and Benishangul-Gumuz (21 percent each). The extent of polygyny has declined slightly over the past five years, from 14 percent to 12 percent.

Table 6.2 Number of co-wives and wives

Percent distribution of currently married women by number of co-wives and percent distribution of currently married men by number of wives, according to background characteristics, Ethiopia 2005

Background characteristic	Number of co-wives				Total	Number of women	Number of wives		Total	Number of men
	0	1	2+	Missing			1	2+		
Age										
15-19	96.0	2.5	1.4	0.1	100.0	711	(100.0)	(0.0)	(100.0)	28
20-24	93.7	3.8	2.1	0.4	100.0	1,574	99.9	0.1	100.0	255
25-29	90.6	5.6	3.6	0.2	100.0	2,066	98.5	1.5	100.0	482
30-34	83.9	8.7	7.1	0.3	100.0	1,551	95.2	4.8	100.0	646
35-39	82.4	9.9	7.5	0.2	100.0	1,343	94.0	6.0	100.0	610
40-44	83.0	9.5	7.4	0.0	100.0	960	87.2	12.8	100.0	468
45-49	83.0	9.9	7.2	0.0	100.0	862	90.8	9.2	100.0	399
50-54	na	na	na	na	na	na	91.7	8.3	100.0	310
55-59	na	na	na	na	na	na	89.8	10.2	100.0	225
Residence										
Urban	92.4	2.8	4.6	0.2	100.0	959	97.4	2.6	100.0	344
Rural	87.1	7.5	5.2	0.2	100.0	8,107	93.1	6.9	100.0	3,080
Region										
Tigray	95.9	2.2	1.6	0.2	100.0	570	98.8	1.2	100.0	206
Affar	78.3	8.8	12.2	0.6	100.0	109	84.2	15.8	100.0	42
Amhara	97.2	1.4	1.2	0.2	100.0	2,330	99.2	0.8	100.0	913
Oromiya	84.1	9.8	6.0	0.1	100.0	3,300	90.8	9.2	100.0	1,228
Somali	78.4	10.3	10.8	0.5	100.0	363	89.9	10.1	100.0	137
Benishangul-Gumuz	78.7	12.2	8.9	0.1	100.0	92	86.2	13.8	100.0	37
SNNP	81.8	9.9	7.9	0.4	100.0	1,988	90.5	9.5	100.0	730
Gambela	72.0	12.0	15.3	0.6	100.0	31	90.9	9.1	100.0	12
Harari	94.6	2.9	2.3	0.2	100.0	22	97.9	2.1	100.0	9
Addis Ababa	96.4	2.0	1.1	0.5	100.0	224	98.4	1.6	100.0	97
Dire Dawa	91.1	5.9	2.7	0.3	100.0	37	94.8	5.2	100.0	14
Education										
No education	86.6	7.5	5.7	0.2	100.0	7,094	93.8	6.2	100.0	1,912
Primary	89.8	7.0	3.2	0.0	100.0	1,402	91.4	8.6	100.0	1,099
Secondary and higher	96.3	0.7	2.4	0.6	100.0	570	97.8	2.2	100.0	413
Wealth quintile										
Lowest	83.7	8.4	7.5	0.4	100.0	1,759	94.1	5.9	100.0	659
Second	86.5	7.3	5.9	0.3	100.0	1,892	93.1	6.9	100.0	745
Middle	87.7	7.5	4.7	0.1	100.0	1,903	91.9	8.1	100.0	715
Fourth	88.7	7.6	3.5	0.2	100.0	1,823	93.2	6.8	100.0	669
Highest	91.9	4.0	4.0	0.1	100.0	1,689	95.5	4.5	100.0	637
Total	87.7	7.0	5.1	0.2	100.0	9,066	93.5	6.5	100.0	3,424

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

There is an inverse relationship between education and polygyny. The proportion of currently married women in a polygynous union decreases from 13 percent among women with no education to 3 percent among women with some secondary or higher education. Substantial differences are observed in the prevalence of polygyny among women in different wealth quintiles. Women in the lowest wealth quintile are twice as likely to be in a polygynous union as women in the highest wealth quintile. Data on polygynous unions among currently married men is also shown in Table 6.2. The data indicate that 7 percent of men report having two or more wives; however, this figure varies widely by region and urban-rural residence. The level of polygyny as reported by men has declined slightly over the past five years, from 9 percent in the 2000 EDHS to 7 percent in the 2005 EDHS.

6.3 AGE AT FIRST MARRIAGE

In Ethiopia, marriage marks the point in a woman's life when childbearing becomes socially acceptable. Age at first marriage has a major effect on childbearing because women who marry early have on average a longer period of exposure to pregnancy and a greater number of lifetime births. Information on age at first marriage was obtained by asking respondents the month and year, or age, at which they started living with their first partner.

Table 6.3 shows the percentage of women and men who have married by specific exact ages, according to current age. Marriage occurs relatively early in Ethiopia. Among women age 25-49, 66 percent married by age 18 and 79 percent married by age 20. The median age at first marriage among women age 25-49 is 16.1 years. The proportion of women married by age 15 has declined from 38 percent among women age 45-49 to 13 percent among women age 15-19, but there has been little change in the median age at marriage among women age 25-49 in the past five years.

Table 6.3 Age at first marriage

Percentage of women and men who were first married by specific exact ages and median age at first marriage, according to current age, Ethiopia 2005

Current age	Percentage first married by exact age:					Percentage never married	Number	Median age at first marriage
	15	18	20	22	25			
WOMEN								
15-19	12.7	na	na	na	na	73.3	3,266	a
20-24	23.9	49.2	62.4	na	na	30.3	2,547	18.1
25-29	31.9	61.7	74.3	82.6	89.1	9.7	2,517	16.6
30-34	31.9	64.3	77.7	85.9	92.6	3.5	1,808	16.2
35-39	33.3	67.4	81.4	88.3	93.3	1.9	1,602	16.0
40-44	36.7	68.6	81.1	89.8	94.5	0.8	1,187	15.8
45-49	38.0	70.8	83.0	90.4	94.8	0.4	1,143	15.8
Women age 20-49	31.4	61.8	74.8	na	na	10.4	10,804	16.5
Women age 25-49	33.7	65.6	78.6	86.6	92.2	4.2	8,257	16.1
MEN								
15-19	na	na	na	na	na	97.6	1,335	a
20-24	na	5.7	13.6	na	na	73.1	1,064	a
25-29	na	7.8	18.8	32.0	54.2	31.2	741	24.2
30-34	na	10.3	24.1	38.4	61.0	10.2	754	23.5
35-39	na	10.5	21.5	42.2	62.1	2.2	651	23.0
40-44	na	12.5	25.1	38.1	57.8	2.1	497	23.8
45-49	na	10.4	25.6	42.7	61.0	0.8	422	23.2
50-54	na	6.8	17.6	28.8	46.2	0.6	335	25.7
55-59	na	7.8	17.1	25.0	44.9	0.0	235	25.5
Men age 25-59	na	9.7	21.8	36.5	57.0	9.3	3,634	23.8

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

Men tend to marry at much older ages than women. Among men age 25-59, only 10 percent were married by age 18 and 22 percent by age 20. The median age at marriage for men age 25-29 is 24.2 years, nearly eight years older than for women in the same age group.

Table 6.4 shows the median age at first marriage for women age 20-49 by current age and background characteristics; summary data are also given for men age 25-59. Data for women age 15-19 and men age 15-24 have been omitted because fewer than 50 percent of respondents in these age groups were married.

Urban women age 25-49 marry more than two years later than rural women. Women with at least some secondary education marry 5 years later than women with no education and women in the highest wealth quintile marry a year later than women in the lowest wealth quintile. The median age at marriage is highest in Addis Ababa (21.9 years) and lowest in Amhara (14.2 years). Similar differences by background characteristics are also observed among men.

Table 6.4 Median age at first marriage

Median age at first marriage among women age 20 (25)-49 and among men 25-49, by current age and background characteristics, Ethiopia 2005

Background characteristic	Current age						Women age 20-49	Women age 25-49	Men age 25-59
	20-24	25-29	30-34	35-39	40-44	45-49			
Residence									
Urban	3.3	21.6	18.7	17.2	15.8	16.1	19.4	18.2	a
Rural	17.3	16.1	16.0	15.9	15.7	15.7	16.1	15.9	23.4
Region									
Tigray	16.9	16.0	15.7	15.3	15.0	15.5	15.7	15.6	24.7
Affar	17.4	16.9	16.0	15.7	15.9	17.8	16.7	16.4	23.9
Amhara	15.2	14.5	14.3	14.2	14.1	13.6	14.4	14.2	22.3
Oromiya	18.7	16.8	17.0	16.7	16.5	16.7	17.1	16.7	24.4
Somali	17.3	17.6	17.2	19.1	18.3	19.6	17.9	18.0	24.3
Benishangul-Gumuz	16.6	15.5	15.3	15.4	15.2	15.1	15.6	15.3	22.7
SNNP	19.5	17.5	17.2	16.9	16.8	16.6	17.6	17.2	23.2
Gambela	15.8	15.7	15.8	15.9	15.8	15.4	15.8	15.7	23.0
Harari	19.6	20.0	18.3	17.9	17.4	18.6	18.9	18.6	a
Addis Ababa	8.5	2.5	23.8	21.2	16.9	16.8	a	21.9	a
Dire Dawa	a	19.3	17.3	16.8	17.0	17.1	18.3	17.8	a
Education									
No education	16.5	16.0	15.9	15.7	15.6	15.7	15.9	15.8	23.5
Primary	20.0	16.6	15.9	17.1	17.1	16.0	17.4	16.5	23.3
Secondary and higher	6.4	24.1	20.7	19.8	18.3	19.1	a	21.2	a
Wealth quintile									
Lowest	16.6	16.2	16.0	15.9	16.1	16.7	16.2	16.1	24.0
Second	16.7	15.6	15.8	15.8	16.0	15.4	15.9	15.7	23.4
Middle	17.2	16.4	16.3	16.1	15.6	15.9	16.4	16.1	23.1
Fourth	17.7	16.4	16.3	15.9	15.5	15.5	16.2	15.9	23.2
Highest	a	19.4	17.0	16.3	15.7	15.9	18.2	17.0	a
Total	18.1	16.6	16.2	16.0	15.8	15.8	16.5	16.1	23.8

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

6.4 Age at First Sexual Intercourse

Age at first marriage is often used as a proxy for first exposure to intercourse and risk of pregnancy. But the two events may not occur at the same time because some women may engage in sexual activity before marriage. In the 2005 EDHS, women and men were asked how old they were when they first had sexual intercourse.

Table 6.5 shows the percentage of women and men who first had sexual intercourse by specific exact ages. Among women age 25-49, 32 percent had sexual intercourse before age 15, 65 percent before age 18, and by age 25 most Ethiopian women have had sexual intercourse. The median age at first sexual intercourse for women age 25-49 years is 16.1 years, which is identical to the median age at first marriage. This suggests that Ethiopian women generally begin sexual intercourse at the time of their first marriage. The median age at first sexual intercourse has increased over the past two decades, from 15.7 years for women age 45-49 to 18.2 years for women age 20-24.

Table 6.5 Age at first sexual intercourse

Percentage of women and men who had first sexual intercourse by specific exact ages and median age at first sexual intercourse, according to current age, Ethiopia 2005

Current age	Percentage who had first sexual intercourse by exact age:					Percentage who never had intercourse	Number	Median age at first intercourse
	15	18	20	22	25			
WOMEN								
15-19	11.1	na	na	na	na	72.3	3,266	a
20-24	21.9	48.6	62.3	na	na	27.4	2,547	18.2
25-29	29.3	61.2	72.5	81.1	87.0	8.1	2,517	16.6
30-34	29.9	63.3	74.4	82.1	86.8	2.4	1,808	16.4
35-39	30.1	65.9	79.1	84.7	89.4	0.6	1,602	16.1
40-44	35.7	69.8	80.3	87.9	90.2	0.3	1,187	15.7
45-49	37.4	71.0	83.1	88.4	91.1	0.3	1,143	15.7
Women age 20-49	29.3	61.3	73.4	na	na	8.9	10,804	16.5
Women age 25-49	31.6	65.2	76.8	84.0	88.4	3.2	8,257	16.1
MEN								
15-19	1.7	na	na	na	na	92.7	1,335	a
20-24	1.7	14.1	29.3	na	na	55.9	1,064	a
25-29	1.5	16.3	35.3	50.2	73.0	18.9	741	22.0
30-34	1.4	15.0	37.5	57.7	77.7	4.1	754	21.0
35-39	1.0	16.9	34.1	55.9	75.8	1.0	651	21.3
40-44	0.7	17.6	38.4	58.2	76.8	0.6	497	20.8
45-49	0.5	15.8	40.7	59.1	73.8	0.0	422	20.8
50-54	0.0	11.3	32.4	49.9	70.3	0.0	335	22.0
55-59	1.1	16.0	36.5	51.4	64.8	0.0	235	21.0
Men age 25-59	1.0	15.8	36.4	55.0	74.3	5.0	3,634	21.2

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

The data show that men initiate sex at a later age than women. The median age at first intercourse for men age 25-59 is 21.2 years. An assessment of the median age at first intercourse across the different age cohorts indicates that there has not been any significant change in age at first sexual intercourse for men over the past 20 years.

Table 6.6 presents differentials in the median age at first sexual intercourse by background characteristics for women and men. Urban women have their first sexual intercourse about two years later than rural women, while urban men have their first intercourse about a year earlier than rural men. Women with at least some secondary education have their first intercourse about five years later than women with no education. On the other hand, highly educated men initiate sex a year earlier than men with no education. Among women, age at first sexual intercourse is lowest in Amhara and highest in Addis Ababa; among men, it is lowest in Gambela and highest in Somali.

Table 6.6 Median age at first intercourse

Median age at first sexual intercourse among women age 20-49 and men age 25-59, by current age and background characteristics, Ethiopia 2005

Background characteristic	Current age						Women age 20-49	Women age 25-49	Men age 25-59
	20-24	25-29	30-34	35-39	40-44	45-49			
Residence									
Urban	a	20.7	18.5	17.4	16.1	15.8	18.7	18.0	20.4
Rural	17.5	16.1	16.1	15.9	15.7	15.7	16.2	15.9	21.4
Region									
Tigray	17.0	15.9	15.6	15.5	14.7	15.3	15.6	15.5	22.3
Affar	17.8	17.2	15.9	15.8	15.8	16.5	16.5	16.1	19.9
Amhara	15.5	14.7	14.7	14.6	14.5	14.1	14.7	14.6	20.3
Oromiya	18.7	17.1	17.1	17.3	16.4	16.3	17.3	16.9	21.6
Somali	17.9	18.2	17.1	19.3	18.4	19.0	18.3	18.4	23.9
Benishangul-Gumuz	16.6	15.8	15.8	15.6	15.3	15.2	15.8	15.6	20.8
SNNP	19.6	17.6	17.7	16.8	16.8	16.8	17.8	17.3	22.0
Gambela	15.9	15.8	15.7	15.7	15.7	15.6	15.8	15.7	18.3
Harari	19.4	19.6	18.4	18.0	18.0	18.5	18.8	18.6	21.0
Addis Ababa	a	22.7	21.0	18.9	16.7	16.6	a	20.0	20.5
Dire Dawa	19.3	18.8	17.1	16.6	17.0	17.0	18.0	17.5	21.0
Education									
No education	16.7	16.0	16.0	15.8	15.6	15.7	15.9	15.8	21.3
Primary	19.6	16.7	16.5	17.4	16.7	16.1	17.5	16.8	21.6
Secondary and higher	a	21.9	19.9	18.8	18.4	18.4	a	20.4	20.4
Wealth quintile									
Lowest	17.2	16.0	16.0	15.9	15.9	16.1	16.1	15.9	21.9
Second	17.0	15.7	16.0	15.8	15.7	15.4	15.9	15.7	21.5
Middle	17.3	16.4	16.6	16.3	15.6	15.9	16.4	16.1	21.5
Fourth	17.8	16.2	16.6	15.9	15.6	15.5	16.2	15.9	20.9
Highest	a	19.6	17.0	17.1	15.9	15.7	18.1	17.2	20.6
Total	18.2	16.6	16.4	16.1	15.7	15.7	16.5	16.1	21.2

a = Omitted because less than 50 percent of the women had intercourse for the first time before reaching the beginning of the age group

6.5 RECENT SEXUAL ACTIVITY

In the absence of contraception, the probability of pregnancy is related to the frequency of intercourse. Therefore, information on sexual activity can be used to refine measures of exposure to pregnancy. Women and men were asked how long ago their last sexual activity occurred to assess whether they had a sexual encounter in the past four weeks.

Tables 6.7.1 and 6.7.2 show the percent distribution of women and men by recent sexual activity.[1] Half of women age 15-49 were sexually activity in the four weeks before the survey, 15 percent had been sexually active in the 12-month period before the survey but not in the month prior to the interview, and 11 percent had not been sexually active for one or more years. Twenty-four percent of the women had never had sexual intercourse.

[1] Questions on recent sexual activity were only administered to the subsample of women who were in households selected for the male survey.

Table 6.7.1 Recent sexual activity: women

Percent distribution of women by timing of last sexual intercourse, according to background characteristics, Ethiopia 2005

Background characteristic	Timing of last sexual intercourse				Never had sexual intercourse	Total	Number of women
	Within the last 4 weeks	Within 1 year[1]	One or more years	Missing			
Age							
15-19	17.5	7.6	3.7	0.2	71.1	100.0	1,645
20-24	50.7	14.5	7.8	0.0	27.0	100.0	1,228
25-29	68.0	15.7	9.0	0.0	7.3	100.0	1,167
30-34	68.2	16.6	12.0	0.3	3.0	100.0	845
35-39	63.5	19.3	16.3	0.4	0.5	100.0	776
40-44	60.0	18.3	21.4	0.3	0.1	100.0	570
45-49	50.2	18.9	30.7	0.1	0.2	100.0	520
Marital status							
Never married	1.6	2.1	2.4	0.0	93.9	100.0	1,703
Married or living together	77.0	19.0	3.8	0.1	0.1	100.0	4,317
Divorced/separated/widowed	3.4	16.9	77.2	0.6	2.0	100.0	731
Marital duration[2]							
Married only once							
0-4 years	75.8	20.3	3.1	0.3	0.6	100.0	670
5-9 years	78.6	19.4	2.1	0.0	0.0	100.0	705
10-14 years	79.5	17.9	2.4	0.1	0.0	100.0	666
15-19 years	78.8	18.8	2.1	0.4	0.0	100.0	495
20-24 years	75.2	20.1	4.8	0.0	0.0	100.0	341
25+ years	67.8	20.4	11.8	0.0	0.0	100.0	413
Married more than once	78.5	17.7	3.7	0.2	0.0	100.0	1,026
Current contraceptive method							
Female sterilisation	*	*	*	*	*	100.0	5
Pill	89.0	10.6	0.4	0.0	0.0	100.0	144
IUD	*	*	*	8	*	100.0	6
Condom	(76.3)	(23.7)	(0.0)	(0.0)	(0.0)	100.0	19
Periodic abstinence	85.0	14.5	0.5	0.0	0.0	100.0	30
Other method	86.3	10.3	2.6	0.8	0.0	100.0	505
No method	45.8	14.9	12.4	0.1	26.8	100.0	6,042
Residence							
Urban	30.6	11.3	18.7	0.5	38.8	100.0	1,173
Rural	54.1	15.2	9.9	0.1	20.8	100.0	5,579
Region							
Tigray	48.6	16.3	13.0	0.1	22.0	100.0	448
Affar	57.2	19.2	11.5	0.0	12.1	100.0	72
Amhara	53.3	16.2	14.4	0.0	16.1	100.0	1,640
Oromiya	51.0	14.8	9.2	0.1	24.9	100.0	2,368
Somali	52.0	14.2	14.5	1.4	18.0	100.0	243
Benishangul-Gumuz	59.0	16.2	8.7	0.1	16.0	100.0	62
SNNP	49.9	12.8	8.5	0.2	28.6	100.0	1,504
Gambela	38.7	20.7	24.9	1.0	14.7	100.0	23
Harari	39.4	18.7	13.3	0.0	28.6	100.0	20
Addis Ababa	26.6	8.0	19.4	0.3	45.7	100.0	339
Dire Dawa	42.0	11.2	20.7	0.0	26.1	100.0	33
Education							
No education	57.6	17.5	12.9	0.1	11.9	100.0	4,419
Primary	39.1	8.6	7.6	0.1	44.5	100.0	1,552
Secondary and higher	28.7	9.2	10.3	0.3	51.6	100.0	781
Wealth quintile							
Lowest	55.5	15.4	13.1	0.1	15.9	100.0	1,251
Second	53.5	17.3	10.0	0.0	19.2	100.0	1,321
Middle	52.6	16.3	8.9	0.3	21.9	100.0	1,273
Fourth	54.1	12.9	9.4	0.0	23.6	100.0	1,234
Highest	38.1	11.4	14.6	0.4	35.6	100.0	1,672
Total	50.0	14.5	11.4	0.2	24.0	100.0	6,751

Note: Only women in the subsample of households selected for the male survey were administered this question. 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] Excludes women who had sexual intercourse within the last 4 weeks
[2] Excludes women who are not currently married

Table 6.7.2 Recent sexual activity: men

Percent distribution of men by timing of last sexual intercourse, according to background characteristics, Ethiopia 2005

Background characteristic	Timing of last sexual intercourse				Never had sexual intercourse	Total	Number of men
	Within the last 4 weeks	Within 1 year[1]	One or more years	Missing			
Age							
15-19	2.1	3.8	1.4	0.0	92.7	100.0	1,335
20-24	22.6	12.1	9.3	0.2	55.9	100.0	1,064
25-29	56.8	14.8	9.5	0.0	18.9	100.0	741
30-34	73.3	16.5	6.1	0.0	4.1	100.0	754
35-39	78.4	15.9	4.6	0.1	1.0	100.0	651
40-44	73.6	20.5	4.8	0.4	0.6	100.0	497
45-49	75.1	16.2	8.1	0.6	0.0	100.0	422
50-54	70.8	19.7	9.1	0.4	0.0	100.0	335
55-59	67.8	20.0	12.3	0.0	0.0	100.0	235
Marital status							
Never married	2.6	6.8	7.7	0.0	82.9	100.0	2,419
Married or living together	80.6	17.1	2.0	0.2	0.1	100.0	3,424
Divorced/separated/widowed	4.3	26.7	65.9	0.0	3.1	100.0	190
Marital duration[2]							
Married only once							
0-4 years	82.3	16.7	0.2	0.3	0.5	100.0	610
5-9 years	82.0	16.8	1.1	0.1	0.0	100.0	650
10-14 years	84.1	14.8	1.1	0.0	0.0	100.0	654
15-19 years	79.5	17.9	2.0	0.6	0.0	100.0	528
20-24 years	79.8	17.1	2.4	0.6	0.0	100.0	372
25+ years	74.8	19.5	5.6	0.1	0.0	100.0	611
Residence							
Urban	32.5	15.9	12.9	0.7	37.9	100.0	916
Rural	49.5	12.8	5.1	0.0	32.6	100.0	5,117
Region							
Tigray	47.6	16.4	4.0	0.0	32.1	100.0	366
Affar	50.3	26.0	7.8	0.0	16.0	100.0	65
Amhara	50.6	10.6	5.9	0.1	32.8	100.0	1,521
Oromiya	45.0	13.9	6.2	0.2	34.7	100.0	2,222
Somali	53.5	12.4	7.2	0.0	26.9	100.0	202
Benishangul-Gumuz	56.6	13.4	3.2	0.0	26.7	100.0	54
SNNP	47.9	12.3	4.6	0.1	35.1	100.0	1,244
Gambela	45.7	19.8	16.2	0.0	18.3	100.0	21
Harari	41.7	24.3	11.2	0.0	22.8	100.0	16
Addis Ababa	31.2	18.0	18.6	0.3	31.9	100.0	292
Dire Dawa	42.2	16.0	9.2	0.0	32.6	100.0	30
Education							
No education	59.4	14.4	6.4	0.1	19.8	100.0	2,589
Primary	40.8	11.6	4.3	0.0	43.4	100.0	2,252
Secondary and higher	31.4	14.0	10.0	0.5	44.1	100.0	1,192
Wealth quintile							
Lowest	48.6	12.8	5.5	0.2	33.0	100.0	1,100
Second	48.7	15.2	5.4	0.0	30.7	100.0	1,184
Middle	56.0	12.4	4.1	0.0	27.5	100.0	1,081
Fourth	47.2	12.0	4.4	0.0	36.4	100.0	1,200
Highest	37.3	13.7	10.9	0.4	37.8	100.0	1,469
Total	46.9	13.3	6.3	0.1	33.4	100.0	6,033

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

The proportion of women who were sexually active during the four weeks before the survey increases with age, from 18 percent at age 15-19 to 68 percent by age 25-34 and decreases thereafter until it reaches 50 percent at age 45-49. Women who are currently in union are much more likely to be sexually active in the four weeks preceding the survey than women who were formerly married or had never been married. Those married 25 years or more are less likely to be sexually active in the recent past than women married for shorter durations. In general, women using contraception are more likely to be sexually active than those not using contraception. Rural women are more likely to be sexually active (54 percent) than urban women (31 percent). Among the regions, women residing in Benishangul-Gumuz (59 percent) and Affar (57 percent) are proportionately more likely to be sexually active than women residing in Addis Ababa (27 percent). Women with no education (58 percent) are twice as likely to be sexually active in the recent past as women with some secondary education (29 percent). Women in the highest wealth quintile are much less likely to report being sexually active in the past four weeks than their counterparts.

Among men, 47 percent were sexually active in the four weeks preceding the survey, 13 percent had had sexual intercourse in the year before the survey but not in the month prior to the survey, while 6 percent had not been sexually active for one year or more. Thirty-three percent of men said they had never had sex. As with women, sexual activity among men increases with age and peaks in the late thirties. Men in union are much more likely to be sexually active than those not in union. Men in urban areas are less likely (33 percent) to be sexually active in the recent past than those in rural areas (50 percent).

Regional variation shows similar patterns with women. Recent sexual activity is highest among men living in Benishangul-Gumuz (57 percent) and lowest in Addis Ababa (31 percent). Comparison of data between the 2005 EDHS and the 2000 EDHS shows that there has been virtually no change in the level of recent sexual activity among women or men over the past five years.

As with women, recent sexual activity is inversely related with men's level of education. Recent sexual activity decreases from 59 percent among men with no education to 41 percent among men with some primary education, and decreases further to 31 percent among those with some secondary education. Recent sexual activity is lowest among the wealthiest men.

6.6 Postpartum Amenorrhoea, Abstinence and Insusceptibility

Postpartum amenorrhoea is the interval between the birth of a child and the resumption of menstruation. It is the period following childbirth during which a woman becomes temporarily and involuntarily infecund. Postpartum protection from conception can be prolonged by the intensity and length of breastfeeding. Postpartum abstinence refers to the period of voluntary sexual inactivity after childbirth. A woman is considered insusceptible if she is not exposed to the risk of pregnancy, either because she is amenorrhoeic or because she is abstaining from sexual intercourse following a birth. Information was obtained about the duration of amenorrhoea and the duration of sexual abstinence following childbirth for births in the three years preceding the survey.

Table 6.8 shows the percentage of births in the three years preceding the survey for which mothers were postpartum amenorrhoeic, abstaining, and insusceptible, by number of months since birth. The results show that Ethiopian women are amenorrhoeic for a median of 15.8 months, abstain for a median of 2.4 months, and are insusceptible to pregnancy for a median of 16.7 months. In general, the proportion of women who are amenorrhoeic or abstaining decreases with increasing months after delivery. The proportion amenorrhoeic drops from 96 percent in the first two months following a birth to 63 percent at 12-13 months and 17 percent at 24-25 months after birth. The majority of Ethiopian women (85 percent) abstain from sex during the first two months following birth. A comparison of data from the 2000 and 2005 EDHS surveys indicates that there has been a decline in the median duration of postpartum amenorrhoea from 19 months to around 16 months while there has been no change in the median duration of postpartum abstinence. The reduction in the duration of postpartum amenorrhoea is probably due to the shorter duration of breastfeeding (see chapter 11).

Table 6.8 Postpartum amenorrhoea, abstinence and insusceptibility

Percentage of births in the three years preceding the survey for which mothers are postpartum amenorrhoeic, abstaining, and insusceptible, by number of months since birth, and median and mean durations, Ethiopia 2005

Months since birth	Percentage of births for which the mother is:			Number of births
	Amenorrhoeic	Abstaining	Insusceptible	
< 2	95.5	85.2	96.2	344
2-3	85.6	43.7	88.8	493
4-5	81.2	22.5	86.0	380
6-7	77.2	13.3	78.3	435
8-9	78.0	12.1	78.7	404
10-11	70.1	8.8	72.4	291
12-13	63.2	7.2	65.1	482
14-15	54.2	9.9	57.7	382
16-17	45.7	6.0	47.6	357
18-19	41.6	5.2	45.2	336
20-21	43.0	8.7	45.8	288
22-23	28.9	11.2	34.6	234
24-25	17.2	4.9	20.2	388
26-27	15.0	2.7	17.1	427
28-29	9.5	3.5	12.0	330
30-31	12.8	2.8	14.5	345
32-33	12.3	3.2	13.1	329
34-35	5.2	2.3	7.5	255
Total	48.9	14.7	51.3	6,497
Median	15.8	2.4	16.7	na
Mean	17.0	5.4	17.9	na

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

Table 6.9 shows the median duration of postpartum amenorrhoea, abstinence, and insusceptibility by background characteristics. The duration of amenorrhoea is much shorter among urban women than among rural women, and is lower among women age 15-29, women with secondary and higher education, women in the highest wealth quintile and women residing in Addis Ababa.

Table 6.9 Median duration of postpartum insusceptibility by background characteristics

Median number of months of postpartum amenorrhoea, postpartum abstinence, and postpartum insusceptibility following births in the three years preceding the survey, by background characteristics, Ethiopia 2005

Background characteristic	Postpartum amenorrhoea	Postpartum abstinence	Postpartum insusceptibility	Number of births
Age				
15-29	15.1	2.4	15.8	3,761
30-49	18.0	2.5	19.9	2,736
Residence				
Urban	9.1	2.4	10.0	489
Rural	16.4	2.4	17.7	6,008
Region				
Tigray	20.0	2.0	21.2	395
Affar	13.4	2.4	14.2	64
Amhara	20.8	2.4	21.4	1,519
Oromiya	14.5	2.5	15.0	2,612
Somali	15.5	3.2	16.3	276
Benishangul-Gumuz	14.4	2.5	14.5	60
SNNP	17.0	2.5	17.8	1,432
Gambela	17.1	11.1	22.9	17
Harari	10.1	2.4	10.2	14
Addis Ababa	9.3	2.1	10.7	85
Dire Dawa	10.8	2.5	11.4	22
Education				
No education	16.2	2.7	18.1	5,070
Primary	14.2	1.8	15.3	1,138
Secondary and higher	10.3	2.1	10.4	289
Wealth quintile				
Lowest	17.0	2.7	18.2	1,384
Second	20.9	3.0	21.2	1,382
Middle	16.4	2.8	18.5	1,456
Fourth	14.3	2.1	14.4	1,306
Highest	11.4	2.1	12.5	970
Total	15.8	2.4	16.7	6,497

Note: Medians are based on current status.

6.7 MENOPAUSE

The risk of childbearing declines as age increases. The term infecundity denotes a process rather than a well-defined event. Although the onset of infecundity is difficult to determine for an individual woman, there are ways of estimating it for a group of women. Table 6.10 presents data on menopause, an indicator of decreasing exposure to the risk of pregnancy (infecundity) for women age 30 and over.

In the context of the available survey data, women are considered menopausal if they are neither pregnant nor postpartum amenorrhoeic and have not had a menstrual period for at least six months preceding the survey. The proportion of women who are menopausal increases with age from 2 percent for women age 30-34 to 60 percent for women age 48-49. Overall, 16 percent of women age 30-49 are menopausal.

Table 6.10 Menopause

Percentage of women age 30-49 who are menopausal, by age, Ethiopia 2005

Age	Percentage menopausal[1]	Number of women
30-34	2.4	1,808
35-39	5.4	1,602
40-41	14.4	697
42-43	22.5	356
44-45	31.9	557
46-47	51.0	329
48-49	60.3	393
Total	15.5	5,740

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

FERTILITY PREFERENCES 7

Information on fertility preference provides insight into a couple's attitude towards future childbearing, desired completed family size, the extent of unwanted and mistimed pregnancies, and the prevailing demand for contraception.

In the 2005 EDHS, women and men were asked a series of questions to ascertain their fertility preferences, including their desire to have another child, the length of time they would like to wait before having another child, and what they consider to be the ideal number of children. These data make it possible to quantify fertility preferences and, coupled with the data on contraceptive use allow estimation of the unmet need for family planning, for both spacing and limiting births. Nevertheless, interpretation of the results of fertility preferences is controversial since respondents' reported preferences are, in most cases, hypothetical and thus subject to change and rationalization.

7.1 Desire for More Children

In the 2005 EDHS currently married women and men were asked whether they want to have another child, and if so how soon. The wording of the question varied slightly if the female respondent or the wife or partner of a male respondent was pregnant to ensure that pregnant women (and men with pregnant partners) were not asked about the wantedness of the current pregnancy but the desire for subsequent children.

Table 7.1 shows future reproductive intentions of currently married women and men by the number of living children. Sixteen percent of women want to have another child soon while 35 percent want another child two or more years later (Figure 7.1). Forty-two percent want no more children or have been sterilized. In general 78 percent of currently married women want to either stop or postpone childbearing. This implies that around four out of five currently married women are in need of family planning services. A similar pattern is observed for men, except that a relatively higher percentage of men want to have another child, either sooner or later.

The desire to stop childbearing increases with the number of living children from 9 percent among women with no children to 72 percent among women with 6 or more children. Comparison between the two EDHS surveys show that the proportion of currently married women who want to stop childbearing has increased in the past five years for all categories of living children, with an overall increase from 32 percent in 2000 to 42 percent in 2005 (Figure 7.2).

Tables 7.2.1 and 7.2.2 show that the desire to limit childbearing is higher among women and men in urban than rural areas, with the urban-rural difference higher overall among men than women. Regional differences are notable. Currently married women living in Addis Ababa, Oromia and Amhara are more likely to want to stop childbearing than women living in the other regions. A similar pattern is seen for currently married men as well. The percentage of currently married men who want to stop childbearing is lower than the percentage among women in all regions except Addis Ababa and Dire Dawa. The male-female difference in the desire to limit childbearing is especially pronounced in Gambela where only 24 percent of currently married men want to stop childbearing compared with 44 percent of women. Women and men living in the Somali Region are least likely to want to limit childbearing (10 percent and 4 percent, respectively).

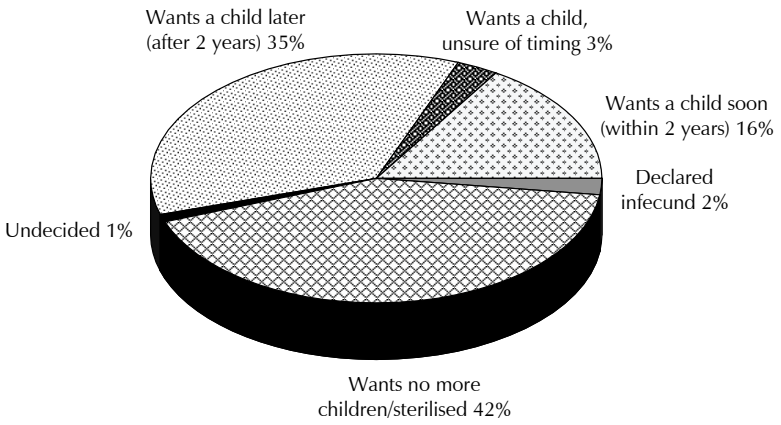
Table 7.1 Fertility preferences by number of living children

Percent distribution of currently married women and currently married men by desire for children, according to number of living children, Ethiopia 2005

Desire for children	Number of living children[1] 0	1	2	3	4	5	6+	Total
WOMEN								
Have another soon[2]	57.9	23.3	16.4	15.1	10.0	8.6	8.0	16.1
Have another later[3]	24.5	58.3	50.9	47.7	33.4	24.4	13.3	35.4
Have another, undecided when	3.0	2.5	3.5	3.7	3.3	2.7	2.4	3.0
Undecided	1.4	0.6	1.2	1.3	1.2	2.6	1.1	1.3
Want no more	8.5	14.2	26.5	31.3	49.7	57.9	72.1	41.9
Sterilised[4]	0.0	0.1	0.2	0.1	0.0	0.2	0.3	0.2
Declared infecund	4.8	0.9	1.2	0.7	2.2	3.6	2.8	2.1
Missing	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	600	1,293	1,370	1,312	1,333	1,066	2,093	9,066
MEN								
Have another soon[2]	43.3	27.4	17.8	15.7	14.9	14.3	12.4	18.7
Have another later[3]	43.6	59.5	59.4	47.9	45.8	30.5	21.6	41.5
Have another, undecided when	2.5	2.3	2.2	2.4	2.1	2.4	3.4	2.6
Undecided	3.6	2.6	1.8	3.6	1.5	1.7	1.5	2.1
Want no more	5.8	8.2	18.0	28.6	35.4	49.9	59.6	34.1
Declared infecund	0.7	0.0	0.3	1.8	0.4	1.1	1.3	0.9
Missing	0.5	0.1	0.5	0.0	0.0	0.0	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	298	419	489	456	479	390	893	3,424

[1] Includes current pregnancy
[2] Wants next birth within 2 years
[3] Wants to delay next birth for 2 or more years
[4] Includes both female and male sterilisation

Figure 7.1 Fertility Preferences of Currently Married Women Age 15-49



Note: Percentages add to less than 100 due to rounding.

EDHS 2005

Among women, the desire to limit childbearing decreases as the respondent's education increases. The percentage of currently married women who want no more children decreases from 43 percent among women with no education to 37 percent among women with secondary and higher education. In contrast, the percentage of currently married men who want no more children increases from 33 percent among men with no education to 46 percent among men with secondary and higher education. The desire to limit childbearing rises with increasing access to resources. Both women and men in the highest wealth quintiles are more likely to want to limit childbearing than those living in poorer households.

Table 7.2.1 Desire to limit childbearing: women

Percentage of currently married women who want no more children, by number of living children by background characteristics, Ethiopia 2005

Background characteristic	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Residence								
Urban	7.8	18.1	45.8	51.3	72.9	74.9	83.4	47.8
Rural	8.6	13.7	23.5	29.2	47.5	56.5	71.8	41.4
Region								
Tigray	2.2	3.1	9.7	11.6	30.0	41.1	70.1	28.5
Affar	13.3	16.9	16.6	29.0	33.6	17.0	16.1	19.8
Amhara	15.2	18.1	32.0	39.2	60.5	65.9	80.4	47.5
Oromiya	5.3	13.7	31.7	33.5	54.0	65.1	78.7	47.1
Somali	0.0	1.1	10.0	7.8	8.2	15.3	14.9	10.3
Benishangul-Gumuz	10.6	14.6	28.8	41.5	56.0	61.0	71.1	40.8
SNNP	5.2	15.1	17.2	25.8	38.4	54.5	67.6	37.8
Gambela	14.2	32.8	36.9	47.5	62.7	68.5	59.3	43.5
Harari	4.9	15.6	35.7	52.7	58.5	73.8	75.4	40.8
Addis Ababa	0.0	14.2	48.4	54.8	70.6	92.3	95.6	47.7
Dire Dawa	2.1	10.2	28.1	42.6	62.5	57.6	65.2	36.0
Education								
No education	9.5	14.2	25.7	27.6	48.0	57.5	73.0	43.0
Primary	9.6	16.2	24.3	41.2	52.9	56.3	67.4	39.5
Secondary and higher	1.6	11.9	36.9	51.6	68.0	86.0	75.4	36.9
Wealth quintile								
Lowest	11.2	9.3	19.2	26.6	37.4	40.1	56.4	33.3
Second	6.0	15.4	24.9	22.1	47.7	56.3	70.4	39.0
Middle	10.2	15.0	23.4	34.3	46.1	66.5	78.5	43.7
Fourth	6.8	15.6	26.0	33.6	55.1	59.5	77.0	46.9
Highest	8.5	15.4	38.4	42.1	66.1	70.4	81.4	47.6
Total	8.5	14.3	26.7	31.4	49.8	58.1	72.4	42.1

Note: Women who have been sterilised are considered to want no more children.
[1] Includes current pregnancy

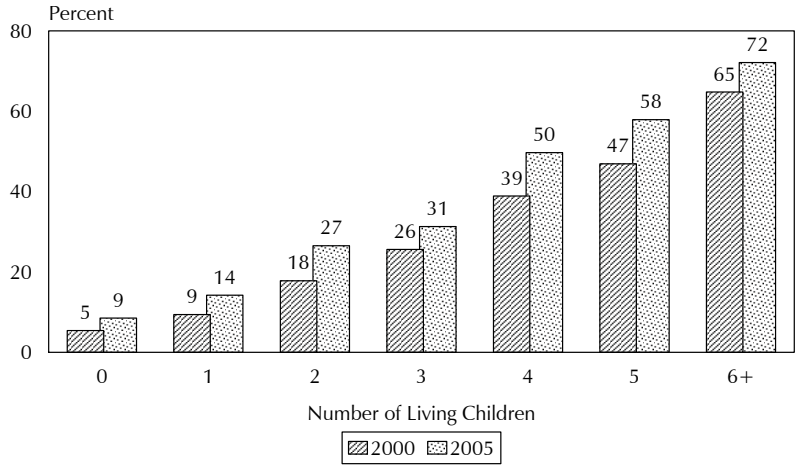
Table 7.2.2 Desire to limit childbearing: men

Percentage of currently married men who want no more children, by number of living children by background characteristics, Ethiopia 2005

Background characteristic	Number of living children							Total
	0	1	2	3	4	5	6+	
Residence								
Urban	9.0	20.8	29.2	59.9	64.1	69.1	73.1	45.5
Rural	5.6	5.7	15.9	25.6	32.3	47.9	58.8	32.8
Region								
Tigray	0.0	0.0	5.3	20.4	27.5	49.2	57.1	28.0
Affar	2.5	21.0	24.8	13.3	26.6	3.9	13.5	15.1
Amhara	4.1	12.9	18.4	29.3	40.1	63.1	67.3	35.6
Oromiya	7.6	5.3	19.6	30.3	40.7	52.8	66.8	39.5
Somali	0.0	0.0	0.0	4.4	0.0	6.4	7.8	4.0
Benishangul-Gumuz	0.0	6.1	10.2	17.1	35.3	54.7	55.7	24.5
SNNP	9.9	7.0	14.9	28.3	21.1	34.6	54.2	29.5
Gambela	12.1	13.3	24.5	18.3	28.2	30.7	41.7	23.9
Harari	0.0	2.4	22.9	51.7	40.0	49.8	69.7	30.4
Addis Ababa	12.1	21.1	41.0	69.0	82.9	88.2	84.6	53.3
Dire Dawa	0.0	11.5	36.6	30.2	62.7	38.8	58.8	36.4
Education								
No education	3.5	5.1	18.0	22.0	33.3	48.5	56.5	33.3
Primary	8.5	9.7	15.7	27.3	29.1	42.8	61.4	31.0
Secondary and higher	9.4	15.0	22.3	55.2	59.4	70.8	82.4	45.8
Wealth quintile								
Lowest	9.0	3.6	15.1	19.5	23.7	32.4	43.7	25.1
Second	10.3	4.7	17.5	24.4	27.6	47.2	59.0	32.2
Middle	2.0	10.3	15.0	27.3	32.2	48.1	68.7	33.0
Fourth	0.0	3.9	12.9	26.8	42.3	56.5	58.5	37.0
Highest	6.2	15.6	27.1	46.9	54.7	66.6	72.0	43.7
Total	5.8	8.2	18.0	28.6	35.4	49.9	59.6	34.1

Note: Men who have been sterilised are considered to want no more children.

Figure 7.2 Desire to Limit Childbearing Among Currently Married Women, by Number of Living Children, 2000 and 2005



Note: Desire to limit childbearing includes respondents who stated that they did not want any more children and those who have been sterilised. Number of living children includes current pregnancy.

EDHS 2005

7.2 NEED FOR FAMILY PLANNING SERVICES

This section discusses the extent of need and the potential demand for family planning services. Currently married women who want to postpone their next birth for two or more years or who want to stop childbearing all together but are not using a contraceptive method are said to have an unmet need for family planning. Pregnant women are considered to have an unmet need for spacing or limiting if their pregnancy was mistimed or unwanted. Similarly, amenorrhoeic women are categorized as having unmet need if their last birth was mistimed or unwanted. Women who are currently using a family planning method are said to have a met need for family planning. The total demand for family planning services comprises those who fall in the met need and unmet need categories.

Table 7.3 shows the need for family planning among currently married women by select background characteristics. Thirty-four percent of currently married women have an unmet need for family planning, with 20 percent having an unmet need for spacing and 14 percent having an unmet need for limiting. Only 15 percent of women have a met need for family planning. If all currently married women who say that they want to space or limit their children were to use a family planning method, the contraceptive prevalence rate would increase three-fold to 49 percent. Currently, only 31 percent of the family planning needs of currently married women are being met.

There has been little change in unmet need for family planning over the past five years, with unmet need in 2005 only slightly lower than it was in 2000 when it was 36 percent. On the other hand, met need has nearly doubled over the same period from 8 percent in 2000 to 15 percent in 2005, resulting in a concomitant rise in demand satisfied from 18 percent to 31 percent.

Unmet need for spacing decreases with age while the opposite is true for unmet need for limiting, with the exception of women age 45-49. Overall, unmet need remains relatively high at all ages but falls sharply at age 45-49. Rural women have twice the unmet need of urban women and less than one in four rural women have the demand for family planning satisfied, compared with three in four urban women. Unmet need is lowest in Addis Ababa (10 percent) and highest in Oromiya (41 percent). Women with no education are twice as likely to have an unmet need for family planning as women with secondary or higher levels of education. Unmet need ranges from a low of 24 percent among women in the highest wealth quintile to a high of 38 percent among women in the second wealth quintile.

Table 7.3 Need for family planning

Percentage of currently married women with unmet need for family planning, and with met need for family planning, and the total demand for family planning, by background characteristics, Ethiopia 2005

Background characteristic	Unmet need for family planning[1]			Met 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	30.1	8.0	38.0	7.1	1.8	8.9	37.3	10.0	47.2	19.4	711
20-24	28.8	5.6	34.4	12.6	4.0	16.7	41.6	9.7	51.3	32.9	1,574
25-29	25.3	10.5	35.8	9.9	7.0	16.9	35.4	17.6	53.0	32.4	2,066
30-34	20.9	15.0	35.9	5.9	8.4	14.4	27.0	23.5	50.6	29.0	1,551
35-39	16.8	20.6	37.4	4.1	13.1	17.2	21.1	33.7	54.8	31.7	1,343
40-44	6.9	25.6	32.4	0.9	13.3	14.2	7.9	39.1	47.1	31.0	960
45-49	1.5	14.9	16.3	0.1	8.0	8.1	1.6	22.9	24.5	33.2	862
Residence											
Urban	7.8	9.1	17.0	23.4	23.3	46.7	31.4	32.7	64.1	73.5	959
Rural	21.5	14.3	35.8	4.8	6.2	10.9	26.4	20.5	46.9	23.7	8,107
Region											
Tigray	16.4	7.6	24.1	9.3	7.2	16.5	25.9	14.8	40.7	40.9	570
Affar	8.8	4.6	13.4	2.3	4.3	6.6	11.1	8.9	20.0	33.0	109
Amhara	14.8	14.9	29.7	7.0	9.1	16.1	21.9	24.1	46.0	35.4	2,330
Oromiya	24.9	16.5	41.4	5.6	8.0	13.6	30.6	24.6	55.2	25.0	3,300
Somali	8.8	2.8	11.6	1.7	1.5	3.1	10.5	4.3	14.8	21.3	363
Benishangul-Gumuz	16.8	13.0	29.7	4.3	6.8	11.1	21.1	20.0	41.1	27.7	92
SNNP	24.0	13.4	37.4	5.8	6.1	11.9	30.0	19.6	49.6	24.6	1,988
Gambela	10.5	13.0	23.5	6.2	9.7	15.9	17.0	22.7	39.6	40.7	31
Harari	16.0	6.4	22.4	18.4	15.1	33.5	34.6	21.7	56.2	60.2	22
Addis Ababa	5.8	4.5	10.3	30.4	26.4	56.9	37.1	31.1	68.2	84.8	224
Dire Dawa	9.5	5.3	14.8	21.3	12.7	34.0	30.9	18.0	48.9	69.8	37
Education											
No education	19.7	14.8	34.5	3.8	6.1	10.0	23.7	21.0	44.7	22.8	7,094
Primary	25.7	11.3	37.0	11.0	12.4	23.4	36.8	23.7	60.5	38.8	1,402
Secondary and higher	10.3	6.7	16.9	32.4	20.2	52.6	43.2	27.1	70.2	75.9	570
Wealth quintile											
Lowest	20.1	13.0	33.1	1.6	2.6	4.2	21.7	15.7	37.3	11.3	1,759
Second	24.3	13.5	37.9	3.3	3.4	6.6	27.7	16.9	44.6	15.1	1,892
Middle	21.5	15.3	36.8	5.3	6.7	12.0	26.9	22.2	49.1	25.1	1,903
Fourth	21.2	15.0	36.2	5.7	9.8	15.5	27.2	24.8	52.0	30.4	1,823
Highest	12.5	11.5	24.0	18.7	18.3	37.0	31.4	30.0	61.3	60.9	1,689
Total	20.1	13.7	33.8	6.7	8.0	14.7	26.9	21.8	48.7	30.7	9,066

[1] *Unmet need for spacing* includes pregnant women whose pregnancy was mistimed, amenorrhoeic women who are not using family planning and whose last birth was mistimed or whose last birth was unwanted but now say they want more children, and fecund women who are neither pregnant nor amenorrhoeic, who are not using any method of family planning and say they want to wait 2 or more years for their next birth. Also included in unmet need for spacing are fecund women who are not using any method of family planning and say they are unsure whether they want another child or who want another child.
Unmet need for limiting refers to pregnant women whose pregnancy was unwanted, amenorrhoeic women who are not using family planning, whose last child was unwanted and who do not want any more children, and fecund women who are neither pregnant nor amenorrhoeic, who are not using any method of family planning, and who want no more children. Excluded from the unmet need category are pregnant and amenorrhoeic women who became pregnant while using a method (these women are in need of a better method of contraception).
[2] Using for spacing is defined as women who are using some method of family planning and say they want to have another child or are undecided whether to have another.
Using for limiting is defined as women who are using and who want no more children. Note that the specific methods used are not taken into account here.
[3] Nonusers who are pregnant or amenorrhoeic and women whose pregnancy was the result of a contraceptive failure are not included in the category of unmet need, but *are* included in total demand for contraception (since they would have been using had their method not failed).

7.3 IDEAL FAMILY SIZE

Information on ideal family size was collected in two ways: respondents who did not have any children were asked how many children they would like to have if they could choose the number of children to have. Respondents with children were asked how many children they would like to have if they could go back to the time when they did not have any children and choose exactly the number of children to have. Even though these questions are based on hypothetical situations they provide an idea of the total number of children women who have not started childbearing will have in the future. For older and high parity women, this information provides a measure of unwanted fertility.

Responses to these questions are summarized in Table 7.4 for both women and men. The majority of women and men were able to provide a numeric response to these questions. However, 10 percent of women and 7 percent of men gave non-numeric responses such as "it is up to God," "any number" or "do not know." The proportion unable to specify an ideal number of children has declined since the 2000 EDHS in which 18 percent of women and 11 percent of men failed to provide a numeric response.

Table 7.4 Ideal number of children

Percent distribution of all women and all men by ideal number of children, and mean ideal numbers of children for all women, for currently married women, for all men and for currently married men, according to number of living children, Ethiopia 2005

	Number of living children[1]							
Desire for children	0	1	2	3	4	5	6+	Total
			WOMEN					
0	11.2	7.7	10.1	8.1	11.4	12.8	14.6	11.0
1	1.1	1.8	0.7	0.2	0.1	0.2	0.1	0.7
2	23.2	11.2	6.9	3.0	3.2	2.1	1.4	10.3
3	12.6	10.4	5.4	3.6	1.5	2.0	1.9	6.7
4	29.0	31.6	31.8	26.9	24.3	16.7	14.4	25.5
5	7.4	9.8	11.6	12.7	7.6	6.8	5.4	8.4
6+	10.3	17.8	23.0	35.2	39.7	45.4	44.4	26.9
Non-numeric responses	5.3	9.6	10.4	10.3	12.1	14.1	17.8	10.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of respondents	4,336	1,633	1,645	1,475	1,521	1,186	2,274	14,070
Mean ideal number children for:[2]								
All women	3.3	4.1	4.5	5.1	5.2	5.6	5.9	4.5
Number	4,107	1,475	1,474	1,323	1,336	1,019	1,869	12,602
Currently married women	3.9	4.3	4.6	5.2	5.3	5.6	5.9	5.1
Number	556	1,160	1,234	1,174	1,166	908	1,728	7,928
			MEN					
0	2.8	1.2	1.9	2.7	2.1	3.8	4.4	2.8
1	0.8	1.8	0.1	0.3	0.0	0.0	0.0	0.6
2	23.6	9.0	4.5	2.5	3.8	2.2	0.8	12.7
3	19.8	18.8	8.4	6.4	2.4	4.7	1.7	12.6
4	29.4	31.5	34.1	22.8	17.9	10.8	12.3	24.7
5	8.1	12.4	15.5	17.9	13.6	9.6	7.1	10.3
6+	11.4	20.4	29.6	37.9	48.7	60.9	60.6	29.5
Non-numeric responses	4.1	4.8	5.9	9.5	11.5	8.1	13.1	6.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	2,766	477	516	478	489	401	906	6,033
Mean ideal number children for:[2]								
All men	3.8	4.7	5.1	5.9	6.5	6.8	8.5	5.2
Number	2,654	454	485	433	433	368	787	5,615
Currently married men	4.4	4.8	5.2	5.9	6.5	6.9	8.5	6.4
Number	291	399	460	414	424	359	776	3,123

[1] Includes current pregnancy
[2] Means are calculated excluding the respondents giving non-numeric responses.

Three out of five women preferred an ideal family size of four or more children with only three in ten favouring less than four children. More than one in ten women did not want any children at all. The mean ideal number of children is 4.5 among all women who gave a numeric response, and it is half a child more among currently married women (5.1). The mean ideal number of children is 5.2 among all men and 6.4 among currently married men. As can be observed, the mean ideal number of children among currently married men is more than one child higher than that among currently married women. The survey shows that ideal family size has declined over the past five years by nearly a child among women (all women and currently married) and by more than a child among all men and currently married men.

The mean ideal family size increases with the number of living children among both women and men, rising from 3.3 among childless women to 5.9 among women with six or more children and from 3.8 among childless men to 8.5 among men with six or more children. This positive association between actual and ideal number of children could be due to two principal reasons. First, to the extent that women are able to implement their fertility desires, women who want smaller families will tend to achieve smaller families. Second, some women may have difficulty admitting their desire for fewer children if they could begin childbearing again and may in fact report their actual number as their preferred number. Despite this tendency to rationalize, the 2005 EDHS data provide evidence of unwanted fertility with more than a third of women (38 percent) with six or more children wanting an ideal family size of fewer than six children.

Table 7.5 shows the mean ideal number of children for all women and men by select background variables. The mean ideal number of children increases with age, for both men and women. It ranges from a low of 3.3 children among women age 15-19 to a high of 5.7 among women age 45-49, and from 3.8 to 6.8 among men in the same age groups. An interesting finding is that women and men age 20-34 have nearly identical ideals for the number of children they desire, indicating a narrowing of the male-female gap in ideal family size for this group. Fertility is highest among women in this age group and the similar fertility intentions of women and men in this age group may have the desired effect of lowering fertility in the long run.

Table 7.5 Mean ideal number of children

Mean ideal number of children for all women and men, by age and background characteristics, Ethiopia 2005

Background characteristic	Mean	Number of women	Mean	Number of men
Age				
15-19	3.3	3,069	3.8	1,287
20-24	4.1	2,343	4.0	1,014
25-29	4.7	2,292	4.8	700
30-34	5.2	1,619	5.1	695
35-39	5.2	1,355	6.6	588
40-44	5.5	998	6.7	456
45-49	5.7	927	6.8	380
50-54	na	na	7.4	277
55-59	na	na	9.0	218
Residence				
Urban	3.4	2,387	3.6	895
Rural	4.7	10,215	5.6	4,720
Region				
Tigray	4.7	886	4.8	346
Affar	7.8	137	11.3	62
Amhara	4.1	3,206	4.9	1,470
Oromiya	4.2	4,338	4.8	2,057
Somali	9.8	400	12.9	166
Benishangul-Gumuz	5.0	119	6.7	51
SNNP	4.7	2,655	5.7	1,116
Gambela	4.7	40	6.0	20
Harari	4.2	31	4.2	15
Addis Ababa	3.3	727	3.3	283
Dire Dawa	5.3	63	4.0	28
Education				
No education	5.1	7,998	6.6	2,347
Primary	3.6	2,966	4.7	2,112
Secondary and higher	3.3	1,638	3.5	1,156
Wealth quintile				
Lowest	6.0	2,055	6.9	999
Second	4.7	2,305	5.5	1,094
Middle	4.4	2,467	5.3	1,002
Fourth	4.5	2,368	5.1	1,114
Highest	3.6	3,407	4.0	1,406
Total	4.5	12,602	5.2	5,615

na = Not applicable

The mean ideal number of children is higher in rural than in urban areas for both women and men. There is a wide variation among regions. As was the case in the 2000 EDHS, women and men living in the nomadic regions of Somali and Affar have a relatively higher mean ideal number of children than those living in the other regions. For example, women in the Somali Region have nearly three times the mean ideal number of children as women in Addis Ababa.

The mean ideal number of children varies inversely with education. Women with no education have a mean ideal of 5.1 children whereas those who have at least a secondary level education reported a mean ideal of 3.3 children. A similar pattern is seen by wealth quintile, with women in the lowest quintile desiring a mean ideal of one and a half more children than women in the highest wealth quintile.

7.4 FERTILITY PLANNING

Data from the EDHS can be used to estimate the level of unwanted fertility. Women age 15-49 were asked a series of questions about each of their children born to them in the preceding five years, as well as any current pregnancy, to determine whether the birth or pregnancy was wanted then (planned), wanted later (mistimed), or not wanted at all (unplanned) at the time of conception. In assessing these results, it is important to recognize that women may declare a birth or current pregnancy as wanted once the child is born, and this rationalization of a current birth or pregnancy as wanted may in fact result in an underestimate the true extent of unwanted births.

Table 7.6 shows the percent distribution of births (including current pregnancy) in the five years preceding the survey by birth order and age of mothers at birth. According to the data, two-thirds of births in the five years preceding the survey were planned, 19 percent were mistimed, and 16 percent were unplanned. One in five births of order four or higher is unplanned, twice the level among births of order three or below. The percentage of unplanned births also increases with mother's age at birth. More than two in five births to mothers who were age 45-49 at the time of the birth were not planned compared with one in ten births to mothers age 25 or younger.

Table 7.6 Fertility planning status

Percent distribution of births 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, Ethiopia 2005

Birth order and mother's age at birth	Planning status of birth					
	Wanted then	Wanted later	Wanted no more	Missing	Total	Number of births
Birth order						
1	72.8	15.7	11.0	0.6	100.0	2,120
2	71.4	18.8	9.6	0.2	100.0	1,917
3	68.0	21.1	10.8	0.1	100.0	1,754
4+	59.4	19.0	21.3	0.3	100.0	6,556
Age at birth						
<20	68.5	20.4	10.7	0.4	100.0	1,842
20-24	68.9	20.2	10.6	0.3	100.0	3,252
25-29	66.5	20.1	13.1	0.3	100.0	3,058
30-34	62.7	17.7	19.3	0.3	100.0	2,205
35-39	56.0	14.2	29.5	0.3	100.0	1,310
40-44	51.2	13.7	34.6	0.5	100.0	581
45-49	51.1	3.6	45.3	0.0	100.0	99
Total	64.8	18.7	16.2	0.3	100.0	12,347

The extent of unplanned births can also be estimated utilizing information on ideal family size to estimate what the total fertility rate would be if all unwanted births were avoided. This measure may also be an underestimate to the extent that women may not report an ideal family size lower than their actual family size. Table 7.7 shows wanted fertility rates calculated in the same way as the total fertility rate but excluding unwanted births from the numerator. In this case, unwanted births are those that exceed the number mentioned as ideal by the respondent. This rate represents the level of fertility that would have prevailed in the five years preceding the survey if all unwanted births had been avoided.

The data show that women on average have 1.4 children more than their ideal number. The gap between wanted and observed fertility rates is greater among women living in rural than in urban areas. The difference in the two rates is largest in Oromiya (a two-child difference) and smallest in Addis Ababa. Women with little or no education tend to want 1.5 children less than their actual number compared with women with at least secondary education who want just 0.5 children less than they actually have. There is also an inverse relationship between wealth and wanted fertility. The gap between wanted and actual fertility is from 1.5 children in the first four wealth quintiles to less than one child in the highest wealth quintile.

Table 7.7 Wanted fertility rates

Total wanted fertility rates and total fertility rates for the three years preceding the survey, by background characteristics, Ethiopia 2005

Background characteristic	Total wanted fertility rate	Total fertility rate
Residence		
Urban	1.8	2.4
Rural	4.5	6.0
Region		
Tigray	4.0	5.1
Affar	4.5	4.9
Amhara	3.7	5.1
Oromiya	4.3	6.2
Somali	5.7	6.0
Benishangul-Gumuz	4.0	5.2
SNNP	4.2	5.6
Gambela	3.2	4.0
Harari	3.4	3.8
Addis Ababa	1.2	1.4
Dire Dawa	3.2	3.6
Education		
No education	4.6	6.1
Primary	3.5	5.1
Secondary and higher	1.5	2.0
Wealth quintile		
Lowest	5.1	6.6
Second	4.5	6.0
Middle	4.5	6.2
Fourth	4.3	5.7
Highest	2.3	3.2
Total	4.0	5.4

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

INFANT AND CHILD MORTALITY 8

This chapter describes levels, trends, and differentials in early childhood mortality and high-risk fertility behaviour of women in Ethiopia. Information on infant and child mortality rates contributes to a better understanding of a country's socioeconomic situation and sheds light on the quality of life of the population. This information is disaggregated by socioeconomic and demographic characteristics since studies have shown the existence of differentials in mortality by these characteristics and the disaggregation helps to identify subgroups that are at high risk. Preparation, implementation, and monitoring and evaluation of population, health, and other socioeconomic programmes and policies depend to a large extent on target population identification.

Childhood mortality in general and infant mortality in particular are often used as broad indicators of social development or as specific indicators of health status. Childhood mortality analyses are thus useful in identifying promising directions for health programmes and advancing child survival efforts. Measures of childhood mortality are also useful for population projections.

One of the targets of the millennium development goal is a two-third reduction in infant and child mortality by 2015, to be achieved through upgrading the proportion of births attended by skilled health personnel, increasing immunization against the six vaccine preventable diseases, and upgrading the status of women through education and enhancing their participation in the labour force. Results from the 2005 EDHS are timely in evaluating the impact of some of the major national policies, such as the National Population Policy, the National Policy on Ethiopian Women, and the National Health Policy, on the achievement of the MDG goal.

The mortality rates presented in this chapter are computed from information gathered from the birth history section of the Women's Questionnaire. Women in the age group 15-49 were asked whether they had ever given birth, and if they had, they were asked to report the number of sons and daughters who live with them, the number who live elsewhere, and the number who have died. In addition, they were asked to provide a detailed birth history of their children in chronological order starting with the first child. Women were asked whether a birth was single or multiple; the sex of the child; the date of birth (month and year); survival status; age of the child on the date of the interview if alive; and if not alive, the age at death of each live birth. Since the primary causes of childhood mortality change as children age, mostly biological factors to environmental factors, childhood mortality rates are expressed by age categories and are customarily defined as follows:

- 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 (${}_1q_0$): the probability of dying between birth and the first birthday
- Child mortality (${}_4q_1$): the probability of dying between exact ages one and five
- Under-five mortality (${}_5q_0$): the probability of dying between birth and the fifth birthday.

The rates of childhood mortality 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.

In addition to questions on live births, women were asked about pregnancies that ended in miscarriage, abortion, or stillbirth. This information was collected for the five years preceding the survey to minimize recall errors. Information on stillbirths and deaths that occurred within seven days

of birth is used to estimate perinatal mortality, which is the number of stillbirths and early neonatal deaths per 1,000 stillbirths and live births.

8.1 Assessment of Data Quality

The accuracy of mortality estimates depends on the sampling variability of the estimates and on nonsampling errors. Sampling variability and sampling errors are discussed in detail in Appendix A. Nonsampling errors depend on the extent to which the date of birth and age at death are accurately reported and recorded and the completeness with which child deaths are reported. Omission of births and deaths affects mortality estimates, displacement of birth and death dates impacts mortality trends, and misreporting of age at death may distort the age pattern of mortality. Typically, the most serious source of nonsampling errors in a survey that collects retrospective information on births and deaths is the underreporting of births and deaths of children who were dead at the time of the survey. It may be that mothers are reluctant to talk about their dead children because of the sorrow associated with their death, or they may live in a culture that discourages discussion of the dead. The possible occurrence of these data problems in the 2005 EDHS is discussed with reference to the data quality tables in Appendix C. Underreporting of births and deaths is generally more severe the further back in time an event occurred.

An unusual pattern in the distribution of births by calendar years is an indication of omission of children or age displacement. Table C.4 shows that the overall percentage of births for which a month and year of birth was reported is relatively complete, with incomplete information being only slightly higher for children who have died than those who are alive (97 percent versus 99 percent), and slightly lower as one moves further back in time. Nevertheless, there is clear indication of omission of deaths in the most recent period. For example, the proportion of births for which the child was no longer alive at the time of the survey declines from 15 percent in the period 1996-2000 to 9 percent during the period 2001-2005. Some of this decline is likely due to a real decrease in mortality in the most recent period, although some is due to the fact that younger children have been exposed to the risk of dying for a shorter period. Nevertheless, such a sharp decline in the proportion of deaths since 1996 may suggest some amount of underreporting in the most recent period. However, when compared with the 2000 EDHS, underreporting in the 2005 EDHS is less of a problem.

Age displacement is common in surveys that include both demographic and health information for children under a specified age. In the Ethiopia DHS survey, the cutoff date for asking health questions was Meskerem 1992 in the Ethiopian calendar (which roughly corresponds to September 1999 in the Gregorian calendar). Table C.4 shows that there is some age displacement across this boundary for both living and dead children. The distribution of living children and the total number of children shows a deficit in 2000 and an excess in 1999, as denoted by the calendar year ratios. A similar excess is seen in 2001. The deficit in 2000 can be attributed to the transference of births by interviewers out of the period for which health data were collected. Transference is proportionally higher for dead children than living children, and this displacement may affect mortality rates. The excess in 2001 is, however, puzzling. The transference of children and especially deceased children out of the five-year period preceding the survey is likely to underestimate the true level of childhood mortality for that period. The overall sex ratio of 108 is also higher than expected, indicating that there may be some underreporting of female births, especially female children who are no longer alive. The sex ratio for dead children is 125 compared with 104 for living children. The data also show heaping in 2001, although this is not as severe as in 1999.

Underreporting of deaths is usually assumed to be higher for deaths that occur very early in infancy. Omission of deaths or misclassification of deaths as stillbirths may also be more common among women who have had several children or in cases where death took place a long time ago. In order to assess the impact of omission on measures of child mortality, two indicators are used: the percentage of deaths that occurred under seven days to the number that occurred under one month and the percentage of neonatal to infant deaths. It is hypothesized that omission will be more prevalent among those who died immediately after birth than those who lived longer and that it will be more

serious for events that took place in the distant past rather than those in the more recent past. Table C.5 shows data on age at death for early infant deaths. Selective underreporting of early neonatal deaths would result in an abnormally low ratio of deaths within the first seven days of life to all neonatal deaths. Early infant deaths have *not* been severely underreported in the Ethiopia DHS survey as suggested by the high ratio of deaths in the first seven days of life to all neonatal deaths. Table C.6 shows the percentage of neonatal to infant deaths. Neonatal deaths are slightly lower than would be expected, suggesting that there may be some underreporting of deaths under one month but not in the first week of life.

Heaping of the age at death on certain digits is another problem that is inherent in most retrospective surveys. Misreporting of age at death biases age pattern estimates of mortality if the net result is the transference of deaths between age segments for which the rates are calculated; for example, child mortality may be overestimated relative to infant mortality if children who died in the first year of life are reported as having died at age one or older. In an effort to minimize misreporting of age at death, interviewers were instructed to record deaths under one month in days and under two years in months. In addition, they were trained to probe deaths reported at exactly 1 year or 12 months to ensure that they had actually occurred at 12 months. The distribution of deaths under 2 years during the 20 years prior to the survey by month of death shows that there is definite heaping at 6, 12, and 18 months of age with corresponding deficits in adjacent months (Table C.6). However, heaping is less pronounced for deaths in the five years preceding the survey, for which the most recent mortality rates are calculated.

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

8.2 Levels and Trends in Infant and Child Mortality

Table 8.1 presents neonatal, postneonatal, infant, child, and under-five mortality rates for the three recent five-year periods before the survey. Neonatal mortality in the most recent period is 39 per 1,000 live births. This rate is similar to postneonatal deaths (38 per 1,000 live births) during the same period; that is, the risk of dying for any Ethiopian child who survived the first month of life is the same as in the remaining 11 months of the first year of life. Thus 50 percent of infant deaths in Ethiopia occur during the first month of life. A similar pattern was observed in the 2000 EDHS. The infant mortality rate in the five years preceding the survey is 77 and under-five mortality is 123 deaths per 1,000 live births for the same period. This means that one in every thirteen Ethiopian children dies before reaching age one, while one in every eight does not survive to the fifth birthday.

Table 8.1 Early childhood mortality rates

Neonatal, postneonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey, Ethiopia 2005

Years preceding the survey	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_0$)	Under-five mortality ($_5q_0$)
0-4	39	38	77	50	123
5-9	42	42	83	63	141
10-14	46	49	95	77	165

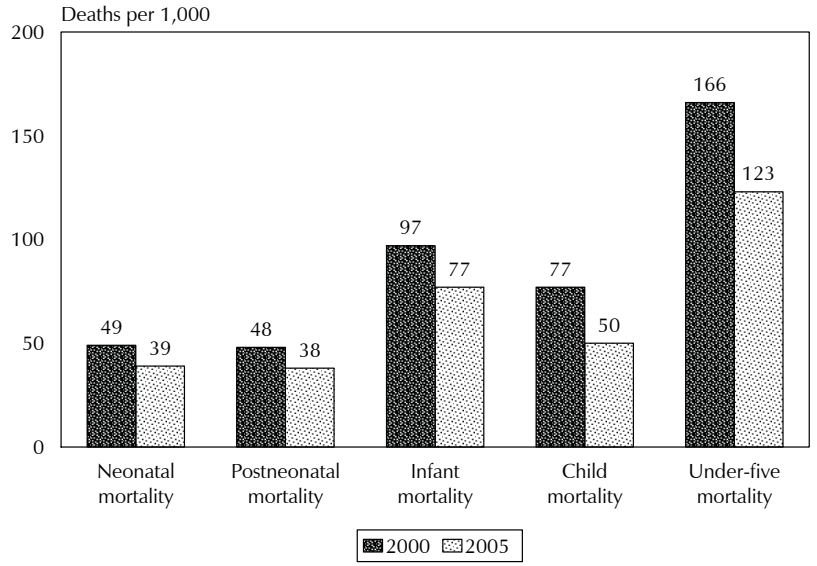
[1] Computed as the difference between infant and neonatal mortality rates

Mortality trends can be examined in two ways: by comparing mortality rates for three five-year periods preceding a single survey and by comparing mortality estimates obtained from various surveys. However, these comparisons should be interpreted with caution because quality of data, time references and sample coverage varies. In particular, sampling errors associated with mortality estimates are large and should be taken into account when examining trends between surveys.

Data from the 2005 EDHS show that infant mortality has declined by 19 percent over the 15-year period preceding the survey from 95 deaths per 1,000 live births to 77. Under-five mortality has gone down by 25 percent from 165 deaths per 1,000 live births to 123. The corresponding decline in neonatal and postneonatal mortality over the 15-year period are 15 percent and 22 percent, respectively.

Mortality trends can also be examined by comparing data from the 2005 EDHS with data from the 2000 EDHS. Infant and under-five mortality rates obtained for the five years preceding the two surveys confirm a declining trend in mortality. Under-five mortality declined from 166 deaths per 1,000 live births in the 2000 survey to 123, while infant mortality declined from 97 deaths per 1,000 live births in the 2000 survey to 77 for the 2005 survey (Figure 8.1). However, data from the 2005 survey for the same period (1996-2000) show lower mortality, indicating a potential underestimate of mortality in the 2001-2005 period. The data also show a ten-point decline in neonatal and postneonatal mortality between the two surveys over the same period.

Figure 8.1 **Early Childhood Mortality Rates for the Period 0-4 Years Preceding the Survey, 2000 and 2005**



8.3 SOCIOECONOMIC DIFFERENTIALS IN CHILDHOOD MORTALITY

To minimize sampling errors associated with mortality estimates and to ensure a sufficient number of cases for statistical reliability, the mortality rates shown in Tables 8.2 and 8.3 are calculated for a ten-year period. Table 8.2 shows differentials in childhood mortality by four socioeconomic variables: place of residence, region, mother's education, and wealth quintile.

From the table it is apparent that infant and child survival is influenced by the socioeconomic characteristics of mothers. Mortality in urban areas is consistently lower than in rural areas. For example, infant mortality in urban areas is 66 deaths per 1,000 live births compared with 81 deaths

per 1,000 live births in rural areas. The urban-rural difference is even more pronounced in the case of child mortality. Wide regional differentials in infant and under-five mortality are observed. For example, under-five mortality ranges from a low of 72 per 1,000 live births in Addis Ababa to a high of 157 per 1,000 live births in Benishangul-Gumuz. Under-five mortality is also relatively higher in Amhara and Gambela.

As expected, mother's education is inversely related to a child's risk of dying. Under-five mortality among children born to mothers with no education (139 per 1,000 live births) is more than twice that of children born to mothers with secondary and higher level of education (54 per 1,000 live births). The beneficial effect of educating mothers is obvious for all childhood mortality rates. With respect to wealth and mortality, the relationship is not consistent, although children born to mothers in the highest wealth quintile clearly are at much lower risk of dying than children born to mothers in the other quintiles.

Table 8.2 Early childhood mortality rates by socioeconomic characteristics

Neonatal, postneonatal, infant, child, and under-five mortality rates for the 10-year period preceding the survey, by background characteristic, Ethiopia 2005

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_0$)	Under-five mortality ($_5q_0$)
Residence					
Urban	35	32	66	34	98
Rural	41	40	81	58	135
Region					
Tigray	40	26	67	42	106
Affar	33	28	61	66	123
Amhara	50	44	94	66	154
Oromiya	40	36	76	51	122
Somali	27	30	57	39	93
Benishangul-Gumuz	44	40	84	80	157
SNNP	36	49	85	63	142
Gambela	42	51	92	70	156
Harari	35	30	66	40	103
Addis Ababa	23	22	45	28	72
Dire Dawa	29	42	71	70	136
Mother's education					
No education	41	42	83	62	139
Primary	45	34	78	35	111
Secondary and higher	21	16	37	18	54
Wealth quintile					
Lowest	39	41	80	54	130
Second	38	47	86	64	144
Middle	47	38	86	63	144
Fourth	45	39	84	60	139
Highest	30	30	60	34	92
Total	41	40	80	56	132

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

8.4 DEMOGRAPHIC DIFFERENTIALS IN MORTALITY

Infant and child mortality is influenced to a considerable extent by the demographic characteristics of mothers and children including the sex of the child, mother's age at birth, birth order, length of the previous birth interval, and the size of the child at birth. The relationship between these demographic characteristics and mortality is shown in Table 8.3 and Figure 8.2. Male children in general experience higher mortality than female children. The gender difference is especially pronounced for infant mortality, where 1 in 11 boys dies before his first birthday, compared with 1 in 14 girls.

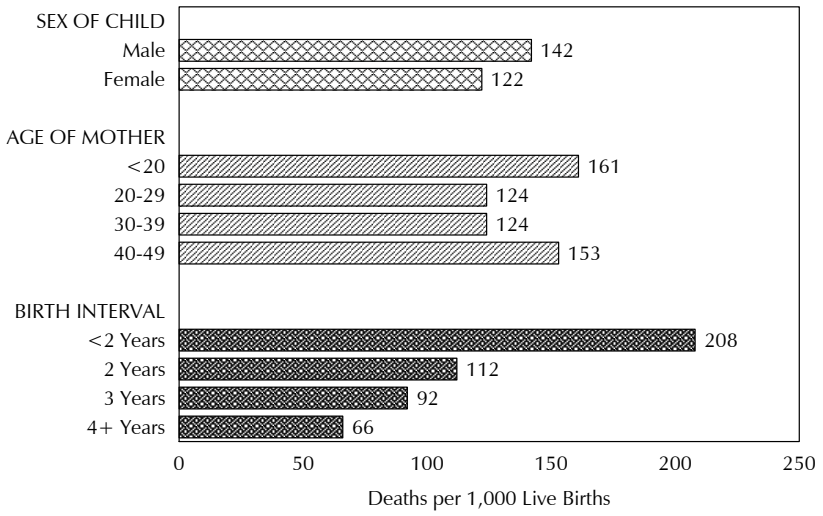
Table 8.3 Early childhood mortality rates by demographic characteristics

Neonatal, postneonatal, infant, child, and under-five mortality rates for the 10-year period preceding the survey, by demographic characteristics, Ethiopia 2005

Demographic characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality ($_1q_0$)	Child mortality ($_4q_0$)	Under-five mortality ($_5q_0$)
Child's sex					
Male	48	43	91	56	142
Female	33	37	70	56	122
Mother's age at birth					
<20	57	48	106	62	161
20-29	38	37	75	54	124
30-39	34	38	72	56	124
40-49	50	46	96	63	153
Birth order					
1	52	45	97	50	142
2-3	32	39	71	53	120
4-6	39	37	76	57	128
7+	47	42	89	67	149
Previous birth interval[2]					
<2 years	68	66	134	85	208
2 years	32	30	62	53	112
3 years	24	27	51	43	92
4+ years	17	20	38	30	66
Birth size[3]					
Small/very small	37	36	73	na	na
Average or larger	39	38	78	na	na

[1] Computed as the difference between infant and neonatal mortality rates
[2] Excludes first-order births
[3] Rates for the five-year period before the survey
na = Not applicable

Figure 8.2 Under-Five Mortality by Selected Demographic Characteristics



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

EDHS 2005

As expected, the relationship between maternal age at birth and childhood mortality is generally U-shaped, being relatively higher among children born to mothers under age 20 and over age 40 than among mothers in the middle age groups. This pattern is especially obvious in the case of infant and under-five mortality. In general, first births and births of order 7 and higher also suffer significantly higher rates of mortality than births of orders 2 through 6. For example, 1 in 10 first births did not survive to the first year, compared with 1 in 14 second and third order births. Short birth intervals also significantly reduce a child's chance of survival. For example, children born within two years of a preceding birth are more than three times as likely to die within the first year of life as children born three or more years after an older sibling.

Studies have shown that a child's birth weight is an important determinant of its survival chances. Since most births in Ethiopia occur at home where children are often not weighed at birth, data on birth weight is available for only a few children. However, mothers in the Ethiopia DHS survey were asked whether their child was very large, larger than average, average, smaller than average, or small at birth since this has been found to be a good proxy for the child's weight. The data show little variation in mortality by size of child at birth.

8.5 Perinatal Mortality

The 2005 Ethiopia DHS survey asked women to report on any pregnancy loss that occurred in the five years preceding the survey. For each pregnancy that did not end in a live birth, the duration of pregnancy was recorded. In this report, perinatal deaths include pregnancy losses of at least seven months' gestation (stillbirths) and deaths to live births within the first seven days of life (early neonatal deaths). The perinatal mortality rate is the sum of stillbirths and early neonatal deaths divided by the sum of all stillbirths and live births. Information on stillbirths and deaths to infants within the first week of life are highly susceptible to omission and misreporting. Nevertheless, retrospective surveys in developing countries provide more representative and accurate perinatal death rates than the vital registration systems and hospital-based studies in developing countries.

Table 8.4 shows that out of the 11,280 reported pregnancies of at least seven months' gestation reported during the five years preceding the survey, 117 were stillbirths and 303 were early neonatal deaths, yielding an overall perinatal mortality rate of 37 per 1,000 stillbirths and live births. Comparable data from the 2000 EDHS show that perinatal mortality has declined from 52 per 1,000 stillbirths and live births to its current level.

Perinatal mortality is significantly higher among women whose age at birth was under 20 years or 40-49 years. First pregnancies and pregnancies that occur after an interval of less than 15 months are much more likely than pregnancies that occur after longer intervals to end in a stillbirth or early neonatal death. Rural women are more likely to experience perinatal losses than urban women, as are women who reside in Amhara and (surprisingly) Addis Ababa. Educated mothers are less likely to experience pregnancy losses than uneducated mothers. Perinatal mortality is highest among women in the middle wealth quintile.

Table 8.4 Perinatal mortality

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

Background characteristic	Number of stillbirths[1]	Number of early neonatal deaths[2]	Perinatal mortality rate[3]	Number of pregnancies of 7+ months duration
Mother's age at birth				
<20	22	88	64	1,736
20-29	47	142	33	5,775
30-39	29	53	26	3,150
40-49	18	21	63	618
Previous pregnancy interval in months				
First pregnancy	29	89	62	1,896
<15	6	34	62	630
15-26	34	69	40	2,570
27-38	9	70	26	3,000
39+	40	40	25	3,183
Residence				
Urban	7	30	45	822
Rural	110	273	37	10,458
Region				
Tigray	4	10	20	702
Affar	1	1	16	108
Amhara	64	85	56	2,685
Oromiya	22	130	34	4,433
Somali	2	12	30	480
Benishangul-Gumuz	2	3	42	107
SNNP	17	58	30	2,517
Gambela	0	1	24	31
Harari	0	0	25	22
Addis Ababa	5	3	48	158
Dire Dawa	0	1	24	38
Mother's education				
No education	110	233	38	8,947
Primary	5	59	34	1,860
Secondary and higher	3	11	29	473
Wealth quintile				
Lowest	11	43	22	2,451
Second	30	47	32	2,386
Middle	28	100	51	2,514
Fourth	29	64	42	2,251
Highest	18	48	40	1,678
Total	117	303	37	11,280

[1] Foetal deaths occurring in pregnancies of seven or more months duration
[2] Deaths at age 0-6 days among live-born children.
[3] The number of stillbirths and early neonatal deaths divided by the number of pregnancies of seven or more months duration.

8.6 HIGH-RISK FERTILITY BEHAVIOUR

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

The first column in Table 8.5 shows the percentage of births occurring in the five years before the survey that fall into the various risk categories. Two-thirds of births in Ethiopia are at an elevated risk of dying that is avoidable while 22 percent are in a "risk-free" category. First births, which make up 12 percent of births, are in the unavoidable risk category. Forty-one percent of births are in a single high-risk category and 25 percent in a multiple high-risk category. The most common single high-risk category is births of order 3 and higher (29 percent), while the most common multiple high-risk category is births to mothers older than 34 years and of birth order 3 and above (13 percent).

The risk ratios displayed in the second column of Table 8.5 denote the relationship between risk factors and mortality. In general, risk ratios are higher for children in a multiple high-risk category than in a single high-risk category. The most vulnerable births are those to two groups of women: births to women age 34 or older, with a birth interval less than 24 months and birth order of three or higher; and births at an interval less than 24 months and of birth order 3 and higher. These children are more than three times as likely to die as children not in any high-risk category. Two percent and 9 percent of births, respectively, fall into these two categories.

The last column of Table 8.5 shows the distribution of currently married women who have the potential for having a high-risk birth by category. This column is purely hypothetical and does not take into consideration the protection provided by family planning, postpartum insusceptibility, and prolonged abstinence. However, it provides an insight into the magnitude of high-risk births. More than one in four births (27 percent) is to women who are or would be too old, and have or would have too many children. A substantially higher proportion of women (49 percent) have the potential of having a birth in a multiple high-risk category than in a single high-risk category (32 percent).

Table 8.5 High-risk fertility behaviour

Percent distribution of children born in the five years preceding the survey by category of elevated risk of mortality and the risk ratio, and percent distribution of currently married women by category of risk if they were to conceive a child at the time of the survey, Ethiopia 2005

Risk category	Births in the 5 years preceding the survey: Percentage of births	Births in the 5 years preceding the survey: Risk ratio	Percentage of currently married women[1]
Not in any high-risk category	21.9	1.00	13.5[a]
Unavoidable risk category			
First-order births between ages 18 and 34 years	11.9	1.85	5.5
Single high-risk category			
Mother's age <18	6.3	2.63	1.4
Mother's age >34	0.5	0.34	2.5
Birth interval <24 months	5.9	2.41	9.5
Birth order >3	28.6	1.13	18.7
Subtotal	41.4	1.53	32.0
Multiple high-risk category			
Age <18 and birth interval <24 months[2]	0.8	1.88	0.5
Age >34 and birth interval <24 months	0.0	*	0.1
Age >34 and birth order >3	13.1	1.43	26.7
Age >34 and birth interval <24 months and birth order >3	2.0	3.21	7.1
Birth interval <24 months and birth order >3	8.9	3.19	14.5
Subtotal	24.9	2.22	49.0
In any avoidable high-risk category	66.3	1.79	81.0
Total	100.0	na	100.0
Number	11,163	na	9,066

Note: Risk ratio is the ratio of the proportion dead among births in a specific high-risk category to the proportion dead among births *not in any high-risk category*. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Women are assigned to risk categories according to the status they would have at the birth of a child if they were to conceive at the time of the survey: current age less than 17 years and 3 months or older than 34 years and 2 months, latest birth less than 15 months ago, or latest birth being of order 3 or higher.

[2] Includes the category *age <18 and birth order >3*

[a] Includes sterilised women

na = Not applicable

MATERNAL HEALTH 9

The health care that a mother receives during pregnancy, at the time of delivery and soon after delivery is important for the survival and well-being of both the mother and the child. This chapter presents findings on several areas of importance to maternal health: antenatal, delivery, and postnatal care; problems in accessing health care and awareness and attitudes concerning tuberculosis. These findings are important to policymakers and programme implementers in formulating programmes and policies and in designing appropriate strategies and interventions to improve maternal and child health care services.

9.1 ANTENATAL CARE

Antenatal care (ANC) coverage can be described according to the type of provider, number of ANC visits, and stage of pregnancy at the time of the first visit, as well as content of services and information provided during ANC. In the 2005 EDHS information on ANC coverage was obtained from women who had a birth in the five years preceding the survey. For women with two or more live births during the five-year period, data refer to the most recent birth only.

Table 9.1 shows the percent distribution of mothers in the five years preceding the survey by source of antenatal care received during pregnancy, according to selected characteristics. Women were asked to report on all persons seen for antenatal care for the last birth. However, for the purpose of presenting the results, if a woman was seen by more than one provider, only the provider with the highest qualification is considered.

Twenty-eight percent of mothers received antenatal care from health professionals (doctor, nurse, midwife) for their most recent birth in the five years preceding the survey, and less than 1 percent of mothers received antenatal care from a traditional birth attendant (trained or untrained). More than seven in ten mothers (72 percent) received no antenatal care for births in the preceding five years.

Differences in antenatal care by women's age at birth are not large. Differences by birth order however are more pronounced. Mothers are more likely to receive care from a health professional for first births (34 percent) than for births of order six and higher (22 percent).

There are large differences in the use of antenatal care services between urban and rural women. In urban areas, health professionals provide antenatal care for 69 percent of mothers, whereas they provide care for only 24 percent of mothers in rural areas. It is important to note that three in four mothers in rural areas, receive no antenatal care at all.

Regional differences in the source of antenatal care are quite significant; 88 percent of mothers in Addis Ababa received antenatal care from a health professional, compared with less than one in ten mothers in the Somali Region.

The use of antenatal care services is strongly related to the mother's level of education. Women with at least secondary education are more likely to receive antenatal care from a health professional (81 percent) than women with primary education (39 percent) and those with no education (22 percent). There is also a positive relationship between increasing wealth and receiving antenatal care from a health professional, with women in the highest wealth quintile nearly five times more likely to receive antenatal care from a health professional than women in the lowest wealth quintile.

Table 9.1 Antenatal care

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

Background characteristic	Health professional	Trained traditional birth attendant	Traditional birth attendant/ other	No one	Missing	Total	Number of women
Age at birth							
<20	27.3	0.7	0.4	71.5	0.2	100.0	994
20-34	29.1	0.2	0.6	70.1	0.0	100.0	4,923
35-49	22.7	0.0	0.5	76.6	0.2	100.0	1,391
Birth order							
1	34.4	0.5	0.5	64.5	0.0	100.0	1,190
2-3	31.1	0.4	0.6	67.8	0.1	100.0	2,089
4-5	25.8	0.1	0.5	73.5	0.0	100.0	1,692
6+	22.4	0.0	0.6	76.9	0.1	100.0	2,336
Residence							
Urban	68.9	0.3	0.5	30.1	0.1	100.0	634
Rural	23.7	0.2	0.5	75.4	0.1	100.0	6,674
Region							
Tigray	35.3	0.4	1.8	62.5	0.0	100.0	480
Affar	15.0	1.7	0.3	83.0	0.0	100.0	68
Amhara	26.5	0.2	0.3	73.1	0.0	100.0	1,856
Oromiya	24.8	0.2	0.4	74.5	0.2	100.0	2,723
Somali	7.4	0.0	0.4	92.0	0.2	100.0	288
Benishangul-Gumuz	24.5	0.2	0.2	74.3	0.8	100.0	69
SNNP	30.3	0.4	0.7	68.5	0.0	100.0	1,632
Gambela	36.6	0.6	1.6	61.0	0.2	100.0	23
Harari	40.7	0.9	0.4	58.0	0.0	100.0	15
Addis Ababa	88.3	0.3	0.0	11.5	0.0	100.0	129
Dire Dawa	52.9	0.0	1.4	45.7	0.0	100.0	25
Education							
No education	21.7	0.3	0.6	77.3	0.1	100.0	5,734
Primary	39.4	0.1	0.4	60.0	0.0	100.0	1,205
Secondary and higher	80.9	0.1	0.4	18.5	0.2	100.0	368
Wealth quintile							
Lowest	12.7	0.1	0.8	86.4	0.0	100.0	1,520
Second	18.6	0.5	0.4	80.4	0.2	100.0	1,553
Middle	25.2	0.4	0.4	74.1	0.0	100.0	1,586
Fourth	30.6	0.0	0.5	68.8	0.2	100.0	1,451
Highest	58.0	0.2	0.7	41.0	0.1	100.0	1,196
Total	27.6	0.2	0.5	71.5	0.1	100.0	7,307

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

There has been little improvement over the past five years in the proportion of mothers who receive antenatal care from a health professional, increasing from 27 percent in 2000 to 28 percent in 2005. However, there seems to have been a shift in the regional pattern of antenatal care coverage. The proportions of women receiving professional antenatal care increased over the past five years in Amhara and Addis Ababa. On the other hand, use of professional antenatal care declined over the past five years in Affar, Somali, Gambela, Harari and Dire Dawa, with the greatest decline seen in the Somali Region. There was little change in the other regions.

Number and Timing of Antenatal Visits

Antenatal care is more beneficial in preventing adverse pregnancy outcomes when it is sought early in the pregnancy and is continued through to delivery. Health professionals recommend that the first antenatal visit should occur within the first three months of pregnancy and continue on a monthly basis through the 28th week of pregnancy and fortnightly up to the 36th week (or until birth). If the

first antenatal visit is made at the third month of pregnancy and as regularly as recommended, there would be a total of at least 12 to 13 antenatal visits. Under normal circumstances, WHO recommends that a woman without complications have at least four ANC visits to provide sufficient care. It is possible during these visits to detect health problems associated with a pregnancy. In the event of any complications, more frequent visits are advisable and admission to a health facility may be necessary.

Table 9.2 shows that slightly more than one in ten (12 percent) women make four or more antenatal care visits during their entire pregnancy. There is marked variation between women residing in urban areas (55 percent) and those in rural areas (8 percent).

Only 6 percent of women make their first antenatal care visit before the fourth month of pregnancy. The median duration of pregnancy for the first antenatal care visit is 5.6 months. This indicates that in Ethiopia women start antenatal care at a relatively late stage of their pregnancy. The median duration of pregnancy for the first antenatal care visit is 4.2 months for urban women compared with 6.0 for rural women. There was little change in the timing of the first visit over the past five years.

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

Percent distribution of women who had a live birth in the five years preceding the survey by number of antenatal care (ANC) visits for the most recent birth, and by the timing of the first visit according to residence, Ethiopia 2005

Number and timing of ANC visits	Residence		Total
	Urban	Rural	
Number of ANC visits			
None	30.1	75.4	71.5
1	2.9	4.8	4.6
2-3	11.8	11.3	11.3
4+	54.5	8.1	12.2
Don't know/missing	0.7	0.4	0.4
Total	100.0	100.0	100.0
Number of months pregnant at time of first ANC visit			
No antenatal care	30.1	75.4	71.5
<4	32.4	3.9	6.4
4-5	25.0	8.2	9.7
6-7	10.7	8.9	9.1
8+	1.4	3.1	3.0
Don't know/missing	0.3	0.4	0.4
Total	100.0	100.0	100.0
Median months pregnant at first visit (for those with ANC)	4.2	6.0	5.6
Number of women	634	6,674	7,307

Components of Antenatal Care

The content of antenatal care is important in assessing the quality of antenatal care services. Pregnancy complications are an important source of maternal and child morbidity and mortality, and thus teaching pregnant women about the danger signs associated with pregnancy and the appropriate action to take are essential components of antenatal care. Table 9.3 presents information on the percentage of women who took iron tablets and intestinal parasite drugs during their last pregnancy in the five years preceding the survey. The table also shows the percentage of women who were informed about the signs of pregnancy complications and the percentage who received routine antenatal care services among women receiving ANC.

Among women with a live birth in the past five years, 10 percent took iron tablets while pregnant with the last birth. There are few variations by age at birth and birth order. However, there are substantial variations by place of residence, region, education and wealth quintile, with urban women, women in Harari and Addis Ababa, and better educated and wealthier women much more likely to have taken iron supplements.

Only 4 percent of women took intestinal parasite drugs during their pregnancy. Variations by background characteristics are small.

Thirty-one percent of mothers who received antenatal care reported that they were informed about pregnancy complications during their visits. Weight and blood pressure measurements were taken on 72 percent and 62 percent of mothers, respectively. About one-quarter of mothers gave urine and blood samples.

Table 9.3 Components of antenatal care

Among women with a live birth in the five years preceding the survey, the percentage who took iron tablets or syrup and drugs for intestinal parasites during the pregnancy for the most recent birth, and among women receiving antenatal care for the most recent live birth in the five years preceding the survey, the percentage receiving specific antenatal services, according to background characteristics, Ethiopia 2005

	Among women with a live birth in the past five years, the percentage who during the pregnancy for their last birth			Among women who received antenatal care for their most recent birth in the past five years, the percentage receiving specific services:					
Background characteristic	Took iron tablets	Took intestinal parasite drugs	Number of women	Informed of signs of pregnancy compli-cations	Weighed	Blood pressure measured	Urine sample taken	Blood sample taken	Number of women
Mother's age at birth									
<20	9.7	3.9	994	28.2	71.1	56.2	22.8	27.0	282
20-34	10.6	4.0	4,923	32.0	72.3	63.8	27.2	26.2	1,472
35-49	10.4	4.0	1,391	31.7	69.8	58.1	26.5	25.1	323
Birth order									
1	9.8	3.1	1,190	34.9	73.4	61.0	32.4	30.1	422
2-3	10.6	3.4	2,089	32.8	74.2	65.8	31.8	30.3	671
4-5	9.6	5.0	1,692	28.0	69.4	60.3	19.9	21.9	448
6+	11.3	4.3	2,336	29.8	69.1	59.0	20.7	21.5	536
Residence									
Urban	20.1	5.3	634	51.8	91.4	84.8	64.6	59.0	442
Rural	9.5	3.9	6,674	25.9	66.4	55.7	16.2	17.3	1,634
Region									
Tigray	12.2	1.8	480	40.8	84.1	79.9	21.4	30.8	180
Affar	9.4	5.2	68	29.7	66.7	65.3	44.5	39.9	12
Amhara	8.4	1.5	1,856	31.9	56.3	40.8	20.0	16.3	500
Oromiya	10.3	5.3	2,723	26.1	71.5	62.0	26.0	26.3	690
Somali	8.3	3.3	288	(52.8)	(87.3)	(86.6)	(80.7)	(67.4)	22
Benishangul-Gumuz	7.5	3.9	69	23.5	60.7	43.4	16.8	15.3	17
SNNP	12.0	5.0	1,632	26.8	76.0	67.6	16.0	16.1	513
Gambela	17.0	7.2	23	28.7	70.0	58.4	23.2	21.1	9
Harari	20.1	5.4	15	58.5	93.4	81.0	77.6	68.0	6
Addis Ababa	20.3	8.8	129	62.8	97.6	93.8	95.1	92.0	114
Dire Dawa	12.5	3.6	25	35.9	90.2	83.1	68.6	64.8	13
Education									
No education	9.4	3.6	5,734	25.1	65.2	53.6	17.6	18.0	1,296
Primary	11.6	5.0	1,205	33.5	77.0	68.3	26.6	30.5	481
Secondary and higher	22.8	6.2	368	55.6	91.4	87.4	64.7	54.7	299
Wealth quintile									
Lowest	6.1	2.7	1,520	23.5	57.3	51.9	14.4	18.0	207
Second	8.5	3.8	1,553	23.5	70.3	55.8	13.5	14.5	302
Middle	10.5	3.3	1,586	23.7	65.4	52.3	14.1	17.0	411
Fourth	11.1	5.0	1,451	27.9	65.6	54.9	16.4	14.1	451
Highest	17.4	5.7	1,196	43.9	84.1	77.5	49.3	46.7	705
Total	10.4	4.0	7,307	31.4	71.7	61.9	26.5	26.2	2,076

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

The quality of antenatal care is particularly affected by mother's education, mother's wealth, residence and region. For example, women with secondary or higher education, women in the highest wealth quintile and urban women are twice as likely as women with no education, women in the lowest wealth quintile and rural women to be informed about pregnancy complications. Regional variations in the proportion of women who were informed about pregnancy complications during ANC visits are marked, ranging from a high of 63 percent among women in Addis Ababa to a low of 24 percent in Benishangul-Gumuz. Similar patterns are observed for the other routine tests and procedures.

There has been a small increase in the percentage of women who have received the various components of antenatal care over the past five years. For example, 31 percent of women with a birth in the five years preceding the survey in 2005 were informed of the signs of pregnancy complications compared with 27 percent in 2000.

Tetanus Toxoid Vaccination

Tetanus toxoid injections are given during pregnancy for the prevention of neonatal tetanus, a major cause of death among infants. For full protection, a pregnant woman should receive at least two doses during each pregnancy. If a woman has been vaccinated during a previous pregnancy, however, she may only require one dose for the current pregnancy. Five doses are considered to provide lifetime protection. Table 9.4 presents the percent distribution of women who had a live birth in the five years preceding the survey by whether the last birth was protected against neonatal tetanus.

Table 9.4 Tetanus toxoid injections

Percent distribution of women who had a live birth in the five years preceding the survey by whether the last birth was protected against neonatal tetanus and by number of injections, according to background characteristics, Ethiopia 2005

	Protected				Not protected					
Background characteristic	Two or more injections	One plus one additional injection in the 10 years prior to the pregnancy	None, but at least 5 lifetime TT injections	Total protected	One and no TT injection in the 10 years prior to the pregnancy	None, less than 5 lifetime TT injections	Total not protected	Don't know/ missing	Total	Number of women
Mother's age at birth										
<20	28.1	2.0	0.5	30.6	7.3	61.3	68.6	0.8	100.0	994
20-34	29.6	2.8	1.5	33.9	6.1	58.5	64.7	1.4	100.0	4,923
35-49	22.5	3.2	1.7	27.3	4.4	65.0	69.4	3.3	100.0	1,391
Birth order										
1	32.0	1.8	0.7	34.6	8.2	56.0	64.3	1.2	100.0	1,190
2-3	31.2	3.2	1.3	35.6	6.6	56.1	62.7	1.7	100.0	2,089
4-5	27.5	2.8	1.6	31.8	5.0	61.8	66.8	1.4	100.0	1,692
6+	23.6	2.8	1.8	28.2	4.9	64.6	69.5	2.2	100.0	2,336
Residence										
Urban	51.9	5.1	3.5	60.5	7.8	28.7	36.5	3.0	100.0	634
Rural	25.8	2.5	1.2	29.5	5.8	63.1	68.9	1.6	100.0	6,674
Region										
Tigray	28.9	4.3	6.6	39.8	5.7	52.2	57.9	2.3	100.0	480
Affar	10.9	0.0	0.0	10.9	4.5	78.5	83.0	6.1	100.0	68
Amhara	24.6	4.0	1.2	29.8	6.6	61.1	67.7	2.5	100.0	1,856
Oromiya	28.4	2.0	0.8	31.1	5.1	62.8	67.9	1.0	100.0	2,723
Somali	9.1	0.0	0.3	9.4	1.3	87.4	88.8	1.8	100.0	288
Benishangul-Gumuz	18.2	2.0	0.3	20.5	4.7	70.8	75.5	4.0	100.0	69
SNNP	33.0	2.6	1.3	36.9	7.4	54.6	62.0	1.1	100.0	1,632
Gambela	22.7	1.0	0.5	24.2	5.8	66.4	72.1	3.7	100.0	23
Harari	33.0	2.6	2.1	37.8	3.7	55.9	59.5	2.6	100.0	15
Addis Ababa	57.7	6.3	3.8	67.7	10.0	15.9	25.9	6.4	100.0	129
Dire Dawa	49.8	1.1	0.8	51.7	3.4	42.3	45.7	2.7	100.0	25
Education										
No education	23.5	2.5	1.2	27.2	5.6	65.5	71.2	1.7	100.0	5,734
Primary	40.3	2.6	1.6	44.6	6.8	47.1	53.8	1.6	100.0	1,205
Secondary and higher	58.8	7.0	4.1	70.0	8.7	18.5	27.3	2.8	100.0	368
Wealth quintile										
Lowest	17.5	1.5	1.1	20.2	3.9	73.9	77.7	2.1	100.0	1,520
Second	22.2	2.3	1.3	25.8	6.6	66.2	72.8	1.4	100.0	1,553
Middle	26.3	1.9	1.1	29.4	7.0	62.5	69.4	1.2	100.0	1,586
Fourth	31.0	3.9	1.3	36.2	5.1	56.7	61.8	2.0	100.0	1,451
Highest	47.7	4.5	2.5	54.7	7.5	35.9	43.4	1.8	100.0	1,196
Total	28.0	2.7	1.4	32.2	6.0	60.1	66.1	1.7	100.0	7,307

Last births were protected against neonatal tetanus for only 32 percent of women. Most of these women (28 percent) had received two or more tetanus toxoid injections while pregnant with the last birth. This indicates that births to women in Ethiopia are not routinely protected against neonatal tetanus.

Births to relatively younger mothers age 20-34 years and lower order births (3 and below) are slightly more likely to be protected against tetanus than births to older mothers and higher order births. Twice as many births in urban areas (61 percent) as in rural areas (30 percent) are protected against tetanus. The proportion of births protected against tetanus varies substantially by region. Tetanus toxoid coverage is highest among mothers in Addis Ababa (68 percent) and lowest among mothers in the Somali and Affar regions (9 percent and 11 percent, respectively). There are marked differences by education and wealth index in the proportion of births protected against tetanus.

Despite the low overall coverage, there is evidence of improvement over time. The percentage of women who received two or more tetanus injections during the pregnancy leading to their most recent birth increased from 17 percent in 2000 to 28 percent in 2005.

9.2 Delivery Care

Proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that may cause the death or serious illness of the mother and the baby or both. Hence, an important component in the effort to reduce the health risks of mothers and children is to increase the proportion of babies delivered in a safe and clean environment and under the supervision of health professionals. Data on delivery care were obtained for all births that occurred in the five years preceding the survey. Table 9.5 presents the percent distribution of live births in the five years preceding the survey by place of delivery, according to background characteristics.

An overwhelming majority of births (94 percent) in the five years before the survey were delivered at home. Five percent of births were delivered in a public facility and less than 1 percent of births were delivered in a private facility. Delivery in a health facility is more common among younger mothers (age less than 35), mothers with first order births, and mothers who have had at least 4 antenatal visits. Children born in urban areas are 20 times more likely to be delivered in a health facility than children born in rural areas. The proportion of births delivered in a health facility is generally low in most of the regions (6 percent or less) with the exception of the Gambela and Harari regions and in Addis Ababa and Dire Dawa. In these four areas, the proportion of births delivered in a health facility ranges from 15 percent in the Gambela Region to 79 percent in Addis Ababa. There is also a strong association between mother's education and place of delivery. The proportion of births delivered in a health facility is only 2 percent among uneducated mothers, compared with 52 percent among mothers with secondary and higher education. Not surprisingly, deliveries in a private health facility are most common among educated women residing in Addis Ababa.

There has been no change in the proportion of births taking place in health facilities over the past five years. Data from the 2000 EDHS show that 5 percent of births took place in a health facility.

Table 9.5 Place of delivery

Percent distribution of live births in the five years preceding the survey by place of delivery, according to background characteristics, Ethiopia 2005

Background characteristic	Health facility: Public sector	Health facility: Private sector	Home	Other	Missing	Total	Number of births
Mother's age at birth							
<20	5.9	0.4	93.1	0.4	0.2	100.0	1,715
20-34	5.0	0.4	93.9	0.4	0.2	100.0	7,702
35-49	2.5	0.9	95.6	0.5	0.4	100.0	1,746
Birth order							
1	12.2	0.9	86.0	0.5	0.3	100.0	1,933
2-3	5.3	0.5	93.8	0.3	0.1	100.0	3,351
4-5	2.4	0.2	96.8	0.4	0.2	100.0	2,620
6+	1.8	0.4	97.0	0.4	0.4	100.0	3,259
Antenatal care visits[1]							
None	1.6	0.2	97.8	0.4	0.0	100.0	5,225
1-3	7.1	1.2	91.2	0.6	0.0	100.0	1,164
4+	28.4	2.2	69.1	0.4	0.0	100.0	888
Residence							
Urban	39.5	2.9	56.9	0.4	0.3	100.0	815
Rural	2.0	0.3	97.0	0.4	0.2	100.0	10,348
Region							
Tigray	6.1	0.0	93.9	0.1	0.0	100.0	698
Affar	3.9	0.0	95.8	0.3	0.0	100.0	107
Amhara	3.5	0.0	96.3	0.0	0.1	100.0	2,621
Oromiya	3.7	0.6	95.2	0.3	0.3	100.0	4,411
Somali	4.6	0.4	93.9	0.0	1.1	100.0	477
Benishangul-Gumuz	4.7	0.0	80.7	13.7	1.0	100.0	105
SNNP	3.3	0.4	95.6	0.7	0.1	100.0	2,500
Gambela	13.2	2.0	81.1	3.4	0.2	100.0	31
Harari	31.1	0.4	66.5	0.8	1.1	100.0	22
Addis Ababa	67.5	11.0	21.0	0.5	0.0	100.0	153
Dire Dawa	24.5	1.4	74.2	0.0	0.0	100.0	37
Education							
No education	2.1	0.1	97.1	0.4	0.2	100.0	8,838
Primary	6.9	1.1	91.3	0.4	0.4	100.0	1,855
Secondary and higher	47.0	4.6	47.8	0.2	0.4	100.0	470
Wealth quintile							
Lowest	0.5	0.1	98.3	0.7	0.4	100.0	2,440
Second	1.2	0.0	98.3	0.3	0.2	100.0	2,356
Middle	1.8	0.1	97.8	0.1	0.2	100.0	2,486
Fourth	3.2	0.9	95.3	0.4	0.2	100.0	2,222
Highest	22.8	1.8	74.7	0.5	0.1	100.0	1,660
Total	4.8	0.5	94.1	0.4	0.2	100.0	11,163

Note: Total includes 47 births missing information on antenatal care visits not shown separately.
[1] Includes only the most recent birth in the five years preceding the survey

Assistance during Delivery

Obstetric care from a trained provider during delivery is recognized as critical for the reduction of maternal and neonatal mortality. Births delivered at home are usually more likely to be delivered without assistance from a health professional, whereas births delivered at a health facility are more likely to be delivered by a trained health professional. Table 9.6 shows the type of assistance during delivery by selected background characteristics. Only 6 percent of births are delivered with the assistance of a trained health professional, that is, a doctor, nurse, or midwife, and 28 percent are delivered by a traditional birth attendant. The majority of births are attended by a relative or some other person (61 percent). Five percent of all births are delivered without any type of assistance at all.

Table 9.6 Assistance during delivery

Percent distribution of live births in the five years preceding the survey by person providing assistance during delivery and percent delivered by caesarean-section, according to background characteristics, Ethiopia 2005

Background characteristic	Person providing assistance during delivery: Health professional	Traditional birth attendant	Relative/ other	No one	Don't know/ missing	Total	Percentage delivered by C-section	Number of births
Mother's age at birth								
<20	6.9	31.8	58.5	2.7	0.1	100.0	1.1	1,715
20-34	5.8	28.3	60.5	5.2	0.2	100.0	1.1	7,702
35-49	3.8	23.9	62.8	9.1	0.4	100.0	0.5	1,746
Birth order								
1	13.7	27.8	55.9	2.2	0.3	100.0	3.1	1,933
2-3	6.6	26.7	62.9	3.9	0.0	100.0	1.0	3,351
4-5	2.7	29.5	61.0	6.4	0.4	100.0	0.2	2,620
6+	2.4	28.6	60.4	8.2	0.3	100.0	0.4	3,259
Place of delivery								
Health facility	97.3	1.5	0.9	0.3	0.0	100.0	18.8	589
Elsewhere	0.6	29.6	63.8	5.7	0.2	100.0	0.0	10,574
Residence								
Urban	44.6	22.9	30.6	1.4	0.4	100.0	9.4	815
Rural	2.6	28.5	62.9	5.8	0.2	100.0	0.3	10,348
Region								
Tigray	6.0	13.8	79.4	0.7	0.0	100.0	0.9	698
Affar	4.5	42.5	50.2	1.3	1.4	100.0	0.6	107
Amhara	3.7	29.6	64.6	1.9	0.1	100.0	0.6	2,621
Oromiya	4.8	32.5	57.7	4.7	0.3	100.0	0.7	4,411
Somali	5.2	71.6	20.9	1.2	1.1	100.0	1.0	477
Benishangul-Gumuz	5.1	20.4	49.8	23.8	1.0	100.0	0.1	105
SNNP	4.2	14.8	68.6	12.4	0.1	100.0	1.0	2,500
Gambela	15.3	19.3	54.5	10.5	0.4	100.0	1.7	31
Harari	31.4	61.5	5.3	0.9	0.9	100.0	3.3	22
Addis Ababa	78.8	4.2	16.0	0.9	0.1	100.0	16.0	153
Dire Dawa	26.7	72.4	0.5	0.3	0.1	100.0	3.5	37
Education								
No education	2.3	29.4	62.0	6.0	0.2	100.0	0.4	8,838
Primary	8.5	25.5	62.1	3.7	0.2	100.0	0.9	1,855
Secondary and higher	57.7	14.2	26.3	1.4	0.5	100.0	13.1	470
Wealth quintile								
Lowest	0.7	36.8	55.2	6.9	0.4	100.0	0.0	2,440
Second	1.3	27.5	64.9	6.1	0.2	100.0	0.3	2,356
Middle	1.9	26.8	66.7	4.4	0.2	100.0	0.2	2,486
Fourth	4.5	25.4	65.2	4.7	0.2	100.0	0.5	2,222
Highest	26.6	21.9	46.6	4.7	0.2	100.0	5.3	1,660
Total	5.7	28.1	60.5	5.4	0.2	100.0	1.0	11,163

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

Births to young mothers (less than 35 years) and first births are more likely to be assisted by trained health professionals.

Nearly one in two births (45 percent) in urban areas was assisted by a trained health professional, compared with only 3 percent of births in rural areas. Additionally, 63 percent of births to women in rural areas were delivered with the help of a relative or some other person, compared with 31 percent of births to women residing in urban areas. In most regions, the proportion of births assisted by a trained health professional is quite low (less than 10 percent). However, about one in seven births in Gambela, one in four births in Dire Dawa, one in three births in Harari, and nearly four in five births in Addis Ababa are delivered by a trained health professional.

As expected, mother's education has a positive relationship with delivery care. Births to women with primary education are almost four times (9 percent) more likely and births to women with secondary or higher education are 25 times (58 percent) more likely to receive delivery assistance from a health professional than births to women with no education (2 percent). Similarly, assistance by a trained health professional varies by economic status of women. Births to women in the highest wealth quintile are much more likely to be assisted by a trained health professional (27 percent) than births to women in the lowest wealth quintile (1 percent).

Table 9.6 shows that deliveries by caesarean section are not common in Ethiopia. If they do occur, they are mostly among highly educated women (13 percent), urban women (9 percent), and women in Addis Ababa (16 percent).

9.3 Postnatal Care

A large proportion of maternal and neonatal deaths occur during the 48 hours after delivery. Thus, postnatal care is important for both the mother and 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. Safe motherhood programmes have recently increased emphasis on the importance of postnatal care, recommending that all women receive a check on their health within two days of delivery. To assess the extent of postnatal care utilization, respondents were asked for the last birth in the five years preceding the survey whether they had received a health check after the delivery, the timing of the first check, and the type of health provider. This information is presented according to background characteristics in Table 9.7.

According to data collected in the 2005 EDHS, postnatal care coverage is extremely low in Ethiopia. More than nine in ten mothers received no postnatal care at all and only 5 percent received postnatal care within the critical first two days after the delivery.

There are no marked variations by mother's age in the utilization of postnatal care services within the first two days of birth. A higher percentage of mothers who delivered for the first time than mothers with two or more children received postnatal care within the first two days.

Thirty-one percent of mothers in urban areas received postnatal care within two days of the birth compared with 2 percent of mothers in rural areas. The utilization of timely postnatal care ranges from a low of 3 percent of mothers in the Somali Region to a high of 49 percent in Addis Ababa.

Similarly, mother's education seems to influence the utilization of postnatal care. Two percent of mothers with no education received timely postnatal care, compared with 41 percent of mothers with at least some secondary education. There are significant differences between women in the receipt of postnatal care within two days by wealth quintile, with only 1 percent of women in the lowest wealth quintile receiving timely postnatal care compared with 20 percent of women in the highest wealth quintile.

Table 9.7 presents information on the type of postnatal care providers by mother's background characteristics. Health professionals provided postnatal care for 6 percent of mothers. About 1 percent of mothers received postnatal care from traditional birth attendants. Health professionals are more likely to provide postnatal care to mothers of first order births, mothers with at least some secondary education, and mothers to the wealthiest households. Likewise, mothers in urban areas and those in Addis Ababa are more likely to have received postnatal care from a health professional.

Table 9.7 Timing and type of provider of first postnatal checkup

Among women giving birth in the five years preceding the survey, the percent distribution by time after delivery and type of provider of the mother's first postnatal health checkup for the last live birth, according to background characteristics, Ethiopia 2005

	Time after delivery of mother's first postnatal checkup					Type of health provider of mother's first postnatal checkup						
Background characteristic	Less than 4 hours	4-23 hours	2 days	3-41 days	Don't know/ missing	Health profes-sional	Traditional birth attendant	Other	Don't know/ missing	No check-up	Total	Number of women
Mother's age at birth												
<20	3.0	1.5	0.3	1.2	0.6	5.9	0.6	0.1	0.0	93.4	100.0	994
20-34	3.1	1.4	0.6	1.4	0.3	5.9	0.7	0.1	0.1	93.2	100.0	4,923
35-49	1.4	1.0	0.3	0.8	0.7	3.8	0.2	0.3	0.0	95.7	100.0	1,391
Birth order												
1	5.4	3.3	0.3	2.9	0.5	11.4	0.8	0.2	0.0	87.6	100.0	1,190
2-3	3.8	1.5	0.7	1.4	0.3	6.4	1.0	0.1	0.1	92.4	100.0	2,089
4-5	1.7	0.6	0.4	0.9	0.6	3.6	0.5	0.0	0.1	95.8	100.0	1,692
6+	1.3	0.7	0.5	0.6	0.4	3.1	0.2	0.2	0.0	96.6	100.0	2,336
Residence												
Urban	18.3	9.9	2.7	5.3	0.9	36.1	0.4	0.0	0.5	62.9	100.0	634
Rural	1.3	0.5	0.3	0.9	0.4	2.6	0.6	0.1	0.0	96.7	100.0	6,674
Region												
Tigray	4.1	2.4	0.4	1.7	0.1	8.2	0.4	0.1	0.0	91.3	100.0	480
Affar	2.1	1.0	1.5	0.7	0.8	6.0	0.1	0.0	0.0	93.9	100.0	68
Amhara	2.2	0.8	0.3	1.0	0.2	3.6	0.8	0.0	0.2	95.5	100.0	1,856
Oromiya	2.6	0.5	0.6	1.1	0.6	4.5	0.6	0.2	0.0	94.7	100.0	2,723
Somali	0.4	2.3	0.5	1.4	0.2	4.7	0.0	0.0	0.2	95.1	100.0	288
Benishangul-Gumuz	2.3	0.7	0.2	0.9	0.0	4.1	0.0	0.0	0.0	95.9	100.0	69
SNNP	1.9	0.7	0.3	1.4	0.6	4.2	0.6	0.2	0.0	95.1	100.0	1,632
Gambela	7.9	0.7	1.9	2.2	0.3	12.6	0.4	0.0	0.0	87.0	100.0	23
Harari	8.5	15.0	0.2	2.9	0.7	25.9	0.7	0.7	0.0	72.7	100.0	15
Addis Ababa	23.6	22.8	3.0	6.6	0.5	55.9	0.3	0.0	0.3	43.4	100.0	129
Dire Dawa	9.9	11.6	1.1	1.0	0.3	23.0	1.0	0.0	0.0	76.1	100.0	25
Education												
No education	1.1	0.5	0.2	0.8	0.4	2.4	0.4	0.1	0.0	97.0	100.0	5,734
Primary	4.1	1.6	0.9	1.9	0.4	7.7	1.2	0.0	0.1	91.0	100.0	1,205
Secondary and higher	24.2	13.4	3.2	6.4	0.9	46.4	1.2	0.0	0.4	52.0	100.0	368
Wealth quintile												
Lowest	0.6	0.1	0.4	0.3	0.6	1.3	0.5	0.0	0.0	98.1	100.0	1,520
Second	0.8	0.6	0.0	0.5	0.3	1.8	0.4	0.0	0.0	97.9	100.0	1,553
Middle	0.8	0.5	0.2	1.3	0.1	2.1	0.7	0.1	0.0	97.0	100.0	1,586
Fourth	1.4	0.5	0.4	1.0	0.5	3.1	0.5	0.3	0.0	96.2	100.0	1,451
Highest	12.2	5.9	1.8	3.8	0.7	23.1	1.0	0.2	0.3	75.5	100.0	1,196
Total	2.8	1.3	0.5	1.3	0.4	5.5	0.6	0.1	0.1	93.7	100.0	7,307

9.4 PROBLEMS IN ACCESSING HEALTH CARE

Many factors can prevent women from getting medical advice or treatment for themselves when they are sick. Information on such factors is particularly important in understanding and addressing the barriers women may face in seeking care during pregnancy and at the time of delivery.

In the 2005 Ethiopia DHS survey, women were asked whether each of the following factors would be a big problem or not a big problem in seeking medical care: getting permission to go for treatment, getting money for treatment, distance to a health facility, having to take transport, not wanting to go alone, concern that there may not be a female health provider, concern that there may not be a health provider, and concern that there may be no one to complete the household chores. The results are shown in Table 9.8.

Table 9.8 Problems in accessing health care

Percentage of women who reported they have serious problems in accessing health care for themselves when they are sick, by type of problem, according to background characteristics, Ethiopia 2005

	Problems in accessing health care									
Background characteristic	Getting permission to go for treatment	Getting money for treatment	Distance to health facility	Having to take transport	Not wanting to go alone	Concern there may not be a female provider	Concern there may not be a health provider	Concern there may be no one to complete household chores	Any of the specified problems	Number of women
Age										
15-19	35.0	68.9	63.4	65.7	57.5	71.0	78.9	59.2	93.8	3,266
20-29	34.5	74.6	67.9	71.0	62.4	72.6	81.3	72.5	95.7	5,064
30-39	34.9	78.9	69.4	74.6	62.1	71.9	79.2	72.2	96.1	3,410
40-49	33.4	82.4	70.9	76.6	63.6	75.1	83.0	72.2	97.4	2,330
Number of living children										
0	32.9	67.3	60.5	62.4	57.5	70.0	79.3	60.7	93.8	4,554
1-2	34.1	76.8	67.5	71.3	62.9	72.7	80.2	71.6	95.5	3,226
3-4	34.3	80.0	71.4	76.6	62.6	72.6	80.2	76.0	96.9	2,981
5+	37.5	82.0	74.5	80.0	64.1	75.5	82.7	72.7	97.2	3,309
Marital status										
Never married	33.5	66.8	59.4	60.5	56.7	69.6	79.3	59.5	93.4	3,516
Married or living together	36.1	77.8	71.8	76.5	63.0	74.2	81.5	73.5	96.3	9,066
Divorced/separated/ widowed	27.7	83.1	62.2	68.0	62.2	68.9	77.2	66.8	96.8	1,488
Employment										
Not employed	35.3	75.6	69.4	73.1	60.6	71.7	79.6	68.9	95.4	9,251
Working for cash	21.9	66.9	46.9	51.2	50.4	62.6	73.0	60.2	92.5	1,904
Not working for cash	40.5	81.4	75.9	80.2	70.9	81.4	88.3	76.3	98.6	2,896
Missing	35.6	76.9	77.1	77.1	62.5	71.9	76.1	82.6	94.5	19
Residence										
Urban	16.0	53.4	31.1	33.5	40.7	53.7	71.2	57.2	88.6	2,499
Rural	38.5	80.4	75.6	79.8	65.8	76.5	82.5	71.9	97.2	11,571
Region										
Tigray	11.5	69.3	49.8	52.9	37.6	37.8	46.9	25.1	87.1	919
Affar	24.5	72.6	81.7	83.5	56.6	66.5	70.6	44.5	97.9	146
Amhara	22.0	67.0	61.3	65.6	48.9	66.1	75.8	63.7	94.3	3,482
Oromiya	48.6	83.0	76.0	80.9	74.8	78.9	83.5	78.9	96.4	5,010
Somali	36.0	89.3	82.7	82.6	68.4	70.9	76.2	63.1	96.2	486
Benishangul-Gumuz	37.1	78.4	63.8	69.1	51.7	72.6	83.3	64.2	96.6	124
SNNP	40.1	80.6	73.7	78.7	65.4	85.0	90.2	77.7	98.3	2,995
Gambela	32.4	73.3	64.6	64.2	58.1	56.9	82.4	61.6	97.3	44
Harari	22.7	55.3	36.7	39.9	43.7	66.5	94.5	62.0	97.2	39
Addis Ababa	7.5	47.2	33.4	28.5	44.5	59.9	91.0	64.3	96.8	756
Dire Dawa	25.2	67.6	32.3	33.7	26.7	26.4	44.7	36.5	81.7	69
Education										
No education	38.1	82.1	74.3	78.7	64.9	75.2	81.2	71.7	97.3	9,271
Primary	34.9	72.8	65.2	69.1	62.7	74.1	82.1	69.7	95.4	3,123
Secondary and higher	14.2	45.2	35.7	36.9	39.4	54.4	73.7	55.1	86.8	1,675
Wealth quintile										
Lowest	38.0	86.0	81.9	84.2	67.9	74.2	78.5	65.0	98.0	2,428
Second	37.8	82.6	76.4	80.4	64.6	74.8	80.4	69.7	97.5	2,643
Middle	40.4	81.3	76.3	81.3	66.4	78.1	85.8	74.9	97.7	2,732
Fourth	37.8	77.8	71.8	76.7	65.6	79.2	85.4	75.8	97.3	2,647
Highest	23.1	57.7	42.3	45.6	47.7	60.5	74.3	62.8	90.0	3,621
Total	34.5	75.6	67.7	71.6	61.4	72.5	80.5	69.3	95.7	14,070

The most important reason for not seeking health care was concern that there may not be a health provider (81 percent). Concern about getting money for treatment, concern that there may not be a female health provider, concern about having to take transport, and concern that there may be no one to complete the household chores were cited by about seven in ten women. Distance to a health facility and not wanting to go alone are perceived as big problems by more than three in five women. Only one in three (35 percent) women perceived getting permission to go for treatment to be a big problem.

Older women, women with more than two living children, women who were married or living together and women working but not for cash are more likely to cite concern that there may not be a health provider as a big problem than their counterparts. Women in rural areas and those residing in Harari, Addis Ababa and SNNP are also more likely than urban women and women residing in the other regions to mention this as a big problem.

Women with no education, women who are married or living with a man, and women working but not for cash are more likely to perceive the problem of not having a female health care provider as a big problem than their counterparts. More than eight in ten (85 percent) women residing in the SNNP Region also mentioned this as a big problem.

As expected, 80 percent of women in rural areas perceived having to take transport as a big problem, compared with only 34 percent of women in urban areas.

Knowledge and Attitudes Concerning Tuberculosis

Tuberculosis (TB) is a leading cause of death in the world and a major health problem in the developing world. TB is caused by the bacteria mycobacterium tuberculosis whose transmission is mainly airborne through droplets coughed or sneezed out by infected persons. The infection is primarily concentrated in the lungs but in some cases it can be transmitted to other areas of the body. The very young and very old and persons with a suppressed immune system (brought on from HIV infection or other causes) are especially prone to contracting the disease when exposed to it. The 2005 EDHS collected information from women and men on the level of their awareness of TB. Specifically, respondents were asked whether they had ever heard of the illness, how it spreads from one person to another, whether it can be cured, and whether they would want to keep the information secret if a member of their family got TB. This information is useful in policy formulation and implementation of programmes designed to combat and limit the spread of the disease.

Tables 9.9.1 and 9.9.2 show the percentage of women and men who have heard of TB, and among those who have heard of it, their knowledge and attitudes concerning TB, according to background characteristics. Three in four women and four in five men have heard of TB. Awareness is slightly higher among women and men in the older age groups, respondents with some secondary or higher education as well as among those in the highest wealth quintile. Ninety-four percent of women in urban areas, compared with 71 percent of women in rural areas have heard of TB. There are marked differences between regions in the knowledge of TB. Most women (about 95 percent) in Harari, Addis Ababa, and Dire Dawa have heard of tuberculosis. Awareness of TB is relatively low in Benishangul-Gumuz, Somali and Gambela, where only about one in two women are aware of TB. A similar pattern is observed for men.

Sixty-five percent of women and 79 percent of men reported that TB is spread through the air when coughing or sneezing. Education is strongly associated with knowledge of how TB can be spread. Nearly all women and men with secondary and higher education know that TB is spread through the air when coughing or sneezing. Wealthier women and women in urban areas are also more likely to know how the disease is spread.

Table 9.9.1 Knowledge and attitude concerning tuberculosis among women

Percentage of women who have heard of tuberculosis, and among women who have heard of TB, the percentage who know that TB is spread through the air by coughing or sneezing, who believe that TB can be cured, and who would want to keep secret that a family member has TB, by background characteristics, Ethiopia 2005

	All women		Among women who have heard of TB, the percentages who:			
Background characteristic	Percentage who have heard of TB	Number of women	Report that TB is spread through the air by coughing or sneezing	Believe that TB can be cured	Would want a family member's TB kept secret	Number of women
Age						
15-19	71.7	3,266	70.4	75.0	23.2	2,342
20-34	73.8	6,872	63.7	76.1	22.8	5,073
35-49	78.7	3,933	61.4	76.3	20.4	3,095
Residence						
Urban	93.7	2,499	83.9	87.9	16.2	2,342
Rural	70.6	11,571	59.0	72.5	23.9	8,168
Region						
Tigray	85.9	919	55.7	84.2	20.6	790
Affar	72.4	146	55.6	78.4	26.3	106
Amhara	73.1	3,482	56.1	74.6	19.5	2,545
Oromiya	78.3	5,010	68.4	75.7	21.1	3,920
Somali	52.1	486	38.2	75.2	22.0	253
Benishangul-Gumuz	48.3	124	66.2	75.5	23.2	60
SNNP	66.0	2,995	65.6	69.9	32.6	1,977
Gambela	55.7	44	63.6	82.1	28.8	25
Harari	95.8	39	84.7	90.5	8.6	37
Addis Ababa	96.6	756	87.8	86.5	11.1	731
Dire Dawa	95.1	69	81.6	92.5	10.2	66
Education						
No education	68.2	9,271	52.8	71.2	23.0	6,323
Primary	81.5	3,123	76.6	76.9	23.4	2,545
Secondary and higher	98.0	1,675	91.0	92.3	16.8	1,642
Wealth quintile						
Lowest	65.2	2,428	49.4	72.1	23.9	1,582
Second	69.1	2,643	55.1	69.8	24.6	1,827
Middle	69.0	2,732	59.1	70.4	25.7	1,886
Fourth	75.1	2,647	64.5	75.2	20.8	1,987
Highest	89.1	3,621	80.5	84.9	18.6	3,228
Total	74.7	14,070	64.5	75.9	22.2	10,510

Seventy-six percent of women and 85 percent of men believe that TB can be cured. Women's belief that TB can be cured varies by education, wealth quintile, and place of residence. Eighty-eight percent of women in urban areas, compared with 73 percent of women in rural areas believe that TB can be cured. About nine in ten women in Dire Dawa and Harari believe that TB can be cured, compared with seven in ten women in SNNP. Ninety-two percent of women with some secondary education and 85 percent of women in the highest wealth quintile believe that TB can be cured compared with 71 percent of women with no education and 72 percent of those in the lowest wealth quintile. A similar pattern is observed for men.

Table 9.9.2 Knowledge and attitude concerning tuberculosis among men

Percentage of men who have heard of tuberculosis, and among men who have heard of TB, the percentage who know that TB is spread through the air by coughing or sneezing, who believe that TB can be cured, and who would want to keep secret that a family member has TB, by background characteristics, Ethiopia 2005

	All men		Among men who have heard of TB, the percentages who:			
Background characteristic	Percentage who have heard of TB	Number of men	Report that TB is spread through the air by coughing or sneezing	Believe that TB can be cured	Would want a family member's TB kept secret	Number of men
Age						
15-19	74.2	1,335	82.7	82.6	31.8	990
20-34	83.4	2,558	80.2	86.3	30.2	2,133
35-49	87.2	2,139	76.2	84.4	28.9	1,865
Residence						
Urban	94.0	916	93.7	91.7	24.1	861
Rural	80.6	5,117	76.2	83.4	31.3	4,126
Region						
Tigray	94.2	366	69.8	89.1	8.0	345
Affar	78.6	65	67.0	90.5	19.8	51
Amhara	78.5	1,521	74.3	84.6	16.5	1,194
Oromiya	83.0	2,222	83.2	84.7	37.7	1,844
Somali	78.9	202	58.2	79.6	30.2	160
Benishangul-Gumuz	70.3	54	74.7	82.4	22.0	38
SNNP	82.4	1,244	80.1	82.1	41.2	1,025
Gambela	75.7	21	72.0	87.2	22.9	16
Harari	96.5	16	92.1	93.2	40.4	16
Addis Ababa	93.6	292	96.1	92.2	25.9	273
Dire Dawa	89.8	30	89.6	95.6	31.4	27
Education						
No education	77.1	2,589	65.9	79.7	31.4	1,996
Primary	81.7	2,252	83.8	84.3	30.4	1,840
Secondary and higher	96.7	1,192	94.9	94.6	27.1	1,152
Wealth quintile						
Lowest	76.1	1,100	66.4	82.6	30.0	837
Second	79.6	1,184	76.0	80.6	30.5	942
Middle	78.2	1,081	75.5	81.5	28.1	846
Fourth	85.4	1,200	79.9	86.3	33.4	1,024
Highest	91.1	1,469	91.2	90.1	28.4	1,338
Total	82.7	6,033	79.2	84.8	30.0	4,988

More than a fifth of women and three-tenths of men believe that if a family member got TB they would want to keep it a secret. Less educated respondents, women in the lower (lowest to middle) wealth quintiles, respondents who reside in rural areas, and those who reside in SNNP are more likely than their counterparts to want to keep secret the fact that a member of their family has the disease.

Use of Tobacco

Smoking has a negative effect on the health of a person. Women and men interviewed in the 2005 EDHS were asked about their smoking habits. The data show that very few women in Ethiopia (less than 2 percent) smoke (data not shown).

Table 9.10 shows the percentage of men who smoke cigarettes or tobacco and the percent distribution of cigarette smokers by number of cigarettes smoked in the preceding 24 hours, according to background characteristics.

Smoking is not common in Ethiopia. Only 9 percent of men smoke cigarettes and 5 percent consume other forms of tobacco. Use of tobacco is more common among older men age 35 and above, men living in rural areas, men with no education and men in the lowest wealth quintile. Regional variations are significant, with use of tobacco being highest in Affar, where nearly one in two men use tobacco, and lowest in Tigray, where less than 2 percent of men reported using tobacco. The majority of men who smoked consumed as much as 3-5 or 10 or more cigarettes a day (about 30 percent each).

Table 9.10 Use of tobacco: men

Percentage of men who smoke cigarettes or a pipe or use other tobacco products and the percent distribution of cigarette smokers by number of cigarettes smoked in preceding 24 hours, according to background characteristics, Ethiopia 2005

Background characteristic	Cigarettes	Pipe	Other tobacco	Does not use tobacco	Number of men	Number of cigarettes: 0	1-2	3-5	6-9	10+	Don't know/ missing	Total	Number of cigarette smokers
Age													
15-19	1.0	0.0	0.6	98.3	1,335	4.3	17.3	52.9	10.5	14.6	0.3	100.0	14
20-34	7.2	0.0	3.2	90.6	2,558	4.1	14.0	29.6	16.5	33.7	2.1	100.0	185
35-49	14.7	0.1	9.4	79.3	2,139	6.6	15.2	27.3	17.7	30.1	3.0	100.0	314
Residence													
Urban	8.1	0.0	0.9	91.2	916	6.0	8.7	35.2	12.0	38.0	0.1	100.0	74
Rural	8.6	0.0	5.5	87.8	5,117	5.6	15.9	27.8	17.9	29.8	3.0	100.0	439
Region													
Tigray	1.4	0.0	0.0	98.6	366	0.0	0.0	31.0	14.9	37.3	16.9	100.0	5
Affar	25.4	0.0	27.8	52.0	65	0.0	7.3	41.1	23.4	28.2	0.0	100.0	17
Amhara	2.3	0.0	2.1	96.0	1,521	6.4	27.3	11.6	10.7	39.3	4.8	100.0	34
Oromiya	11.7	0.1	6.2	84.6	2,222	3.3	17.6	28.6	20.1	28.5	1.9	100.0	259
Somali	24.8	0.0	3.3	73.5	202	1.4	2.3	8.8	16.0	71.0	0.5	100.0	50
Benishangul-Gumuz	13.4	0.0	15.1	74.8	54	2.1	8.6	24.9	28.8	33.5	2.0	100.0	7
SNNP	7.9	0.0	6.5	87.7	1,244	15.2	14.0	43.7	11.2	10.4	5.5	100.0	98
Gambela	15.5	0.8	13.0	76.0	21	3.1	13.7	39.7	6.7	33.7	3.1	100.0	3
Harari	25.2	0.0	3.6	72.5	16	0.0	2.1	11.8	19.4	65.3	1.3	100.0	4
Addis Ababa	9.9	0.0	0.6	89.8	292	7.7	13.2	31.5	14.1	33.5	0.0	100.0	29
Dire Dawa	20.7	0.0	6.1	75.4	30	0.0	3.5	27.9	15.5	53.1	0.0	100.0	6
Education													
No education	10.8	0.0	8.1	83.5	2,589	5.2	17.7	23.6	19.3	31.2	3.1	100.0	281
Primary	6.8	0.1	3.2	91.5	2,252	6.7	9.4	35.2	15.7	30.0	3.0	100.0	153
Secondary and higher	6.7	0.0	0.8	92.7	1,192	5.1	15.4	35.2	12.0	32.2	0.1	100.0	79
Wealth quintile													
Lowest	12.5	0.0	10.4	80.2	1,100	1.7	13.4	28.6	20.4	33.2	2.7	100.0	138
Second	9.5	0.2	6.2	87.4	1,184	12.2	11.9	23.5	22.9	23.9	5.6	100.0	112
Middle	8.5	0.0	3.9	89.0	1,081	4.1	16.3	29.2	15.8	31.0	3.6	100.0	92
Fourth	6.4	0.0	3.4	91.0	1,200	4.2	26.1	23.2	13.3	33.1	0.1	100.0	77
Highest	6.4	0.0	1.4	92.3	1,469	6.3	9.8	39.8	9.6	34.4	0.1	100.0	94
Total	8.5	0.0	4.8	88.3	6,033	5.6	14.9	28.8	17.1	31.0	2.6	100.0	513

CHILD HEALTH 10

This chapter presents findings on several areas of importance to child health; characteristics of the neonate (birth weight and size at birth), vaccination status of children and important childhood illnesses and their treatment. The information on birth weight and birth size is important for the design and implementation of programmes aimed at reducing neonatal and infant mortality.

Vaccination coverage information focuses on the age group 12-23 months. Overall coverage levels at the time of the survey and by 12 months of age are shown for this age group. Additionally, the source of the vaccination information (whether based on a written vaccination card or on the mother's recall) is shown. Differences in vaccination coverage between subgroups of the population aid in programme planning.

Treatment practices and contact with health services among children with the three most important childhood illnesses (acute respiratory infection, fever, and diarrhoea) help in the assessment of national programmes aimed at reducing the mortality impact of these illnesses. Information is provided on the prevalence and treatment of ARI and its treatment with antibiotics and the prevalence of fever and its treatment with antimalarial drugs and antibiotics. The treatment of diarrhoeal disease with oral rehydration therapy (including increased fluids) aids in the assessment of programmes that recommend such treatment. Because appropriate sanitary practices can help prevent and reduce the severity of diarrhoeal disease, information is also provided on the manner of disposing of children's faecal matter.

10.1 Child's Size at Birth

A child's birth weight or size at birth is an important indicator of the child's vulnerability to the risk of childhood illnesses and the chances of survival. Children whose birth weight is less than 2.5 kilogrammes, or children reported to be 'very small' or 'smaller than average' are considered to have a higher than average risk of early childhood death. For births in the five years preceding the survey, birth weight was recorded in the questionnaire if available from either a written record or the mother's recall. Since birth weight may not be known for many babies, the mother's estimate of the baby's size at birth was also obtained. Even though it is subjective, it can be a useful proxy for the weight of the child. Table 10.1 presents information on child's size at birth according to background characteristics.

Only 3 percent of children in Ethiopia are weighed at birth. This is not surprising because the majority of births do not take place in a health facility, and children are less likely to be weighed at birth. Among children born in the five years before the survey with a reported birth weight, 14 percent weighed less than 2.5 kg at birth. Birth weight is lower among children born to older women (age at birth 35-49), children at higher birth orders (6 and above), and children of women with no education. The birth weight of a child also varies by mother's place of residence. Twenty-three percent of births in rural areas compared with 10 percent in urban areas have a reported birth weight less than 2.5 kg.

In the absence of birth weight a mother's subjective assessment of the size of the baby at birth may be useful. Twenty-one percent of births were reported to be very small and 7 percent were reported as smaller than average. Births to mothers with no education and rural births are more likely to be reported as very small or smaller than average than births to educated mothers and births in urban areas. Nearly two-fifths of births (37 percent) in Affar are reported to be very small or smaller than average.

Table 10.1 Child's size at birth

Among live births in the five years preceding the survey with a reported birth weight, the percent distribution by birth weight and among all live births in the five years preceding the survey, the percent distribution by mother's estimate of baby's size at birth, according to background characteristics, Ethiopia 2005

Background characteristics	Percent distribution of births with a reported birth weight[1]				Percent distribution of all live births by size of child at birth					
	Less than 2.5 kg	2.5 kg or more	Total	Number of births	Very small	Smaller than average	Average or larger	Don't know/ missing	Total	Number of births
Mother's age at birth										
<20	14.4	85.6	100.0	50	21.3	7.9	70.5	0.3	100.0	1,715
20-34	12.6	87.4	100.0	263	20.1	7.2	72.3	0.4	100.0	7,702
35-49	19.0	81.0	100.0	30	21.2	7.2	71.0	0.6	100.0	1,746
Birth order										
1	10.1	89.9	100.0	135	21.9	7.8	69.7	0.7	100.0	1,933
2-3	12.9	87.1	100.0	141	20.5	7.7	71.7	0.2	100.0	3,351
4-5	14.7	85.3	100.0	37	18.9	7.4	73.3	0.4	100.0	2,620
6+	28.6	71.4	100.0	31	20.9	6.5	72.1	0.5	100.0	3,259
Residence										
Urban	10.2	89.8	100.0	255	16.7	5.0	77.9	0.4	100.0	815
Rural	23.0	77.0	100.0	88	20.8	7.5	71.4	0.4	100.0	10,348
Region										
Tigray	(0.0)	(100.0)	100.0	27	20.1	13.5	65.8	0.6	100.0	698
Affar	*	*	100.0	3	27.2	9.9	62.6	0.3	100.0	107
Amhara	*	*	100.0	37	23.9	9.0	66.5	0.5	100.0	2,621
Oromiya	(20.5)	(79.5)	100.0	100	20.0	5.7	74.0	0.3	100.0	4,411
Somali	*	*	100.0	13	15.9	8.6	73.6	1.9	100.0	477
Benishangul-Gumuz	*	*	100.0	2	18.2	11.7	68.6	1.5	100.0	105
SNNP	(19.7)	(80.3)	100.0	39	18.9	5.9	75.0	0.2	100.0	2,500
Gambela	14.0	86.0	100.0	4	12.9	6.5	80.2	0.4	100.0	31
Harari	5.6	94.4	100.0	6	20.3	4.9	73.5	1.3	100.0	22
Addis Ababa	12.8	87.2	100.0	106	16.0	7.2	76.4	0.5	100.0	153
Dire Dawa	5.9	94.1	100.0	8	13.0	5.0	81.7	0.3	100.0	37
Mother's education										
No education	24.3	75.7	100.0	76	21.1	7.7	70.8	0.4	100.0	8,838
Primary	18.4	81.6	100.0	74	19.7	5.3	74.6	0.3	100.0	1,855
Secondary and higher	7.3	92.7	100.0	193	12.0	7.5	79.8	0.6	100.0	470
Wealth quintile										
Lowest	*	*	100.0	3	22.4	8.3	68.7	0.6	100.0	2,440
Second	*	*	100.0	7	21.6	7.7	70.3	0.5	100.0	2,356
Middle	*	*	100.0	21	22.3	7.1	70.1	0.4	100.0	2,486
Fourth	(38.3)	(61.7)	100.0	28	18.0	6.6	75.2	0.3	100.0	2,222
Highest	10.2	89.8	100.0	285	16.4	6.4	76.8	0.4	100.0	1,660
Total	13.5	86.5	100.0	343	20.5	7.3	71.8	0.4	100.0	11,163

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Based on either a written record or the mother's recall.

The percentage of low birth weight babies has increased in the past five years from 8 percent in 2000 to 14 percent in 2005. The percentage of babies assessed by mothers as being very small at birth has increased over the same period from 6 percent to 21 percent.

10.2 VACCINATION COVERAGE

Universal immunisation of children against the six vaccine-preventable diseases (namely, tuberculosis, diphtheria, whooping cough, tetanus, polio, and measles) is crucial to reducing infant and child mortality. Differences in vaccination coverage among subgroups of the population are useful for programme planning and targeting resources to areas most in need. Additionally, information on immunization coverage is important for the monitoring and evaluation of the Expanded Programmes on Immunization (EPI).

The EDHS 2005 collected information on vaccination coverage for all living children born in the five years preceding the survey. According to the guidelines developed by the World Health Organization, children are considered fully vaccinated when they have received a vaccination against tuberculosis (BCG), three doses each of the DPT and polio vaccines, and a measles vaccination by the age of 12 months. BCG should be given at birth or at first clinical contact, DPT and polio require three vaccinations at approximately 4, 8, and 12 weeks of age, and measles should be given at or soon after reaching 9 months of age.

Information on vaccination coverage was collected in two ways in the EDHS: from vaccination cards shown to the interviewer and from mothers' verbal reports. If the cards were available, the interviewer copied the vaccination dates directly onto the questionnaire. When there was no vaccination card for the child or if a vaccine had not been recorded on the card as being given the respondent was asked to recall the vaccines given to her child. Table 10.2 and Figure 10.1 show the percentage of children age 12-23 months who have received the various vaccinations by source of information, that is, from vaccination card or mother's report. This is the youngest cohort of children who have reached the age by which they should be fully vaccinated.

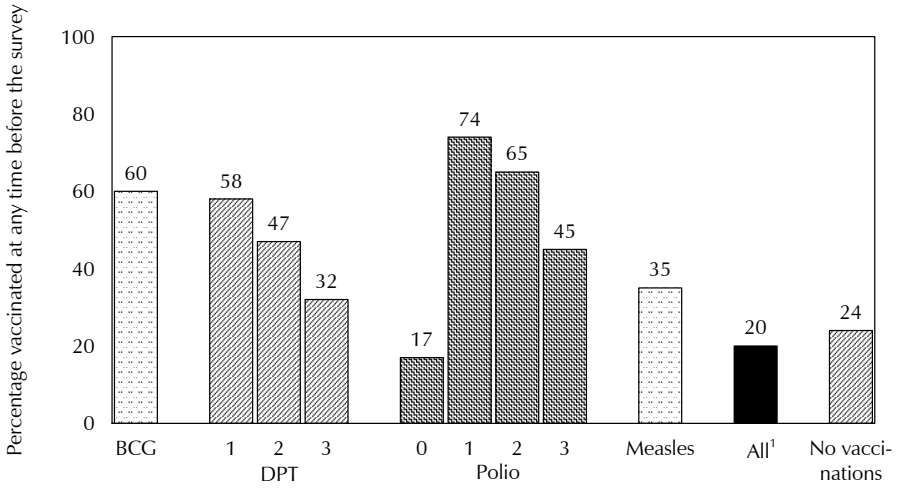
Table 10.2 Vaccinations by source of information

Percentage of children age 12-23 months who received specific vaccines at any time before the survey, by source of information (vaccination card or mother's report), and percentage vaccinated by 12 months of age, Ethiopia 2005

Source of information	BCG	DPT 1	DPT 2	DPT 3	Polio 0	Polio 1	Polio 2	Polio 3	Measles	All[2]	No vaccinations	Number of children
Vaccinated at any time before survey												
Vaccination card	33.4	36.5	31.3	25.1	13.2	35.8	31.0	24.9	22.2	17.3	0.0	692
Mother's report	27.0	21.7	15.7	6.7	4.2	38.5	33.7	19.8	12.6	3.0	24.0	1,185
Either source	60.4	58.2	47.0	31.9	17.4	74.3	64.6	44.7	34.9	20.4	24.0	1,877
Vaccinated by 12 months of age[3]	57.4	54.9	43.9	29.0	16.9	70.0	60.2	41.0	28.5	16.7	28.0	1,877

[1] Polio 0 is the polio vaccination given at birth.
[2] BCG, measles, and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)
[3] For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccination.

Figure 10.1 **Percentage of Children Age 12-23 Months with Specific Vaccinations**



Note: Based on health cards and mothers' reports
[1] BCG, measles, and three doses each of DPT and polio vaccine (excluding polio 0)

EDHS 2005

Twenty percent of children age 12-23 months were fully vaccinated at the time of the survey, 60 percent had received the BCG vaccination, and 35 percent had been vaccinated against measles. The coverage for the first dose of DPT is relatively high (58 percent). However, only 32 percent went on to receive the third dose of DPT. Even though DPT and polio vaccines are often administered at the same time, polio coverage is much higher than DPT coverage. Three in four children received the first dose of polio, two in three received the second dose, and more than four in ten received the third dose. This is primarily due to the success of the national immunization day campaigns during which polio vaccines are administered. Nevertheless, the dropout between the first and third doses of polio is marked—a 40 percent decline.

Table 10.3 shows the vaccination coverage among children age 12-23 months, according to information from the vaccination card or mother's report, by background characteristics. This information may give some indication of the success of the immunization programme in reaching out to all population subgroups. Boys are slightly more likely than girls to be fully immunized (23 percent versus 18 percent). Birth order has a close relationship with vaccination coverage; as birth order increases, vaccination coverage generally decreases. Twenty-seven percent of first-born children have been fully immunized, compared with 18 percent of children of birth order six and above.

There are marked urban-rural differences in vaccination coverage. For example, children residing in urban areas are almost three times (49 percent) as likely to be fully immunized as children in rural areas (18 percent). Similarly, there are substantial differences in coverage among regions. The percentage of children fully immunized ranges from a low of less than 1 percent in the Affar Region to 70 percent in Addis Ababa.

The percentage of children fully immunized increases with mother's education. Seventeen percent of children whose mothers have no education are fully immunized, compared with 42 percent of children born to mothers who have at least some secondary education. Children in households in the lowest wealth quintile are less likely to have been fully immunized than children in households in the highest wealth quintile.

Table 10.3 shows that a vaccination card was seen for 37 percent of children age 12-23 months. The actual percentage of children who have a vaccination card may be higher because in some areas the cards are kept at the health centre and not by mothers. Cards were more likely to have been shown for male children, first-order births, children living in urban areas, children in Addis Ababa, children of mothers with at least some secondary education, and children of mothers in the highest wealth quintile.

Data from the EDHS generally show vaccination coverage to be lower than data collected from the 2004 Welfare Monitoring Survey and data reported in the service statistics from the Ministry of Health. However, when comparing data from various sources, consideration should be given to differences in the sampling frame, design, sample size, representativeness of the sample, and selection methodology, as well as differences in the source of information, phrasing of questions, and reporting of data that could explain these differences.

Table 10.3 Vaccinations by background characteristics

Percentage of children age 12-23 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), and percentage with a vaccination card, by background characteristics, Ethiopia 2005

Background characteristic	BCG	DPT 1	DPT 2	DPT 3	Polio[1] 0	Polio[1] 1	Polio[1] 2	Polio[1] 3	Measles	All[2]	No vaccinations	Percentage with a vaccination card seen	Number of children
Sex													
Male	63.8	60.7	49.0	34.5	18.3	75.1	66.0	46.1	36.4	22.5	23.1	38.7	959
Female	56.9	55.6	45.0	29.1	16.5	73.5	63.2	43.3	33.2	18.2	25.1	35.0	917
Birth order													
1	65.9	66.7	52.2	40.5	21.1	78.1	66.1	46.6	39.5	26.8	21.7	45.3	359
2-3	63.9	61.4	51.8	34.4	21.4	75.9	66.6	48.2	35.2	21.1	20.9	41.7	543
4-5	55.4	54.0	44.0	28.1	15.9	67.8	59.3	39.7	32.8	17.4	30.0	32.1	448
6+	57.3	52.7	41.2	26.5	12.1	75.7	66.0	44.0	33.1	17.7	23.7	30.3	527
Residence													
Urban	84.0	84.9	78.6	65.7	43.1	86.9	80.8	69.3	65.4	49.3	11.3	62.0	147
Rural	58.4	55.9	44.3	29.0	15.2	73.3	63.3	42.6	32.2	17.9	25.1	34.7	1,729
Region													
Tigray	77.4	85.9	70.9	51.6	19.6	89.8	77.3	56.6	63.3	32.9	7.2	58.4	135
Affar	27.6	13.5	8.7	2.8	4.6	58.2	36.9	19.9	8.1	0.6	38.8	4.0	18
Amhara	62.3	57.2	46.7	31.5	11.0	78.1	70.7	45.6	34.8	17.1	20.6	33.3	482
Oromiya	57.8	54.2	43.7	28.5	18.5	73.7	61.5	41.1	29.4	20.2	25.5	38.8	691
Somali	17.1	14.9	11.1	5.6	5.2	19.8	17.7	10.2	6.4	2.8	78.0	8.1	78
Benishangul-Gumuz	53.5	49.6	41.4	30.7	9.4	70.0	59.4	36.7	33.4	18.5	28.5	28.7	16
SNNP	64.2	64.8	50.4	33.2	21.0	75.3	66.6	50.2	37.7	20.3	21.7	35.5	408
Gambela	49.3	39.8	29.8	20.3	26.2	68.1	59.5	41.4	30.7	15.9	31.9	22.5	5
Harari	67.4	64.6	56.5	45.8	33.0	74.7	61.9	52.0	39.9	34.9	23.7	41.0	4
Addis Ababa	93.5	93.8	90.5	83.8	71.3	97.7	92.7	85.5	78.8	69.9	2.3	68.3	32
Dire Dawa	75.4	69.6	68.3	61.4	33.6	81.8	79.2	65.1	55.7	43.4	18.2	54.8	7
Education													
No education	56.5	54.5	42.5	27.9	14.6	71.2	61.0	39.8	30.0	17.2	27.3	34.4	1,456
Primary	70.7	68.3	59.5	40.7	19.6	83.3	74.5	58.7	48.4	28.6	14.2	42.3	328
Secondary and higher	85.8	80.9	73.6	62.2	54.5	92.5	86.0	71.5	63.4	41.5	7.5	56.8	93
Wealth quintile													
Lowest	50.0	47.4	37.2	25.6	16.0	68.6	57.9	38.2	24.9	14.1	30.0	31.3	450
Second	60.9	57.0	44.9	26.8	11.7	71.7	60.6	38.3	29.0	16.7	28.1	31.2	399
Middle	59.6	59.3	45.0	33.0	15.3	75.4	64.2	45.2	37.6	21.8	22.4	39.2	381
Fourth	65.4	60.3	50.6	30.6	17.4	78.5	72.3	48.8	36.1	17.9	17.9	35.2	345
Highest	70.6	72.2	62.9	47.9	29.8	80.2	71.8	57.5	52.5	35.6	18.9	51.7	302
Total	60.4	58.2	47.0	31.9	17.4	74.3	64.6	44.7	34.9	20.4	24.0	36.9	1,877

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

Trends in Vaccination Coverage

One way of measuring trends in vaccination coverage is to compare coverage among children of different ages in the 2005 EDHS. Table 10.4 shows the percentage of children who have received vaccinations during the first year of life by current age. This type of data can provide information on trends in vaccination coverage over the past four years.

Table 10.4 Vaccinations in the first year of life

Percentage of children under five years of age at the time of the survey who received specific vaccines by 12 months of age, and percentage with a vaccination card, by current age of child, Ethiopia 2005

Current age in months	BCG	DPT 1	DPT 2	DPT 3	Polio[1] 0	Polio[1] 1	Polio[1] 2	Polio[1] 3	Measles	All[2]	No vaccinations	Percentage with a vaccination card seen	Number of children
12-23	57.4	54.9	43.9	29.0	16.9	70.0	60.2	41.0	28.5	16.7	28.0	36.9	1,877
24-35	45.3	39.1	30.0	19.7	10.7	60.0	50.7	35.8	18.8	10.4	39.2	22.2	1,892
36-47	42.4	34.5	27.5	17.5	9.6	53.9	47.1	35.4	17.8	8.0	43.7	13.9	2,105
48-59	36.2	30.1	24.9	15.8	7.4	47.7	42.1	30.5	15.3	7.2	51.3	11.6	2,013
Total	46.9	40.6	32.3	20.9	11.2	60.0	52.0	37.4	20.8	10.7	38.4	20.8	7,887

Note: Information was obtained from the vaccination card or if there was no written record, from the mother. For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccinations.
[1] Polio 0 is the polio vaccination given at birth.
[2] BCG, measles, and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)

There are notable changes in vaccination coverage over the past five years. The percentage of children who have received no vaccinations at all by 12 months of age has declined significantly over the past four years from 51 percent among children age 48-59 months at the time of the survey to 28 percent among children age 12-23 months. The percentage fully immunized by age 12 months has increased from 7 percent to 17 percent. Not surprisingly, vaccination cards were shown for 37 percent of children age 12-23 months but for only 12 percent of children age 48-59 months. This may be because vaccination cards for older children have been discarded.

Trends in vaccination coverage can be seen by comparing similarly collected data in the 2000 EDHS with the data from the 2005 EDHS. The data show that vaccination coverage in Ethiopia has improved over the past five years. The percentage of children age 12-23 months fully vaccinated at the time of the survey increased by 43 percent from 14 percent in 2000 to 20 percent in 2005. However, the percentage who had received none of the six basic vaccinations increased from 17 percent in 2000 to 24 percent in 2005. With the exception of Polio 1, the percentage of children who received all the other vaccinations has increased in the past five years, with the largest increase seen in the percentage of children under five who received DPT 3 by 12 months of age.

10.3 Acute Respiratory Infection

Acute respiratory infection (ARI) is among the leading causes of childhood morbidity and mortality throughout the world. Early diagnosis and treatment with antibiotics can prevent a large proportion of deaths caused by ARI. In the 2005 Ethiopia DHS survey, 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 compatible with ARI. It should be noted that the morbidity data collected are subjective in the sense that they are based on the mother's perception of illness without validation by medical personnel.

Table 10.5 shows that 13 percent of children under five years of age showed symptoms of ARI at some time in the two weeks preceding the survey. Prevalence of ARI varies by age of child. Children age 6-11 months are most likely to show symptoms of ARI (18 percent), compared with children in the other age groups. There are small differences in the prevalence of ARI by gender of the child and wealth quintile. Children living in households that use wood/straw or animal dung for cooking are proportionately more likely to exhibit symptoms of ARI than children living in households using other sources of cooking fuel.

Table 10.5 Prevalence and treatment of symptoms of ARI

Among children under age five, the percentage who had symptoms of acute respiratory infection (ARI), in the two weeks preceding the survey and the percentage with symptoms of ARI who took specific treatments according to background characteristics, Ethiopia 2005

	Children under age five		Children under age five with symptoms of ARI		
Background characteristic	Percentage with symptoms of ARI[1]	Number of children	Percentage for whom treatment was sought from a health facility or provider[2]	Percentage who took antibiotics	Number of children
Age in months					
<6	13.8	1,152	21.6	5.2	159
6-11	17.7	1,071	19.2	4.3	190
12-23	14.6	1,877	22.4	3.9	274
24-35	13.1	1,892	20.2	6.5	247
36-47	10.8	2,105	17.2	6.1	226
48-59	8.5	2,013	9.7	2.8	172
Sex					
Male	12.6	5,129	18.9	4.3	646
Female	12.5	4,980	18.5	5.5	623
Residence					
Urban	8.5	752	45.6	11.0	64
Rural	12.9	9,357	17.3	4.6	1,205
Region					
Tigray	14.4	653	13.9	7.0	94
Affar	5.3	96	*	*	5
Amhara	9.3	2,312	14.7	1.6	215
Oromiya	14.2	4,017	20.3	5.1	572
Somali	7.0	432	(7.6)	(3.7)	30
Benishangul-Gumuz	9.6	95	23.0	12.6	9
SNNP	14.4	2,273	19.6	5.6	328
Gambela	10.4	29	(35.4)	(7.0)	3
Harari	9.3	21	(34.9)	(4.4)	2
Addis Ababa	6.1	146	*	*	9
Dire Dawa	2.4	34	*	*	1
Cooking fuel					
Electricity or gas	(0.2)	12	*	*	0
Kerosene	4.7	128	*	*	6
Charcoal	10.2	167	(51.8)	(9.8)	17
Wood/straw[3]	12.8	9,025	18.1	5.0	1,156
Animal dung	11.6	768	16.7	0.0	89
Other/missing	(2.5)	9	*	*	0
Mother's education					
No education	12.5	7,951	15.4	4.1	997
Primary	13.5	1,709	27.6	7.2	231
Secondary and higher	9.2	450	(50.1)	(11.8)	41
Wealth quintile					
Lowest	12.3	2,218	18.6	4.2	272
Second	11.4	2,122	12.3	3.9	241
Middle	14.6	2,210	20.7	5.5	323
Fourth	13.1	2,015	13.2	5.2	265
Highest	10.8	1,544	33.1	5.9	167
Total	12.6	10,109	18.7	4.9	1,269

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Symptoms of ARI (cough accompanied by short rapid breathing which was chest-related) is considered a proxy for pneumonia.
[2] Excludes pharmacy, shop, and traditional practitioner
[3] Includes grass, shrubs, crop residues.

Cough and rapid breathing were higher among children in rural areas (13 percent) than children in urban areas (9 percent). Prevalence of ARI ranges from a high of 14 percent among children under five living in Tigray, Oromiya and SNNP to a low of 2 percent among children in Dire Dawa. ARI prevalence is lower for children whose mothers have at least some secondary education.

Only 19 percent of all children under five with symptoms of ARI were taken to a health facility or provider. There are differences in the proportion of children with ARI symptoms taken to a health facility by child's age; children under age six months and children age 12-23 months are more likely to be taken to a health facility than other children. There is no gender difference in children taken to a health facility or provider. Children of women with primary or secondary education are more likely to be taken to a health facility or provider when they have ARI than other children.

The proportion of children with cough and rapid breathing who were taken to a health facility is much higher in urban areas (46 percent) than in rural areas (17 percent).

Five percent of children with symptoms of ARI received antibiotics.

Compared with 2000, far fewer children in 2005 were reported to have ARI in the two weeks preceding the survey, and a slightly higher proportion were taken for treatment.

10.4 Fever

Fever is a major manifestation of malaria and other acute infections in children. Malaria and fever contribute to high levels of malnutrition and mortality. While fever can occur year-round, malaria is more prevalent after the end of the rainy season. For this reason, temporal factors must be taken into account when interpreting fever as an indicator of malaria prevalence. Since malaria is a major contributory cause of death in infancy and childhood in many developing countries, the so-called presumptive treatment of fever with anti-malarial medication is advocated in many countries where malaria is endemic. Malaria is discussed in greater detail in Chapter 12.

Table 10.6 shows the percentage of children under five with fever during the two weeks preceding the survey and the percentage receiving various treatments, by selected background characteristics. Nineteen percent of children under five were reported to have had fever in the two weeks preceding the survey. The prevalence of fever varies by age of child. Children age 6-11 months and 12-23 months are more commonly sick with fever (28 percent and 23 percent, respectively) than other children.

There are no significant variations in the prevalence of fever by sex of the child, place of residence, or wealth quintile of the household. The prevalence of fever among children under five varies from a low of 12 percent in Dire Dawa to a high of 24 percent in SNNP. The prevalence of fever is also relatively high among children living in Tigray (20 percent) and Oromiya (19 percent).

Less than one in five (18 percent) children with fever were taken to a health facility or provider for treatment. Younger children, male children, and children of mothers with some secondary or higher education were more likely to be taken to a health facility or provider for treatment of fever than other children. Likewise, children of mothers in the highest wealth quintile, children living in urban areas, and children living in Addis Ababa were more likely to be treated in a health facility or by a provider. A very small percentage of children with fever received anti-malarial drugs (3 percent) or antibiotic drugs (6 percent).

Table 10.6 Prevalence and treatment of fever

Among children under age five, the percentage who had a fever in the two weeks preceding the survey and the percentage with fever for whom treatment was sought from a health facility or provider, who took antimalarial drugs and who took antibiotic drugs, by background characteristics, Ethiopia 2005

	Children under age five		Children under age five with fever			
Background characteristic	Percentage with fever	Number of children	Percentage for whom treatment was sought from a health facility or provider[1]	Percentage who took antimalarial drugs	Percentage who took antibiotic drugs	Number of children
Age in months						
<6	16.8	1,152	19.0	0.6	7.2	194
6-11	27.6	1,071	20.3	4.4	6.8	295
12-23	23.3	1,877	18.3	2.7	6.4	438
24-35	21.6	1,892	16.5	1.9	6.4	408
36-47	15.1	2,105	17.0	3.5	6.2	317
48-59	11.6	2,013	14.0	4.9	5.7	233
Sex						
Male	18.2	5,129	19.2	2.7	6.6	935
Female	19.1	4,980	15.9	3.2	6.3	951
Residence						
Urban	16.0	752	45.3	4.2	13.3	121
Rural	18.9	9,357	15.6	2.9	6.0	1,765
Region						
Tigray	20.3	653	10.1	0.0	6.4	132
Affar	17.0	96	12.1	9.0	7.6	16
Amhara	14.2	2,312	12.6	2.4	2.3	329
Oromiya	19.0	4,017	20.2	1.5	7.2	764
Somali	14.0	432	4.4	0.0	1.9	60
Benishangul-Gumuz	15.3	95	21.0	4.0	7.9	15
SNNP	23.5	2,273	18.5	6.3	7.8	534
Gambela	17.8	29	28.0	11.2	4.1	5
Harari	13.7	21	23.1	1.2	6.1	3
Addis Ababa	16.1	146	50.9	3.3	20.4	23
Dire Dawa	12.3	34	(28.6)	(0.0)	(6.8)	4
Mother's education						
No education	18.3	7,951	13.0	2.5	4.9	1,457
Primary	21.3	1,709	29.4	4.9	11.2	364
Secondary and higher	14.4	450	53.9	4.1	14.1	65
Wealth quintile						
Lowest	19.1	2,218	10.8	0.5	4.8	422
Second	19.5	2,122	14.2	2.7	2.8	413
Middle	19.7	2,210	16.6	3.6	9.0	436
Fourth	17.7	2,015	16.4	3.5	6.8	357
Highest	16.7	1,544	37.0	5.7	10.0	258
Total	18.7	10,109	17.5	3.0	6.4	1,886

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Excludes pharmacy, shop, and traditional practitioner

10.5 PREVALENCE OF DIARRHOEA

Dehydration caused by severe diarrhoea is a major cause of morbidity and mortality among young children although the condition can be easily treated with oral rehydration therapy (ORT). Exposure to diarrhoea-causing agents is frequently related to the use of contaminated water and to unhygienic practices in food preparation and disposal of excreta. In interpreting the findings of the 2005 Ethiopia DHS survey, it should be borne in mind that prevalence of diarrhoea varies seasonally.

Table 10.7 shows the percentage of children under five with diarrhoea in the two weeks preceding the survey according to selected background characteristics. Overall, 18 percent of all children under five had diarrhoea while 6 percent had diarrhoea with blood.

The occurrence of diarrhoea varies by age of the child. Young children age 6-23 months are more prone to diarrhoea than children in the other age groups. There are no variations in the prevalence of diarrhoea by child's sex. Diarrhoea is more common among rural children (19 percent) than urban children (12 percent). There are also variations in the prevalence of diarrhoea by regions. Children living in the SNNP Region are more susceptible to episodes of diarrhoea (25 percent) than children living in the other region. Children living in Dire Dawa and Somali have the lowest prevalence of diarrhoea when compared with children living in the other regions (12 percent). The prevalence of diarrhoea with blood follows a pattern similar to that observed for diarrhoea in general.

Table 10.7 Prevalence of diarrhoea

Percentage of children under age five who had diarrhoea in the two weeks preceding the survey, by background characteristics, Ethiopia 2005

Background characteristic	Diarrhoea in the two weeks preceding the survey: All diarrhoea	Diarrhoea with blood	Number of children
Age in months			
<6	13.9	1.9	1,152
6-11	29.3	6.7	1,071
12-23	28.3	10.2	1,877
24-35	18.5	7.6	1,892
36-47	12.4	5.2	2,105
48-59	10.0	4.4	2,013
Sex			
Male	17.9	6.2	5,129
Female	18.0	6.2	4,980
Residence			
Urban	12.1	3.3	752
Rural	18.5	6.4	9,357
Region			
Tigray	12.8	5.4	653
Affar	13.7	3.0	96
Amhara	14.6	6.5	2,312
Oromiya	17.7	4.9	4,017
Somali	12.2	2.5	432
Benishangul-Gumuz	21.3	7.2	95
SNNP	25.1	9.6	2,273
Gambela	15.1	2.9	29
Harari	18.8	3.5	21
Addis Ababa	12.9	2.7	146
Dire Dawa	11.6	2.2	34
Mother's education			
No education	18.1	6.3	7,951
Primary	19.4	6.8	1,709
Secondary and higher	9.8	1.9	450
Wealth quintile			
Lowest	17.8	5.2	2,218
Second	20.2	7.0	2,122
Middle	19.7	6.7	2,210
Fourth	16.8	7.5	2,015
Highest	14.3	4.0	1,544
Source of drinking water[1]			
Improved	16.6	5.2	5,798
Non-improved	19.9	7.6	4,294
Other/missing	(27.3)	(7.0)	18
Toilet facility[2]			
Improved, not shared	22.0	9.7	605
Not improved	17.7	6.0	9,504
Total	18.0	6.2	10,109

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.

10.6 DIARRHOEA TREATMENT

In the 2005 EDHS, mothers of children who had diarrhoea were asked about what was done to treat the illness. Table 10.8 shows the percentage of children with diarrhoea who received specific treatments according to background characteristics. Twenty-two percent of children with diarrhoea were taken to a health provider. Nearly one in two children (45 percent) of mothers with some secondary or higher education and more than one in three children (37 percent) of mothers in the highest wealth quintile were taken to a health provider. Notable differences also exist by place of residence. The proportion of children in urban areas taken to a health facility is 35 percent whereas only 22 percent of children in rural areas were taken to a health provider. There are slight variations between regions. More than two-fifths of children living in Gambela were taken to a health provider in contrast to less than one in ten children living in Affar and Somali.

Table 10.8 Diarrhoea treatment

Among children under age five who had diarrhoea in the two weeks preceding the survey, the percentage who were taken for treatment to a health provider, the percentage who received oral rehydration therapy (ORT), and the percentage given other treatments, by background characteristics, Ethiopia 2005

Background characteristic	Percentage of children with diarrhoea taken to a health provider[1]	Oral rehydration therapy (ORT)					Other treatments				Missing	No treat-ment	Number of children with diarrhoea
		ORS packets or pre-packaged liquid	Recom-mended home fluids (RHF)	Either ORS or RHF	Increased fluids	Any ORT	Anti-biotic drugs	Anti-motility drugs	Zinc supple-ments	Home remedy/ other			
Age in months													
<6	15.9	5.1	13.5	16.8	2.4	19.2	10.5	0.0	0.0	15.2	0.4	63.9	160
6-11	17.9	17.3	21.4	32.7	8.3	37.7	7.4	1.6	0.0	10.8	0.0	56.7	314
12-23	26.5	27.5	18.9	37.7	5.8	40.1	10.6	0.4	0.3	16.9	0.0	47.4	531
24-35	20.3	18.6	16.4	28.8	8.8	34.9	10.4	1.1	0.7	19.1	0.2	47.8	350
36-47	22.1	20.4	21.9	32.7	12.6	39.1	16.0	0.0	0.0	14.6	0.6	41.1	261
48-59	26.5	17.4	19.7	32.4	17.7	43.5	7.3	1.4	0.0	18.6	0.0	41.7	202
Sex													
Male	24.8	21.4	20.2	33.9	7.7	38.5	12.0	1.0	0.4	15.5	0.3	47.5	920
Female	19.6	18.4	17.5	30.0	9.9	35.6	8.8	0.5	0.1	16.5	0.0	50.6	898
Type of diarrhoea													
Non bloody	20.1	17.6	17.9	29.9	8.8	34.4	10.2	1.0	0.2	14.8	0.3	51.9	1,192
Bloody	26.3	24.3	20.8	36.0	8.7	42.2	10.7	0.3	0.3	18.2	0.0	43.4	626
Residence													
Urban	35.0	45.7	33.1	56.6	8.1	59.2	10.1	0.0	0.0	17.5	0.0	34.8	91
Rural	21.6	18.6	18.1	30.7	8.8	35.9	10.4	0.8	0.2	15.9	0.2	49.7	1,727
Region													
Tigray	18.8	21.1	25.6	41.5	23.3	53.5	12.4	0.0	0.0	2.9	0.7	42.5	84
Affar	9.2	8.8	11.8	16.3	23.9	40.2	5.3	0.0	0.0	6.8	1.5	51.6	13
Amhara	27.1	19.9	18.8	32.3	1.0	32.9	9.0	0.6	0.5	15.9	0.0	53.1	337
Oromiya	23.5	22.6	19.6	35.7	10.7	40.4	11.7	1.7	0.2	13.4	0.2	47.1	709
Somali	8.5	15.8	35.1	40.7	2.9	40.7	0.8	0.0	1.4	17.2	1.3	49.8	53
Benishangul-Gumuz	29.6	24.9	28.5	39.6	5.0	40.8	8.6	0.0	0.0	16.8	0.0	48.4	20
SNNP	18.6	15.9	14.3	23.8	9.2	31.0	10.5	0.0	0.0	21.2	0.0	50.8	571
Gambela	40.2	27.6	23.6	41.7	3.4	41.7	11.2	1.5	0.0	14.4	0.0	45.6	4
Harari	31.3	22.6	28.7	40.3	30.9	57.3	7.6	1.0	0.0	16.2	1.3	30.5	4
Addis Ababa	(44.6)	(45.3)	(47.7)	(66.0)	(9.4)	(70.9)	(7.0)	(0.0)	(0.0)	(18.7)	(0.0)	(23.4)	19
Dire Dawa	(25.7)	(31.3)	(10.6)	(40.4)	(9.6)	(45.5)	(0.0)	(0.0)	(0.0)	(8.9)	(0.0)	(51.8)	4
Mother's education													
No education	18.9	17.0	17.0	28.9	8.5	33.7	9.4	0.8	0.2	15.9	0.2	51.8	1,443
Primary	33.6	28.4	23.9	41.0	9.2	46.9	13.2	0.8	0.5	16.6	0.0	40.4	332
Secondary and higher	44.6	51.6	41.8	64.9	16.0	73.0	21.7	0.0	0.0	13.7	0.0	21.6	44
Wealth quintile													
Lowest	14.3	13.5	15.0	25.4	6.1	28.9	10.4	0.7	0.2	16.1	0.2	56.3	395
Second	17.1	13.5	19.0	27.1	9.3	32.3	7.9	0.7	0.0	15.8	0.4	51.5	428
Middle	27.1	23.1	18.2	32.8	10.9	38.9	13.4	1.1	0.4	14.2	0.0	45.6	436
Fourth	21.8	19.8	16.7	31.4	7.7	36.8	9.5	0.5	0.0	16.4	0.2	50.5	339
Highest	37.2	37.8	30.2	52.5	10.3	57.6	10.6	0.9	0.7	19.2	0.0	35.5	221
Total	22.2	19.9	18.9	32.0	8.8	37.1	10.4	0.8	0.2	16.0	0.2	49.0	1,819

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

Thirty-seven percent of children with diarrhoea were treated with some kind of oral rehydration therapy (ORT): 20 percent were treated with ORS prepared from an ORS packet, 19 percent were given recommended home fluids, and 9 percent were given increased fluids.

Ten percent of children were given antibiotic drugs and 16 percent were given home remedies or other treatments. However, about half (49 percent) of children with diarrhoea did not receive any treatment at all.

Diarrhoea treatment does not vary significantly by age. Male children and children who had diarrhoea with blood are more likely to receive ORT than others. Large variations exist by mother's education and wealth quintile. There are also marked differences between urban and rural areas. Three-fifths of children in urban areas (59 percent) received ORT compared with just over one-third of children in rural areas (36 percent). Children living in SNNP are least likely to receive ORT.

Comparable data from the 2000 EDHS show that only 13 percent of children with diarrhoea were taken to a health provider in 2000 compared with 22 percent in 2005. On the other hand, a higher percentage of children with diarrhoea in 2005 than in 2000 did not receive any treatment (49 percent versus 39 percent).

10.7 Feeding Practices

Mothers are encouraged to continue feeding children with diarrhoea normally and to increase the amount of fluids. These practices help to reduce dehydration and minimize the adverse consequences of diarrhoea on the child's nutritional status. Mothers were asked whether they gave the child less, the same amount, or more fluids and food than usual when their child had diarrhoea. Table 10.9 shows the percent distribution of children under five who had diarrhoea in the past two weeks by feeding practices, according to background characteristics.

Nineteen percent of children who had diarrhoea were given the same amount of liquid as usual, 9 percent were given more, 32 percent were given somewhat less than the usual amount, and 26 percent were given much less than the usual amount. Fourteen percent of children who had diarrhoea were given no liquids.

Regarding the amount of food offered to children who had diarrhoea, 14 percent were given the same as usual, only 1 percent were given more, 30 percent were given somewhat less than the usual amount of food, 26 percent were given much less than the usual amount of food, and 18 percent did not receive food during their illness, presumably because these children had not yet started eating solid food.

Older children age 36 months and above, children who did not have bloody diarrhoea, children of the most educated mothers, children in the highest wealth quintile and children residing in Tigray are more likely to receive more or the same amount of liquid during episodes of diarrhoea than other children. A similar pattern is seen regarding the amount of food offered during diarrhoea.

Table 10.9 Feeding practices during diarrhoea

Percent distribution of children under five years who had diarrhoea in the two weeks preceding the survey by amount of liquids and food offered compared with normal practice, according to background characteristics, Ethiopia 2005

Background characteristic	Amount of liquids offered							Amount of food offered								Number of children with diarrhoea
	More	Same as usual	Some-what less	Much less	None	Don't know	Total	More	Same as usual	Some-what less	Much less	None	Never gave food	Don't know	Total	
Age in months																
<6	2.4	24.5	17.2	27.1	28.9	0.0	100.0	0.1	7.2	4.9	2.1	0.1	84.7	0.9	100.0	160
6-11	8.3	16.6	30.2	26.9	17.5	0.6	100.0	0.9	12.3	15.8	17.5	14.4	38.9	0.2	100.0	314
12-23	5.8	19.9	32.8	26.2	14.1	1.2	100.0	1.8	11.4	31.4	28.6	15.2	11.0	0.7	100.0	531
24-35	8.8	19.6	32.3	28.5	10.4	0.4	100.0	0.5	15.7	34.6	36.3	11.6	0.6	0.6	100.0	350
36-47	12.6	18.4	37.1	23.4	6.8	1.8	100.0	1.7	16.7	42.6	25.3	11.4	0.5	1.9	100.0	261
48-59	17.7	11.4	39.2	22.5	9.2	0.0	100.0	1.5	18.6	39.1	35.1	5.6	0.0	0.0	100.0	202
Sex																
Male	7.7	20.2	32.1	25.3	14.2	0.4	100.0	1.1	13.6	30.1	25.3	11.3	18.0	0.6	100.0	920
Female	9.9	16.8	32.3	26.7	13.1	1.2	100.0	1.3	13.5	28.8	26.9	11.6	17.2	0.8	100.0	898
Type of diarrhoea																
Non bloody	8.8	21.8	33.2	22.5	12.4	1.2	100.0	1.1	15.6	29.6	22.4	9.9	20.6	0.8	100.0	1,192
Bloody	8.7	12.2	30.2	32.8	16.1	0.0	100.0	1.3	9.6	29.3	33.2	14.4	11.7	0.5	100.0	626
Residence																
Urban	8.1	21.3	40.7	21.3	8.5	0.0	100.0	0.2	14.8	38.1	25.3	2.5	19.1	0.0	100.0	91
Rural	8.8	18.4	31.7	26.3	14.0	0.8	100.0	1.2	13.5	29.0	26.2	11.9	17.5	0.7	100.0	1,727
Region																
Tigray	23.3	23.1	28.6	18.5	2.4	4.1	100.0	4.5	14.6	34.7	28.4	8.5	7.6	1.8	100.0	84
Affar	23.9	21.5	29.1	12.3	13.3	0.0	100.0	9.6	26.6	12.8	30.0	2.5	18.6	0.0	100.0	13
Amhara	1.0	21.0	31.5	26.0	20.5	0.0	100.0	0.6	17.1	27.0	25.2	15.6	14.1	0.4	100.0	337
Oromiya	10.7	17.1	29.8	25.2	15.7	1.5	100.0	0.7	13.1	26.2	26.4	13.8	19.3	0.6	100.0	709
Somali	2.9	3.1	37.1	52.4	4.4	0.0	100.0	1.8	2.9	32.6	50.2	0.0	12.5	0.0	100.0	53
Benishangul-Gumuz	5.0	23.0	41.5	19.6	10.9	0.0	100.0	4.2	16.9	35.7	21.8	10.9	10.4	0.0	100.0	20
SNNP	9.2	18.7	35.3	26.6	10.2	0.0	100.0	1.4	12.1	33.8	23.8	7.9	20.1	0.9	100.0	571
Gambela	3.4	34.1	41.0	5.8	15.6	0.0	100.0	0.6	20.9	46.5	8.0	10.2	12.8	1.0	100.0	4
Harari	30.9	10.1	33.3	18.0	3.9	3.9	100.0	11.2	10.1	34.0	27.4	6.5	6.9	3.9	100.0	4
Addis Ababa	(9.4)	(36.3)	(27.3)	(23.1)	(3.9)	(0.0)	(100.0)	(0.0)	(26.4)	(26.4)	(31.7)	(7.2)	(8.3)	(0.0)	(100.0)	19
Dire Dawa	(9.6)	(22.0)	(45.3)	(23.1)	(0.0)	(0.0)	(100.0)	(1.8)	(7.4)	(52.7)	(8.0)	(8.7)	(21.3)	(0.0)	(100.0)	4
Mother's education																
No education	8.5	18.1	31.9	27.2	13.5	0.8	100.0	1.3	13.3	29.8	26.7	10.9	17.2	0.9	100.0	1,443
Primary	9.2	19.6	33.9	21.4	15.2	0.7	100.0	0.7	14.4	27.1	23.8	15.3	18.7	0.0	100.0	332
Secondary and higher	16.0	25.1	30.9	21.0	7.0	0.0	100.0	0.3	17.1	35.7	24.3	0.7	21.9	0.0	100.0	44
Wealth quintile																
Lowest	6.1	17.2	33.8	25.5	17.1	0.3	100.0	0.9	11.0	28.4	27.0	14.2	17.0	1.4	100.0	395
Second	9.3	19.0	34.8	25.2	11.4	0.5	100.0	1.2	14.9	25.5	29.3	12.2	15.7	1.1	100.0	428
Middle	10.9	15.1	33.8	24.9	14.2	1.2	100.0	0.6	12.0	35.1	22.1	10.9	19.4	0.0	100.0	436
Fourth	7.7	18.6	25.7	31.9	15.2	1.0	100.0	1.8	15.1	24.5	27.1	9.8	21.2	0.6	100.0	339
Highest	10.3	26.8	31.3	21.9	8.7	1.1	100.0	2.0	16.3	35.4	24.8	8.5	13.1	0.0	100.0	221
Total	8.8	18.5	32.2	26.0	13.7	0.8	100.0	1.2	13.6	29.5	26.1	11.4	17.6	0.7	100.0	1,819

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

10.8 KNOWLEDGE OF ORS PACKETS

A simple and effective response to dehydration caused by diarrhoea is a prompt increase in the child's fluid intake through some form of oral rehydration therapy, which may include the use of a solution prepared from packets of oral rehydration salts (ORS). To ascertain how widespread knowledge of ORS is in Ethiopia, respondents were asked whether they know about ORS packets.

Table 10.10 shows that slightly less than half of women (46 percent) who gave birth in the five years preceding the survey know about ORS packets. There are significant differences in knowledge of ORS packets between women residing in urban and rural areas. Knowledge is twice as high among urban women (85 percent) than among rural women (43 percent). Knowledge of ORS also varies by region. More than nine in ten mothers in Addis Ababa (94 percent) and about four in five mothers in Tigray, Harari, and Dire Dawa know about ORS packets, compared with slightly more than three in ten mothers in the Amhara and Benishangul-Gumuz regions.

There are marked differences in knowledge of ORS packets by mother's level of education; 89 percent of mothers with some secondary or higher education know about ORS packets compared with 41 percent of mothers with no education. Similarly, knowledge of ORS packets is widespread among mothers in the highest wealth quintile (73 percent), compared with mothers in the lowest wealth index (41 percent).

There has been a steep decline in the proportion of mothers who have heard about ORS, from 66 percent in 2000 to 46 percent in 2005.

Table 10.10 Knowledge of ORS packets or pre-packaged liquids

Percentage of mothers who gave birth in the five years preceding the survey who know about ORS packets or pre-packaged liquids for treatment of diarrhoea, by background characteristics, Ethiopia 2005

Background characteristic	Percentage of mothers who know about ORS packets or prepackaged liquids	Number of mothers
Age		
15-19	42.2	440
20-24	50.5	1,473
25-29	46.4	1,961
30-34	43.2	1,428
35-49	45.8	2,006
Residence		
Urban	85.3	634
Rural	42.5	6,674
Region		
Tigray	80.8	480
Affar	54.0	68
Amhara	31.7	1,856
Oromiya	49.9	2,723
Somali	45.5	288
Benishangul-Gumuz	36.1	69
SNNP	41.8	1,632
Gambela	50.0	23
Harari	80.0	15
Addis Ababa	94.1	129
Dire Dawa	79.1	25
Education		
No education	41.4	5,734
Primary	55.7	1,205
Secondary and higher	88.9	368
Wealth quintile		
Lowest	41.1	1,520
Second	39.2	1,553
Middle	41.0	1,586
Fourth	42.4	1,451
Highest	73.1	1,196
Total	46.2	7,307

ORS = Oral rehydration salts

10.9 Stool Disposal

If human faeces are left uncontained, disease may spread by direct contact or by animal contact with the faeces. Hence, the proper disposal of children's stools is extremely important in preventing the spread of disease. Table 10.11 presents information on the disposal of the stools of children under five, by background characteristics.

Sixty-seven percent of children's stools are left uncontained: 7 percent are put or rinsed into a drain or ditch, 11 percent are thrown into the garbage, and 49 percent are left in the open. Slightly more than one in five children's stools are disposed of hygienically. Two percent of children under five use a toilet or latrine. Additionally, 17 percent of children's stool are disposed of in the toilet or latrine, and 2 percent are buried in the yard.

There are pronounced differences by mother's level of education and type of toilet facilities in the way stools are disposed of. For more than half the children (51 percent) of mothers with secondary and higher education, stools are disposed of hygienically (child uses toilet, child's stool thrown in toilet, or buried in yard), compared with 17 percent of children of mothers with no education. Similarly, 51 percent of children in households with improved toilets that are not shared with other households, have their stools contained compared with 19 percent of children in the households using non-improved or shared toilet facilities.

Children's stools are more likely to be contained in urban areas (52 percent) than in rural areas (19 percent). This marked difference could be attributed to the fact that toilet facilities are more available in urban areas. The table also shows that 69 percent of children's stools in rural areas are thrown in the garbage, rinsed in a drain, or left in the open compared with 44 percent in urban areas. There are large variations in the way the child's faeces are disposed of. For example, the percentage of children whose stools are contained ranges from a low of 11 percent in Somali to a high of 68 percent in Addis Ababa. Furthermore, 61 percent of children's stools are left in the open in the Tigray and Somali regions, compared with 5 percent in Addis Ababa.

Table 10.11 Disposal of children's stools

Among mothers whose youngest child under age five is living with her, percent distribution by the manner of disposing of the child's last faecal matter, according to background characteristics, Ethiopia 2005

	Children's stools contained			Children's stools uncontained						
Background characteristic	Child used toilet or latrine	Put/rinsed into toilet or latrine	Buried	Put/rinsed into drain or ditch	Thrown into garbage	Left in the open	Other	Don't know	Total	Number of mothers
Age of child in months										
< 6	0.3	11.2	1.3	10.1	7.6	49.9	18.9	0.7	100.0	1,142
6-11	1.0	16.5	1.8	7.0	11.8	48.9	12.2	0.9	100.0	1,057
12-17	0.6	17.7	2.5	7.6	12.2	48.0	10.6	0.8	100.0	1,091
18-23	0.8	21.2	1.6	6.1	12.7	49.5	7.2	0.7	100.0	718
24-35	1.4	17.5	1.6	6.0	12.9	51.5	8.2	1.0	100.0	1,442
36-59	6.6	20.6	1.9	5.4	9.3	46.5	8.5	1.2	100.0	1,529
Toilet facilities										
Improved, not shared[1]	7.9	40.8	2.1	8.1	3.2	28.7	8.5	0.7	100.0	420
Not improved or shared	1.7	15.9	1.8	6.9	11.4	50.3	11.0	0.9	100.0	6,559
Residence										
Urban	5.4	44.8	1.6	12.6	13.6	17.7	4.2	0.1	100.0	586
Rural	1.8	14.9	1.8	6.4	10.7	51.9	11.5	1.0	100.0	6,393
Region										
Tigray	0.9	10.2	5.3	3.5	16.0	60.9	2.5	0.7	100.0	466
Affar	2.5	14.8	2.1	6.3	19.1	53.8	1.4	0.0	100.0	63
Amhara	1.7	11.7	1.8	6.6	9.8	55.9	11.9	0.6	100.0	1,737
Oromiya	1.5	9.4	1.4	9.3	12.5	52.6	12.1	1.1	100.0	2,630
Somali	1.3	6.8	2.8	1.2	23.3	60.8	2.0	1.8	100.0	273
Benishangul-Gumuz	3.1	20.8	0.7	2.1	7.1	54.0	10.8	1.4	100.0	65
SNNP	3.9	37.3	1.2	5.0	6.1	32.8	12.8	0.9	100.0	1,567
Gambela	1.8	14.5	0.6	5.7	17.8	54.2	4.3	1.0	100.0	22
Harari	2.8	22.5	4.7	3.8	21.2	32.9	10.3	1.8	100.0	14
Addis Ababa	3.7	63.2	0.6	15.3	6.9	5.4	4.4	0.6	100.0	118
Dire Dawa	2.3	39.8	3.2	6.1	6.3	40.5	1.5	0.3	100.0	24
Education										
No education	1.6	13.3	1.9	6.7	11.5	52.9	11.2	0.9	100.0	5,485
Primary	3.1	29.1	1.2	6.2	9.4	38.3	11.4	1.3	100.0	1,147
Secondary and higher	6.4	43.1	1.3	13.4	7.7	23.0	4.8	0.2	100.0	348
Wealth quintile										
Lowest	0.5	4.5	2.7	7.0	13.0	59.3	11.8	1.2	100.0	1,476
Second	0.7	9.8	1.8	7.2	11.1	55.4	12.9	1.1	100.0	1,477
Middle	1.9	18.2	1.2	6.1	11.4	50.2	10.1	0.9	100.0	1,514
Fourth	3.2	21.4	2.0	6.2	9.5	45.8	11.0	0.9	100.0	1,389
Highest	5.0	38.4	1.0	8.6	9.1	29.5	7.9	0.4	100.0	1,123
Total	2.1	17.4	1.8	6.9	10.9	49.0	10.9	0.9	100.0	6,979

[1] Non-shared facilities that are of the types flush or pour flush into a piped sewer system/septic tank/pit latrine, ventilated, improved pit (VIP) latrine, pit latrine with a slab and composting toilet.

NUTRITION OF CHILDREN AND WOMEN 11

This chapter covers the nutritional status of children and women. The section on children covers the following related topics: infant and young child feeding practices, including breastfeeding and feeding with solid/semi-solid foods; diversity of foods fed; frequency of feeding; micronutrient intake among children and women; and prevalence of anaemia. The sections on nutritional status cover anthropometric assessment of the nutritional status of children under five years of age and the nutritional status of women 15 to 49 years of age.

Adequate nutrition is critical to child development. The period from birth to two years of age is important for optimal growth, health and development, especially since it is during this period that children are particularly vulnerable to growth retardation, micronutrient deficiencies, and common childhood illnesses such as diarrhoea and acute respiratory infections (ARI).

A woman's nutritional status has important implications for her health as well as the health of her children. Malnutrition in women results in reduced productivity, an increased susceptibility to infections, retarded recovery from illness, and heightened risk of adverse pregnancy outcomes. A woman who has poor nutritional status as indicated by a low body mass index (BMI), short stature, anaemia, or other micronutrient deficiency, has a greater risk of obstructed labour, having a baby with a low birth weight, producing lower quality breast milk, death due to postpartum haemorrhage, and illness for herself and her baby.

11.1 Initiation of Breastfeeding

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

Table 11.1 shows the percentage of all children born in the five years before the survey by breastfeeding status and the timing of initial breastfeeding, by background characteristics. Breastfeeding is nearly universal in Ethiopia, with 96 percent of children born in the five years preceding the survey having been breastfed at some time. The proportion of children ever breastfed ranges from a low of 93 percent in Addis Ababa to a high of 99 percent in Harari. However, the percentage of children ever breastfed does not vary much by other background characteristics.

More than two in three children are breastfed within one hour of birth (69 percent) and 86 percent within one day of birth. Twenty-nine percent of children were given a prelacteal feed, that is, something other than breast milk during the first three days of life. Forty-five percent of children were given the first milk. The percentage of children who are breastfed early has increased in the past five years, the increase being more pronounced for children breastfed within 1 hour.

There is no difference in the timing of initial breastfeeding by gender of the child. However, other characteristics of the infant and mother, such as type of assistance at delivery, place of delivery, have important influences on early breastfeeding practices. Rural children are more likely than urban children to start breastfeeding within one hour and within one day of birth, as are children born in Dire Dawa and Somali compared with children in the other regions. Highly educated mothers are less likely than those with little or no education to put their newborn to the breast within the first hour or day of birth. Differences in early breastfeeding by wealth are small. Early initiation of breastfeeding is more common among children whose mothers were assisted at delivery by a trained traditional birth attendant and among children delivered at home.

Table 11.1 Initial breastfeeding

Percentage of children born in the five years preceding the survey who were ever breastfed and for last-born children ever breastfed in the five years preceding the survey, the percentage who started breastfeeding within one hour and within one day of birth and the percentage who received a prelacteal feed, according to background characteristics, Ethiopia 2005

Background characteristic	Percentage ever breastfed	Number of children	Percentage who started breastfeeding: Percentage who started breastfeeding within 1 hour of birth	Percentage who started breastfeeding: Percentage who started breastfeeding within 1 day of birth[1]	Percentage who received a prelacteal feed[2]	Percentage who received the first milk	Number of children ever breastfed
Sex							
Male	96.0	5,723	68.4	85.2	29.5	44.9	3,668
Female	95.9	5,440	69.8	86.3	28.4	45.7	3,441
Residence							
Urban	95.0	815	64.8	81.9	38.8	43.8	608
Rural	96.0	10,348	69.5	86.1	28.0	45.5	6,501
Region							
Tigray	98.5	698	52.9	73.7	30.6	55.8	475
Affar	97.2	107	86.4	91.1	36.8	68.3	67
Amhara	97.1	2,621	62.6	77.4	44.6	44.8	1,823
Oromiya	94.8	4,411	72.1	88.5	26.0	45.8	2,624
Somali	95.1	477	91.4	94.0	19.2	53.7	275
Benishangul-Gumuz	96.7	105	72.1	80.3	19.0	45.4	67
SNNP	96.4	2,500	71.4	92.7	15.4	39.3	1,596
Gambela	95.9	31	72.7	80.8	28.3	43.0	22
Harari	99.0	22	73.7	88.2	48.6	75.9	15
Addis Ababa	92.9	153	66.2	86.7	49.4	42.1	120
Dire Dawa	98.1	37	91.4	94.4	34.2	66.5	24
Mother's education							
No education	96.2	8,838	70.4	86.2	28.8	46.4	5,594
Primary	95.1	1,855	64.8	84.6	28.2	38.5	1,157
Secondary and higher	95.4	470	63.0	81.5	34.8	51.0	357
Wealth quintile							
Lowest	96.4	2,440	72.1	85.4	30.7	49.3	1,486
Second	95.8	2,356	69.7	85.5	27.3	46.5	1,510
Middle	95.8	2,486	69.9	85.6	26.8	45.6	1,541
Fourth	95.3	2,222	67.0	86.4	28.5	43.5	1,415
Highest	96.6	1,660	65.8	85.8	32.3	40.7	1,157
Assistance at delivery							
Health professional[3]	93.2	644	62.2	84.4	30.0	49.5	487
Trained traditional birth attendant	95.5	734	70.8	88.2	28.6	41.0	445
Untrained traditional birth attendant	96.3	2,399	68.7	84.1	35.2	50.4	1,480
Other	96.0	6,756	69.2	85.6	28.0	43.3	4,261
No one	97.1	607	75.6	92.8	17.1	47.7	430
Missing	100.0	23	46.2	46.2	0.0	29.9	7
Place of delivery							
Health facility	93.4	589	61.4	84.9	29.6	49.2	444
At home	96.1	10,502	69.7	85.9	28.9	45.0	6,631
Other	94.9	45	52.2	82.0	32.0	53.7	28
Missing	100.0	26	34.1	34.8	0.6	34.8	6
Total	96.0	11,163	69.1	85.7	29.0	45.3	7,109

Note: Table is based on births in the five years preceding the survey whether the children are living or dead.
[1] Includes children who started breastfeeding within one hour of birth.
[2] Received something other than breast milk during the first three days of life, before the mother started breastfeeding regularly.
[3] Doctor, nurse/midwife, or auxiliary midwife

11.2 Breastfeeding Status by Age

UNICEF and WHO recommend that children be exclusively breastfed during the first 6 months of life and that children be given solid or semisolid complementary food in addition to continued breastfeeding from six months on. Exclusive breastfeeding is recommended because breast milk is uncontaminated and contains all the nutrients necessary for children in the first few months of

life. In addition, the mother's antibodies in breast milk provide immunity to disease. Early supplementation is discouraged for several reasons. First, it exposes infants to pathogens and increases their risk of infection, especially disease. Second, it decreases infants' intake of breast milk and therefore suckling, which reduces breast milk production. Third, in a harsh socioeconomic environment, supplementary food is often nutritionally inferior.

Information on supplementation was obtained by asking mothers about the current breastfeeding status of all children under five years of age and, for the youngest child born in the three-year period before the survey and living with the mother, food (liquids or solids) given to the child the day before the survey..

Table 11.2 shows the percent distribution of youngest children under three years living with the mother by breastfeeding status and percentage of children under three years using a bottle with a nipple, according to age in months. The data presented in Table 11.2 and Figure 11.1 shows that not all children under 6 months are exclusively breastfed. Contrary to WHO's recommendations only one in three Ethiopian children age 4-5 months is exclusively breastfed. The table also shows that just over two-thirds of children under 2 months of age are exclusively breastfed, 10 percent consume breast milk and plain water, 5 percent consume breast milk and other non-milk liquids, and 11 percent consumed breast milk and other milk. Six percent of children under 2 months are given complementary foods. The EDHS results also indicate that complementary foods are not introduced in a timely fashion for many children. At 6-8 months of age, 14 percent of children continue to be exclusively breastfed, 9 percent receive plain water in addition to breast milk, 6 percent consume other water-based liquids, 20 percent consume other milk, and 50 percent consume complementary foods. The proportion of exclusively breastfed children drops to 1 in 20 by age 9-11 months, and continues to decline thereafter.

Table 11.2 Breastfeeding status by age

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

		Breastfeeding and consuming:								
Age in months	Not breast-feeding	Exclusively breastfed	Plain water only	Non-milk liquids/ juice	Other milk	Comple-mentary foods	Total	Number of children	Percentage using a bottle with a nipple[1]	Number of children
<2	1.6	67.3	9.9	5.0	10.6	5.6	100.0	328	7.6	331
2-3	1.2	49.4	14.4	7.0	15.1	12.9	100.0	458	13.2	461
4-5	1.3	31.6	18.7	3.2	23.8	21.5	100.0	355	17.9	360
6-8	1.6	14.1	9.0	5.5	19.8	50.0	100.0	598	18.7	608
9-11	5.2	4.7	6.3	1.5	8.4	74.0	100.0	459	17.0	463
12-17	6.5	2.3	3.3	1.1	2.9	83.9	100.0	1,091	10.7	1,115
18-23	11.9	0.5	1.5	0.8	1.8	83.5	100.0	718	8.4	762
24-35	38.8	0.2	0.6	0.5	0.5	59.4	100.0	1,442	7.6	1,892
<4	1.4	56.8	12.5	6.1	13.2	9.9	100.0	787	10.9	791
<6	1.3	49.0	14.5	5.2	16.5	13.5	100.0	1,142	13.0	1,152
6-9	2.5	12.7	8.4	4.5	17.5	54.4	100.0	791	17.4	804
12-23	8.6	1.6	2.6	1.0	2.5	83.7	100.0	1,809	9.7	1,877

Note: Breastfeeding status refers to a "24-hour" period (yesterday and last night). Children who are classified as *breastfeeding and consuming plain water only* consumed no liquid or solid supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding and consuming plain water, non-milk liquids/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.
[1] Based on all children under 3 years.

Figure 11.1 **Breastfeeding Practices by Age**

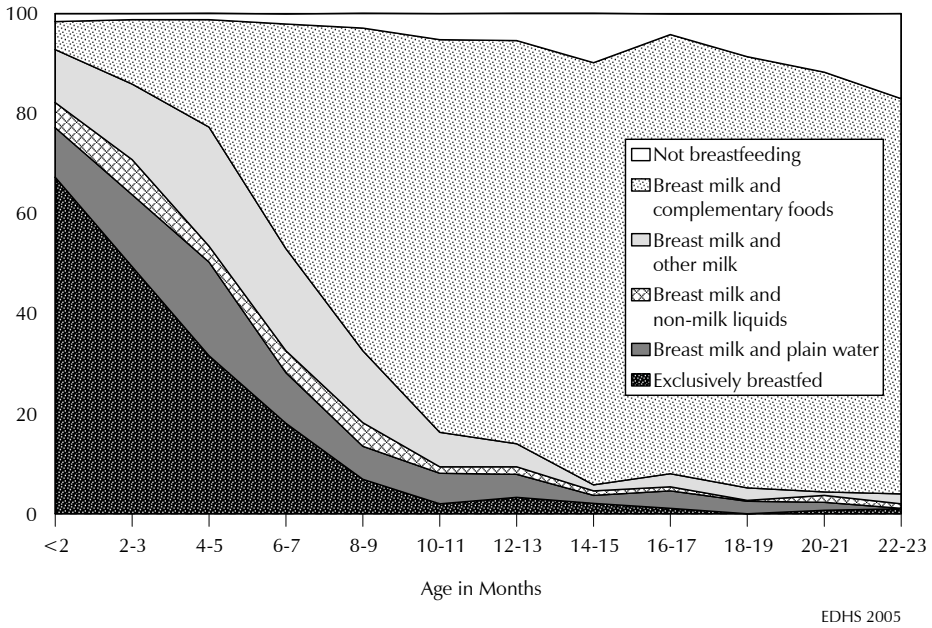
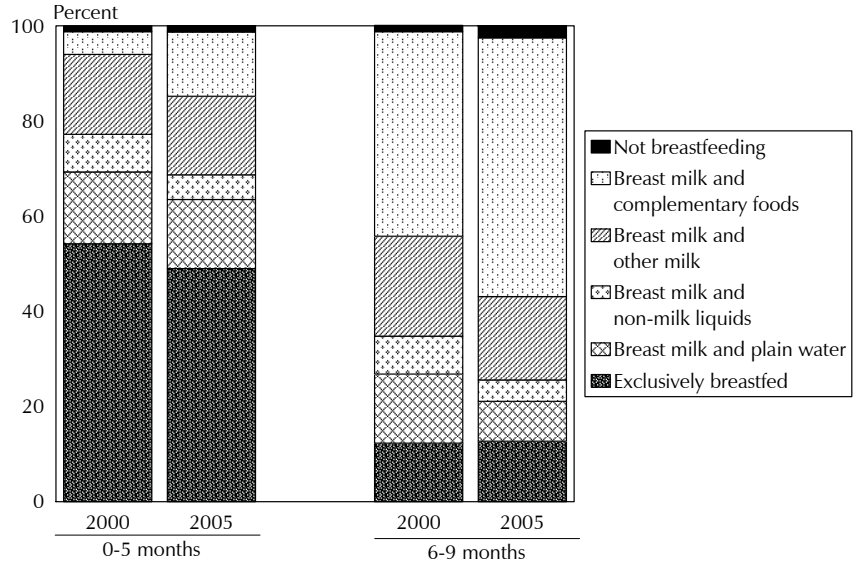


Figure 11.2 shows the breastfeeding status of children 0-5 months and 6-9 months for the years 2000 and 2005. Exclusive breastfeeding declined slightly among children under six months while complementary feeding increased between the two surveys.

Figure 11.2 **Trends in Infant Feeding Practice for Children 0-5 Months and 6-9 Months, 2000 and 2005**



Bottle-feeding is discouraged at any age. It is usually associated with increased risk of illness, and especially diarrhoeal disease, because of the difficulty in sterilizing the nipples properly. Bottle-feeding also shortens the period of postpartum amenorrhoea and increases the risk of pregnancy. The practice of bottle-feeding with a nipple is not widespread in Ethiopia. However, the proportion of children who are bottle-fed rises from 8 percent among children age less than two months to 19 percent among children age 6-8 months, after which it declines gradually to 8 percent among children 18-35 months of age.

11.3 DURATION AND FREQUENCY OF BREASTFEEDING

Table 11.3 shows the median duration of breastfeeding by selected background characteristics. The estimates of median and mean durations of breastfeeding are based on current status data, that is, the proportion of last-born children in the three years preceding the survey who were being breastfed at the time of the survey.

Table 11.3 Median duration and frequency of breastfeeding

Median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children born in the three years preceding the survey, percentage of breastfeeding children under six months living with the mother who were breastfed six or more times in the 24 hours preceding the survey, and mean number of feeds (day/night), by background characteristics, Ethiopia 2005

	Median duration (months) of breastfeeding[1]				Breastfeeding children under six months[2]			
Background characteristic	Any breast-feeding	Exclusive breast-feeding	Predominant breast-feeding[3]	Number of children	Percentage breastfed 6+ times in last 24 hours	Mean number of day feeds	Mean number of night feeds	Number of children
Sex								
Male	25.5	2.1	4.5	3,428	96.2	6.8	5.5	602
Female	26.2	2.1	4.3	3,120	94.3	6.4	5.7	507
Residence								
Urban	24.8	1.8	3.2	491	93.4	6.4	5.3	71
Rural	25.9	2.1	4.5	6,057	95.4	6.7	5.6	1,038
Region								
Tigray	25.9	1.6	6.3	397	99.0	6.2	4.8	62
Affar	24.5	0.4	0.7	65	98.0	7.6	6.9	10
Amhara	≥36.0	4.3	7.1	1,527	96.3	7.1	5.5	280
Oromiya	24.6	1.6	3.4	2,633	93.4	6.1	5.7	399
Somali	21.8	0.5	2.9	279	100.0	8.6	5.8	43
Benishangul-Gumuz	23.1	1.6	4.0	61	91.5	6.6	5.2	12
SNNP	26.1	1.8	3.2	1,447	95.3	6.7	5.6	280
Gambela	≥36.0	1.6	4.0	17	(100.0)	(7.7)	(6.3)	3
Harari	20.6	0.8	3.1	14	93.0	6.3	4.7	3
Addis Ababa	25.7	0.6	0.9	87	(97.3)	(7.0)	(5.0)	13
Dire Dawa	20.3	0.5	5.0	23	(100.0)	(7.9)	(6.4)	4
Mother's education								
No education	26.2	2.3	4.7	5,116	95.4	6.7	5.6	876
Primary	24.9	1.7	3.8	1,142	94.0	6.5	5.6	192
Secondary and higher	23.3	1.6	2.1	290	99.0	6.1	5.0	41
Wealth quintile								
Lowest	25.1	0.7	3.4	1,403	97.0	7.1	6.0	221
Second	27.1	2.6	5.2	1,386	96.5	6.4	5.4	220
Middle	25.4	3.0	4.6	1,470	96.3	6.5	5.8	251
Fourth	25.9	2.4	4.5	1,316	91.1	6.6	5.2	263
Highest	25.3	2.2	3.2	974	96.6	6.8	5.8	154
All children	25.8	2.1	4.4	6,548	95.3	6.6	5.6	1,109
Mean for all children	25.5	4.0	6.0	na	na	na	na	na

Note: Median and mean durations are based on current status. The median duration of any breastfeeding is shown as ≥36.0 for groups in which the exact median cannot be calculated because the proportion of breastfeeding children does not drop below 50 percent in any age group for children under 36 months of age. Includes children living and deceased at the time of the survey. Figures in parentheses are based on 25-49 unweighted cases.

na = Not applicable

[1] It is assumed that non-last-born children or last born child not currently living with the mother are not currently breastfeeding

[2] Excludes children who do not have a valid answer on the number of times breastfed

[3] Either exclusively breastfed or received breast milk and plain water, non-milk based liquids, and/or juice only

The median duration of breastfeeding is 25.8 months, while the mean duration is 25.5 months. There is little difference in the duration of breastfeeding by sex of the child. Rural children are breastfed for a slightly longer duration than urban children, as are children living in SNNP compared with children in other regions. Highly educated mothers breastfeed their children for a shorter duration than mothers with little or no education.

Both duration and frequency of breastfeeding can affect the length of postpartum amenorrhoea. Table 11.3 shows that the overwhelming majority (95 percent) of children under six months of age were breastfed 6 or more times in the 24 hours preceding the survey. In line with expectations, breastfeeding is slightly more frequent in the daytime than at night, with the mean number of feeds in the daytime being 6.6 compared with 5.6 at night. Breastfeeding in the day is more frequent among children residing in the Somali Region than in the other regions, while night feeds are most frequent among children in Affar.

11.4 Types of Supplemental Food

Table 11.4 shows information on the types of food given to the youngest child under three years of age living with the mother on the day and night preceding the survey, according to their breastfeeding status. The introduction of other liquids such as water, juice, and formula takes place earlier than the recommended age of about 6 months. Even among the youngest breastfeeding children (<2 months), 10 percent consume other liquids, and 12 percent drink milk other than breast milk. Consumption of liquids other than milk increases gradually with age, and by age 24-35 months more than one in two children receives liquid supplements other than milk. Consumption of milk, other than breast milk and infant formula, peaks at 6-8 months (48 percent) and then declines thereafter. Supplementing with infant formula at any age is uncommon in Ethiopia.

WHO recommends the introduction of solid food to infants around the age of 6 months because by that age breast milk by itself is no longer sufficient to maintain a child's optimal growth. The percentage receiving solid or semisolid food increases gradually; by age two most children are fed solid or semisolid foods. Nevertheless, it is disconcerting to note that even at 6-8 months of age, only one in two children are consuming solid or semisolid food.

At age 6-23 months, the proportion of children consuming foods made from grains (70 percent) is the highest, compared with the consumption of other types of solid or semisolid foods. Only 14 percent of children less than three years of age consumed vitamin A-rich foods in the day and night preceding the survey. Meat, fish, poultry and eggs have bodybuilding substances essential to good health; they are important for balanced physical and mental development. The introduction of these foods in the diet is late and few children consume them. For instance, at age 6-23 months, only one in ten children consume meat, fish, shellfish, poultry or eggs.

As expected, the percentage of non-breastfeeding children who consume supplements at an earlier age is higher than the percentage of breastfeeding children.

Table 11.4 Foods and liquids 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, Ethiopia 2005

	Liquids			Solid or semi-solid foods										
Age in months	Infant formula	Other milk	Other liquids	Fortified baby foods	Foods made from grains	Fruits and vegetables rich in vitamin A	Other fruits and vegetables	Food made from roots/ tubers	Food made from legumes and nuts	Meat/ fish/ shellfish/ poultry/ eggs	Cheese, yogurt, other milk product	Any solid or semi-solid food	Foods made with oil/ fat/ butter	Number of children
BREASTFEEDING CHILDREN														
<2	0.2	12.2	10.0	0.1	3.4	0.5	0.0	0.0	0.3	0.0	0.1	5.7	0.6	323
2-3	1.2	20.4	12.4	0.7	6.6	1.7	0.0	2.1	0.6	1.7	0.9	13.1	0.9	453
4-5	0.6	31.0	13.3	1.7	16.1	1.4	1.4	1.0	1.7	0.0	1.9	21.7	2.7	351
6-8	1.3	47.5	30.1	2.5	40.2	4.0	2.6	8.1	8.2	5.5	8.6	50.6	13.1	588
9-11	0.2	43.2	33.6	5.3	67.1	11.2	6.0	17.8	18.1	5.4	11.6	77.7	27.6	435
12-17	0.8	35.2	46.1	4.4	78.7	17.5	5.5	24.3	30.6	12.2	15.7	89.5	39.2	1,021
18-23	1.1	31.0	49.8	3.4	87.5	18.0	5.8	23.9	42.0	14.2	15.5	94.4	49.7	632
24-35	1.6	30.2	53.1	2.7	88.1	21.6	5.0	24.2	46.1	9.8	16.4	97.1	47.6	882
6-23	0.9	38.2	41.4	3.9	70.4	13.6	5.0	19.6	26.3	10.1	13.4	80.2	34.0	2,676
Total	1.0	32.7	36.5	2.9	58.9	12.2	3.9	16.0	23.9	7.8	11.0	67.4	28.7	4,685
NONBREASTFEEDING CHILDREN														
0-11	11.1	63.3	57.1	5.9	54.0	8.2	8.7	26.2	17.3	22.2	31.2	60.0	37.2	49
12-17	1.5	61.2	81.6	4.3	82.9	36.0	8.3	40.1	22.5	20.3	12.6	95.2	34.0	71
18-23	2.1	62.4	63.6	5.2	82.8	18.8	10.4	30.9	27.7	22.4	27.8	99.1	48.6	85
24-35	1.1	40.3	60.5	2.4	91.4	25.9	9.0	26.9	41.8	15.2	22.7	98.9	48.9	560
6-23	4.0	63.1	70.4	5.5	80.3	24.0	10.0	34.8	25.3	23.4	24.9	93.8	42.7	189
Total	1.9	46.2	62.6	3.1	87.3	24.9	9.1	28.5	36.9	17.0	22.9	96.1	46.7	765

Note: Breastfeeding status and food consumed refer to a "24-hour" period (yesterday and last night).
[1] Other milk includes fresh, tinned and powdered cow or other animal milk
[2] Does not include plain water
[3] Includes fortified baby food
[4] Includes pumpkin, carrots, squash, sweet potatoes, dark green leafy vegetables, mangoes, papayas, and other locally grown fruits and vegetables that are rich in vitamin A

11.5 FOODS CONSUMED BY MOTHERS

The quality and quantity of food that mothers consume influences their health and that of their children, especially the health of breastfeeding children. The 2005 EDHS included questions on the type of foods consumed by mothers of children under age three during the day and night preceding the interview.

Table 11.5 shows that most mothers of young children consume foods made from grains (88 percent), one in two mothers consume foods made from legumes and nuts, one-third consume foods made from roots or tubers and vitamin A-rich fruits and vegetables. Smaller proportions of mothers consume cheese, yogurt, milk or other milk products (23 percent) and meat, fish, shellfish, poultry and eggs (14 percent). Eighty-six percent of mothers drink tea or coffee and 56 percent consume foods made with oil, fat or butter.

Table 11.5 Foods consumed by mothers in the day and night preceding the interview

Percentage of mothers of children under three years of age who consumed specific types of foods in the day and night preceding the interview, by background characteristics, Ethiopia 2005

Background characteristic	Foods made from grains	Foods made from roots/ tubers	Foods made from legumes/ nuts	Meat/ fish/ shellfish/ poultry/ eggs	Cheese/ yogurt/ milk/ milk products	Fruits/ vegetables rich in vitamin A	Other fruits/ vegetables	Foods made with oil/ fat/ butter	Sugary foods	Tea/ coffee	Number of mothers
Age at birth											
<20	89.2	29.5	52.0	12.2	20.2	28.6	5.3	56.8	2.6	84.1	760
20-24	90.4	29.3	49.5	15.5	21.4	29.4	6.3	57.7	3.1	82.4	1,402
25-29	87.8	35.5	48.6	14.9	25.4	32.5	6.5	56.3	3.2	87.0	1,415
30-34	83.9	32.8	44.4	14.9	22.8	36.5	7.5	53.6	2.7	87.5	968
35-49	86.8	32.4	50.6	12.1	25.4	28.1	3.3	55.7	2.8	89.4	905
Residence											
Urban	97.1	38.9	63.5	31.5	23.5	39.2	19.8	81.2	8.8	92.3	411
Rural	87.1	31.5	47.7	12.8	23.1	30.5	4.8	54.1	2.5	85.4	5,038
Region											
Tigray	96.6	4.0	68.8	24.6	6.9	9.5	8.5	76.9	3.4	78.3	348
Affar	92.2	5.1	25.1	18.6	73.4	11.4	3.9	69.3	3.3	92.5	51
Amhara	94.4	23.1	76.2	19.3	13.8	13.2	3.3	67.5	2.2	86.6	1,296
Oromiya	92.6	23.9	49.1	12.9	29.1	33.2	5.6	57.7	3.1	85.4	2,137
Somali	94.0	11.8	9.2	7.6	41.1	4.6	2.0	48.8	8.5	70.6	214
Benishangul-Gumuz	90.0	12.1	48.0	22.6	14.7	27.8	7.4	53.7	3.8	83.2	50
SNNP	67.8	68.4	21.0	7.9	22.3	57.4	7.0	34.2	1.8	90.9	1,231
Gambela	95.3	26.7	33.6	24.9	25.3	56.5	12.8	55.3	4.1	68.7	15
Harari	100.0	30.6	49.7	16.3	25.3	42.7	17.9	60.6	3.1	79.7	12
Addis Ababa	99.4	41.5	74.5	27.3	21.7	35.9	34.6	90.2	11.5	94.2	77
Dire Dawa	94.8	39.1	31.4	15.1	41.6	28.8	20.5	57.1	6.3	60.0	19
Education											
No education	87.4	30.3	47.4	12.5	22.2	29.2	4.2	53.8	2.7	84.6	4,262
Primary	87.5	37.8	52.1	15.8	25.9	38.0	9.5	60.0	1.4	89.3	932
Secondary and higher	96.6	40.8	62.1	37.0	29.1	38.7	21.9	81.5	13.3	95.6	255
Wealth quintile											
Lowest	89.0	18.6	44.1	12.6	26.3	19.7	3.8	48.5	2.6	78.2	1,154
Second	86.2	30.9	48.3	9.7	21.6	31.6	4.5	48.9	2.7	84.1	1,192
Middle	86.9	32.0	46.3	12.9	23.1	31.3	4.9	55.5	2.4	87.5	1,196
Fourth	85.6	41.2	49.8	13.9	19.7	36.0	5.9	59.8	2.0	90.2	1,086
Highest	92.9	40.9	59.0	25.2	25.8	39.8	12.6	73.4	5.9	91.4	822
Total	87.8	32.1	48.9	14.2	23.2	31.1	5.9	56.1	2.9	85.9	5,450

Note: Table refers to foods consumed in the preceding "24-hour" period (yesterday and last night)

[1] Includes pumpkin, carrots, squash, sweet potatoes, dark green leafy vegetables, mangoes, papayas, and other locally grown fruits and vegetables that are rich in vitamin A

11.6 MICRONUTRIENT INTAKE

Micronutrient deficiencies are a result of inadequate intake of micronutrient-rich foods and the inadequate utilization of available micronutrients in the diet as a result of infections, parasitic infestations, and other factors. Measures of micronutrient fortification through the use of iodized household salt, micronutrient supplementation with iron and vitamin A, consumption of vitamin A-rich and iron-rich foods, and micronutrient status in terms of anaemia and night blindness are discussed in the following section for both women and children.

11.6.1 Iodine Intake

Insufficient iodine in the diet can lead to serious health problems. Disorders arising from iodine deficiency range from goiter to mental and neurological disorders. Deficiency of iodine also causes abortion, stillbirth, low birth weight in infants, and premature birth. The principal cause of iodine deficiency is inadequate iodine in foods. Since iodine cannot be stored for long periods by the body, tiny amounts are needed regularly (100-150 micrograms per day per person).

In the 2005 EDHS cooking salt in households was tested for the presence of iodine using salt testing kits supplied by UNICEF. Salt that contains at least 15 parts per million (ppm) of iodine is considered to be adequately iodized. Of the 99 percent of households in which an iodine test was carried out, only 20 percent had salt that was adequately iodized. Wealth and place of residence make little difference in iodine fortification (Table 11.6). Households in Dire Dawa are most likely to consume salt that is adequately iodized (62 percent) while households in Benishangul-Gumuz least likely (14 percent).

Table 11.6 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), percentage of households tested, and percentage of households with no salt, according to background characteristics, Ethiopia 2005

Background characteristic	Iodine content of salt in households tested: None (0 ppm)	Inadequate (<15 ppm)	Adequate (15+ ppm)	Total	Number of households	Among all households, the percentage: With salt tested	With no salt	Number of households
Residence								
Urban	46.1	32.9	21.0	100.0	1,939	98.2	0.1	1,974
Rural	45.6	34.7	19.7	100.0	11,606	98.8	0.1	11,747
Region								
Tigray	43.7	28.3	28.0	100.0	932	99.2	0.4	940
Affar	39.0	38.0	23.0	100.0	136	98.8	0.0	138
Amhara	53.4	31.7	14.9	100.0	3,658	98.6	0.1	3,709
Oromiya	40.3	37.7	22.0	100.0	4,749	99.1	0.0	4,790
Somali	41.8	33.6	24.7	100.0	535	99.0	0.0	540
Benishangul-Gumuz	58.7	27.7	13.6	100.0	127	99.4	0.0	128
SNNP	45.9	35.6	18.5	100.0	2,746	98.0	0.2	2,802
Gambela	34.9	27.4	37.6	100.0	45	96.7	0.4	47
Harari	41.5	29.7	28.8	100.0	38	98.0	0.0	39
Addis Ababa	50.4	31.7	17.9	100.0	516	98.4	0.0	525
Dire Dawa	8.3	29.4	62.3	100.0	63	98.5	0.0	64
Wealth quintile								
Lowest	43.4	34.5	22.1	100.0	2,733	99.1	0.1	2,757
Second	48.0	33.4	18.7	100.0	2,813	99.1	0.0	2,838
Middle	44.0	36.2	19.8	100.0	2,636	98.7	0.0	2,670
Fourth	45.9	35.0	19.1	100.0	2,492	98.5	0.1	2,531
Highest	46.9	33.3	19.9	100.0	2,872	98.2	0.1	2,925
Total	45.7	34.4	19.9	100.0	13,546	98.7	0.1	13,721

11.6.2 Micronutrient Intake Among Children

A serious contributor to childhood morbidity and mortality is micronutrient deficiency. Children can receive micronutrients from foods, food fortification, and direct supplementation. Table 11.7 looks at measures relating to intake of several key micronutrients among children.

Vitamin A is an essential micronutrient for the immune system and plays an important role in maintaining the epithelial tissue in the body. Severe vitamin A deficieny (VAD) can cause eye damage. VAD can also increase severity of infections such as measles and diarrheal diseases in children and slows recovery from illness. Vitamin A is found in breast milk, other milks, liver, eggs,

fish, butter, red palm oil, mangoes, papayas, carrots, pumpkins, and dark green leafy vegetables. The liver can store an adequate amount of the vitamin for four to six months. Periodic dosing (usually every six months) of vitamin A supplements is one method of ensuring that children at risk do not develop VAD**.**

The EDHS collected information on the consumption of vitamin A-rich foods and on the coverage of supplements. Table 11.7 shows that 26 percent of last-born children living with the mother consumed vitamin A-rich foods in the 24-hour period before the survey. Consumption of vitamin A-rich foods increases from 8 percent among children age 6-8 months to 33 percent among children age 24-35 months. There is no gender difference in the consumption of vitamin A-rich foods and no discernible difference by birth order. Not surprisingly, breastfeeding children are much less likely to consume vitamin A-rich foods than nonbreastfeeding children. Urban children are nearly twice as likely to consume vitamin A-rich foods as rural children. Children living in Gambela and Addis Ababa are more likely than children living in other regions to consume vitamin A-rich foods. Children born to mothers with at least some secondary education are more likely to have received foods rich in vitamin A than children born to mothers with little or no education. Children living in the wealthiest households are much more likely to consume vitamin A-rich foods than children living in other households.

Eleven percent of young children consume foods rich in iron. Noticeable differences by background characteristics are also seen in the consumption of iron-rich foods by young children. Consumption of iron-rich foods rises to peak of 15 percent among children age 18-23 months, is slightly higher among female than male children, and among lower than higher order births. Differences by other background variables are similar to those seen for the consumption of vitamin A-rich foods.

Nearly one in two children age 6-59 months received a vitamin A supplement in the six months before the survey. Differences in the consumption of vitamin A supplements by gender, birth order, breastfeeding status and mother's age at birth are small. The urban-rural difference in vitamin A intake is marked, with rural children much less likely to receive vitamin A supplements than children in urban areas. Children residing in Benishangul-Gumuz are least likely to receive vitamin A supplements compared with children in the other regions. Vitamin A supplementation children rises as mother's education and household wealth increases.

As discussed earlier, inadequate amounts of iodine in the diet are related to serious health risks for young children. The EDHS results show that 19 percent of children 6-59 months live in households using adequately iodized salt. Children under age one, rural children, and children living in Dire Dawa are more likely than their counterparts to live in households using adequately iodized salt. There is no clear pattern by mother's age at birth or wealth quintile in the percentage of children living in households using adequately iodized salt.

Table 11.7 Micronutrient intake among children

Percentage of last-born children age 6-35 months living with the mother who consumed foods rich in vitamin A and iron in the 24 hours preceding the survey, and percentage of children age 6-59 months who received vitamin A supplements in the six months preceding the survey, and percentage of children under five living in households with adequately iodized salt, by background characteristics, Ethiopia 2005

	Last-born children age 6-35 months			Children age 6-59 months		Children age 6-59 months in households with salt tested	
Background characteristic	Consumed foods rich in vitamin A in past 24 hours[1]	Consumed foods rich in iron in past 24 hours[2]	Number of children	Given vitamin A supplements in past 6 months	Number of children	Household salt adequately iodized[3]	Number of children
Child's age in months							
6-8	8.4	5.4	598	41.8	608	21.2	603
9-11	18.3	7.5	459	38.9	463	21.9	455
12-17	28.0	12.8	1,091	45.2	1,115	16.3	1,101
18-23	29.4	15.2	718	49.6	762	18.4	753
24-35	32.5	11.9	1,442	46.2	1,892	19.1	1,876
36-47	na	na	na	47.9	2,105	19.6	2,081
48-59	na	na	na	44.9	2,013	18.7	1,986
Mother's age at birth							
<20	26.4	12.1	599	44.3	1,314	15.6	1,294
20-24	27.4	13.5	1,103	45.5	2,427	18.9	2,400
25-29	25.1	11.7	1,106	44.9	2,206	20.1	2,170
30-34	30.3	10.5	773	48.1	1,607	20.2	1,597
35-49	20.3	7.6	727	46.4	1,404	19.3	1,394
Sex							
Male	26.0	10.6	2,206	45.7	4,508	18.5	4,467
Female	26.0	12.0	2,102	45.9	4,450	19.5	4,388
Birth order							
2-3	27.7	13.4	703	45.8	1,474	17.5	1,459
4-5	27.5	13.8	1,239	46.3	2,726	19.3	2,692
6+	26.8	9.8	1,048	48.0	2,122	19.4	2,091
Breastfeeding status							
Breastfeeding	23.2	10.1	3,558	44.5	3,976	18.4	3,931
Not breastfeeding	39.2	17.1	739	47.3	4,881	19.4	4,825
Residence							
Urban	44.2	28.7	335	62.0	673	14.4	668
Rural	24.5	9.9	3,973	44.5	8,285	19.4	8,186
Region							
Tigray	25.1	20.7	286	65.3	591	25.0	588
Affar	9.3	6.8	41	33.3	85	23.5	84
Amhara	19.2	12.1	1,010	43.2	2,026	14.2	1,995
Oromiya	26.4	10.9	1,721	43.0	3,599	21.1	3,576
Somali	7.9	6.6	166	38.8	383	22.6	378
Benishangul-Gumuz	31.1	16.2	38	27.4	83	13.7	83
SNNP	35.4	8.4	948	49.9	1,986	17.4	1,948
Gambela	38.2	16.3	12	39.1	26	32.2	25
Harari	33.9	21.4	9	36.1	18	27.1	18
Addis Ababa	37.9	20.5	64	53.2	130	11.8	130
Dire Dawa	23.9	18.6	15	46.7	31	53.0	31
Mother's education							
No education	22.9	9.0	3,371	43.8	7,052	19.1	6,967
Primary	33.1	14.9	727	50.3	1,502	19.6	1,488
Secondary and higher	51.1	35.4	210	63.6	404	14.4	400
Wealth quintile							
Lowest	16.9	6.9	926	39.5	1,990	20.4	1,969
Second	26.1	8.7	964	42.1	1,893	17.4	1,872
Middle	24.0	10.6	940	45.6	1,953	18.7	1,934
Fourth	28.9	11.6	818	49.6	1,744	20.7	1,719
Highest	37.9	22.1	659	55.4	1,378	17.5	1,360
Total	26.0	11.3	4,308	45.8	8,958	19.0	8,855

Note: Information on vitamin A supplements is based on mother's recall. Total includes 98 children with missing information on breastfeeding status who are not shown separately.
na = Not applicable
[1] Includes meat (and organ meat), fish, poultry, eggs, pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, dark green leafy vegetables, 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] Salt containing 15 ppm of iodine or more.

11.6.3 Micronutrient Intake among Mothers

A mother's nutritional status during pregnancy is important both for the child's intrauterine development and for protection against maternal morbidity and mortality. Night blindness is an indicator of severe vitamin A deficiency, and pregnant women are especially prone to suffer from it.

Table 11.8 shows the micronutrient intake among mothers of young children by background characteristics. Two-fifths of mothers consumed vitamin A-rich foods and 14 percent consumed iron-rich foods. Twenty-one percent of mothers received vitamin A supplements postpartum. One in five mothers reported having difficulty seeing at night but when adjusted for those mothers who had no difficulty seeing in the daytime, only 6 percent of mothers are considered to have suffered from night blindness during their pregnancy. The majority of mothers did not take iron supplements during their pregnancy (89 percent). Nineteen percent of mothers live in households using adequately iodized salt.

Consumption of vitamin A-rich foods is higher among mothers whose age at birth was 30-34, mothers residing in urban areas, mothers living in Gambela, mothers with at least secondary education, and mothers in the highest wealth quintile. Urban residence, education, and wealth also exert a positive influence on the consumption of iron-rich foods. Consumption of iron-rich foods is highest in Addis Ababa, Gambela, and Tigray and lowest in SNNP and Somali.

Night blindness during pregnancy is more prevalent among older mothers (age 30 and above), mothers of higher order births, rural mothers, mothers residing in Amhara, mothers with no education, and mothers in the poorest households.

Table 11.8 Micronutrient intake among mothers

Percentage of women with a child under age three years living with her who consumed foods rich in vitamin A and iron in the 24 hours preceding the survey, and among women with a birth in the five years preceding the survey, percentage who received a vitamin A dose in the first two months after delivery, percentage who suffered from night blindness during pregnancy, percentage who took iron tablets or syrup for specific number of days, and percentage who live in households with adequately iodized salt, by background characteristics, Ethiopia 2005

Background characteristics	Mothers with a living child under age 3 years who consumed: Foods rich in vitamin A[1]	Iron-rich foods[2]	Number of women	Received vitamin A dose post-partum[3]	Night blindness during pregnancy: Reported	Adjusted[4]	Number of days iron tablets taken during pregnancy: None	<60	60-89	90+	Don't know/ missing	Number of women with a birth in the 5 years preceding the survey	Women in households with salt tested: Percentage with salt adequately iodized[5]	Number of women
Age at birth														
<20	36.3	12.2	760	19.9	14.1	4.3	90.2	8.3	0.4	0.0	1.1	994	15.2	974
20-24	40.2	15.5	1,402	19.9	18.6	5.7	90.7	7.9	0.0	0.2	1.2	1,822	17.3	1,808
25-29	42.7	14.9	1,415	21.7	22.3	6.1	88.3	10.4	0.1	0.0	1.2	1,781	20.0	1,754
30-34	46.8	14.9	968	20.6	24.8	7.3	88.2	10.5	0.1	0.2	1.0	1,320	19.8	1,300
35-49	38.0	12.1	905	20.7	29.5	6.9	89.4	9.5	0.0	0.1	1.0	1,391	19.6	1,380
Number of children ever born														
1	40.2	14.8	909	19.7	12.9	4.8	90.2	8.2	0.2	0.0	1.5	1,190	16.1	1,177
2-3	41.1	15.5	1,606	20.7	19.5	6.1	89.1	9.2	0.3	0.2	1.2	2,089	18.4	2,065
4-5	41.7	13.4	1,318	22.2	23.3	6.1	90.2	9.0	0.0	0.0	0.7	1,692	19.5	1,668
6+	41.2	13.2	1,616	19.8	28.2	6.8	88.6	10.2	0.0	0.1	1.1	2,336	19.3	2,306
Residence														
Urban	54.4	31.5	411	36.0	11.5	3.1	79.7	15.9	0.4	0.2	3.8	634	14.8	629
Rural	40.0	12.8	5,038	19.1	23.1	6.4	90.3	8.7	0.1	0.1	0.9	6,674	18.9	6,587
Region														
Tigray	32.5	24.6	348	17.5	24.9	8.3	87.8	10.1	0.0	0.2	1.9	480	25.6	478
Affar	22.8	18.6	51	18.4	14.4	4.1	89.7	6.1	0.0	0.0	4.2	68	20.9	67
Amhara	30.1	19.3	1,296	16.2	21.2	11.7	91.5	7.3	0.0	0.1	1.2	1,856	14.1	1,827
Oromiya	40.7	12.9	2,137	23.9	24.4	4.6	89.5	9.5	0.1	0.1	0.7	2,723	20.1	2,702
Somali	10.2	7.6	214	14.5	17.4	4.5	91.0	6.9	0.5	0.0	1.6	288	19.8	285
Benishangul-Gumuz	41.5	22.6	50	13.2	12.7	5.8	90.6	7.1	0.0	0.0	2.3	69	12.2	68
SNNP	61.2	7.9	1,231	22.1	22.1	2.6	87.8	11.1	0.1	0.0	1.0	1,632	18.5	1,598
Gambela	64.1	24.9	15	25.4	6.3	2.0	81.4	15.3	0.3	0.2	2.7	23	31.1	22
Harari	48.9	16.3	12	26.0	10.5	1.2	79.9	18.2	0.5	0.0	1.5	15	27.3	15
Addis Ababa	49.0	27.3	77	21.8	3.1	0.9	79.6	15.4	0.6	0.7	3.7	129	13.8	129
Dire Dawa	35.0	15.1	19	28.9	6.8	1.9	87.5	10.0	0.2	0.4	1.9	25	55.4	25
Education														
No education	38.8	12.5	4,262	18.2	23.7	6.8	90.4	8.5	0.1	0.1	1.0	5,734	18.9	5,663
Primary	46.8	15.8	932	25.8	19.0	4.1	88.3	10.7	0.0	0.0	1.0	1,205	18.1	1,189
Secondary and higher	58.4	37.0	255	41.2	7.9	2.8	77.1	17.6	1.2	0.2	3.9	368	15.4	364
Wealth quintile														
Lowest	30.3	12.6	1,154	15.8	27.1	8.6	93.8	5.0	0.0	0.3	1.0	1,520	20.4	1,504
Second	39.0	9.7	1,192	16.7	22.7	6.5	91.1	7.8	0.1	0.0	1.0	1,553	17.6	1,534
Middle	42.0	12.9	1,196	19.9	23.9	7.1	89.4	9.9	0.1	0.2	0.4	1,586	18.2	1,568
Fourth	45.2	13.9	1,086	22.3	20.0	3.6	88.5	10.6	0.0	0.0	0.8	1,451	19.0	1,432
Highest	52.8	25.2	822	30.7	15.0	4.1	82.5	14.4	0.4	0.1	2.7	1,196	17.4	1,177
Total	41.1	14.2	5,450	20.6	22.1	6.1	89.4	9.3	0.1	0.1	1.1	7,307	18.6	7,216

[1] Includes meat (and organ meat), fish, poultry, eggs, pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, mango, papaya, and other locally grown fruits and vegetables that are rich in vitamin A.
[2] Includes meat (and organ meat), fish, poultry, eggs.
[3] In the first two months after delivery.
[4] Women who reported night blindness but did not report difficulty with vision during the day.
[5] Salt containing 15 ppm of iodine or more.

11.7 Prevalence of Anaemia

The most common causes of anaemia in developing countries are inadequate intake of iron, folate, vitamin B_{12} or other nutrients. Anaemia can also result from sickle cell disease, malaria, and intestinal worm infestation. Anaemia may be the underlying cause of maternal mortality, spontaneous abortion, premature birth, and low birth weight. Iron and folic acid supplementation and anti-malarial prophylaxis for pregnant women, promotion of the use of insecticide-treated bednets by pregnant women and children under five, and six-month de-worming for children are some of the important measures to reduce anaemia prevalence among vulnerable groups. Anaemia is characterized by a low level of haemoglobin in the blood. The 2005 EDHS measured haemoglobin levels to identify anaemia in children and women. The resulting data are the first of its kind in Ethiopia.

11.7.1 Prevalence of Anaemia in Children

Table 11.9 shows the percentage of children age 6-59 months classified as having anaemia, by background characteristics. More than half (54 percent) of Ethiopian children 6-59 months old are anaemic, with 21 percent mildly anaemic, 28 percent moderately anaemic, and 4 percent severely anaemic. Severe anaemia is highest among children age 9-11 months, male children, children of mothers who were not interviewed and not in the household at the time of the interview, children living in the Somali Region, children of mothers with little or no education, and children in the poorest households. Surprisingly, severe anaemia does not vary much by urban-rural residence. This indicates the widespread nature of the problem and the need to intensify the various components of the anaemia control strategy.

Table 11.9 Prevalence of anaemia in children

Percentage of children age 6-59 months classified as having anaemia, by background characteristics, Ethiopia 2005

Background characteristic	Any anaemia	Anaemia status: Mild (10.0-10.9 g/dl)	Moderate (7.0-9.9 g/dl)	Severe (>7.0 g/dl)	Number of children
Age in months					
6-8	77.2	20.8	53.1	3.4	226
9-11	73.3	23.1	41.9	8.3	199
12-17	73.7	26.2	41.4	6.1	521
18-23	62.2	24.1	33.6	4.5	344
24-35	50.7	20.7	26.5	3.5	882
36-47	48.1	23.4	22.2	2.5	1,002
48-59	38.2	16.1	18.5	3.6	965
Sex					
Male	55.0	21.6	28.9	4.6	2,055
Female	52.1	21.1	27.7	3.3	2,083
Mother's status					
Interviewed	53.9	21.4	28.6	3.9	3,846
Not interviewed but in household	47.6	20.9	26.1	0.5	111
Not interviewed and not in household[2]	49.5	20.9	23.2	5.4	182
Residence					
Urban	46.8	18.4	24.8	3.5	270
Rural	54.0	21.6	28.5	3.9	3,868
Region					
Tigray	56.5	23.9	28.8	3.8	288
Affar	58.5	25.3	28.8	4.4	32
Amhara	52.0	20.0	26.6	5.4	858
Oromiya	56.0	22.3	30.2	3.5	1,717
Somali	85.6	19.7	51.7	14.1	124
Benishangul-Gumuz	54.3	24.6	25.2	4.4	39
SNNP	46.2	20.7	23.5	2.0	1,004
Gambela	61.8	25.3	32.5	4.0	10
Harari	56.1	23.6	29.3	3.1	7
Addis Ababa	37.5	9.6	23.9	4.0	45
Dire Dawa	60.7	20.0	29.1	11.5	14
Mother's education[1]					
No education	54.5	21.8	28.7	4.0	3,122
Primary	51.4	20.9	26.8	3.7	685
Secondary and higher	47.9	15.0	31.5	1.4	149
Wealth quintile					
Lowest	59.9	22.2	32.3	5.4	923
Second	55.7	22.3	28.8	4.6	888
Middle	52.8	19.8	29.4	3.6	899
Fourth	49.1	20.8	25.1	3.2	853
Highest	47.8	21.7	24.0	2.0	576
Total	53.5	21.4	28.3	3.9	4,138

Note: Table is based on children who stayed in the household the night before the interview. Prevalence is adjusted for altitude using formulas recommended by CDC (CDC, 1998). Haemoglobin is measured as grams per decilitre (g/dl).
[1] For women who were not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers were not listed in the household schedule.
[2] Includes children whose mothers are deceased

11.7.2 Prevalence of Anaemia in Women

Table 11.10 shows the prevalence of anaemia among women age 15-49, which is less pronounced than among children. Twenty-seven percent of women are anaemic, with 17 percent mildly anaemic, 8 percent moderately anaemic, and just over 1 percent severely anaemic. Lack of education, being pregnant, and living in poor households are associated with higher prevalence. Anaemia is also higher among rural than urban women. Women residing in Affar, Somali and Dire Dawa are much more likely to be severely anaemic than women living in the other regions.

Table 11.10 Prevalence of anaemia in women

Percentage of women with anaemia, by background characteristics, Ethiopia 2005

Background characteristic	Any anaemia	Anaemia status: Mild anaemia	Moderate anaemia	Severe anaemia	Number of women
Age[1]					
15-19	24.8	16.6	7.4	0.9	1,489
20-29	24.5	15.9	7.4	1.2	2,163
30-39	30.6	19.9	8.8	1.9	1,489
40-49	27.7	18.2	8.3	1.3	1,000
Children ever born[2]					
None	21.5	14.9	5.6	1.0	1,909
1	29.0	18.3	9.8	0.9	593
2-3	28.2	17.8	8.6	1.8	1,101
4-5	28.6	16.4	11.2	1.0	1,012
6+	29.4	20.5	7.2	1.6	1,526
Maternity status[2]					
Pregnant	30.6	14.7	13.0	3.0	520
Breastfeeding	29.8	20.2	8.3	1.3	2,222
Neither	23.9	16.0	6.8	1.0	3,398
Residence					
Urban	17.8	13.4	3.7	0.7	948
Rural	28.2	18.1	8.6	1.4	5,193
Region					
Tigray	29.3	22.4	6.3	0.6	411
Affar	40.4	26.2	10.9	3.4	55
Amhara	31.0	21.4	8.1	1.5	1,486
Oromiya	24.9	15.7	8.0	1.2	2,177
Somali	39.8	20.1	14.9	4.8	181
Benishangul-Gumuz	31.3	20.7	9.9	0.8	59
SNNP	23.5	14.8	7.7	1.0	1,437
Gambela	42.0	29.4	10.8	1.7	21
Harari	22.4	15.2	6.7	0.5	16
Addis Ababa	14.6	10.7	3.1	0.8	271
Dire Dawa	25.8	17.9	5.4	2.5	26
Education[1]					
No education	29.4	18.4	9.5	1.4	4,045
Primary	23.0	16.2	5.3	1.5	1,447
Secondary and higher	17.0	13.6	3.1	0.3	649
Smoking status[2]					
Yes	35.2	16.4	18.8	0.0	91
No	26.4	17.4	7.7	1.3	6,046
Wealth quintile					
Lowest	31.8	18.6	11.7	1.5	1,138
Second	30.3	19.2	9.6	1.4	1,218
Middle	26.7	17.6	7.9	1.3	1,206
Fourth	28.5	18.5	8.4	1.7	1,165
Highest	17.4	13.9	2.8	0.7	1,414
Total	26.6	17.4	7.9	1.3	6,141

Note: Table is based on women who stayed in the household the night before the interview. Prevalence is adjusted for altitude using formulas recommended by CDC (CDC, 1998). Women with <7.0 g/dl of haemoglobin have severe anaemia, women with 7.0-9.9 g/dl have moderate anaemia, and pregnant women with 10.0-10.9 g/dl and nonpregnant women with 10.0-11.9 g/dl have mild anaemia. Total includes 5 women missing information on smoking status who are not shown separately.

[1] For women who were not interviewed, information is taken from the Household Questionnaire.

[2] Excludes women who were not interviewed

11.8 NUTRITIONAL STATUS

The nutritional status of young children and women of reproductive age reflects household, community, and national development. Children and women are most vulnerable to malnutrition in developing countries because of low dietary intakes, infectious diseases, lack of appropriate care, and inequitable distribution of food within the household.

11.8.1 Nutritional Status of Children

The 2005 EDHS included information on the nutritional status of children under five years of age for three indices, namely, weight-for-age, height-for-age and weight-for-height, taking age and sex into consideration. Weight measurements were taken using a lightweight electronic SECA scale designed and manufactured under the guidance of UNICEF, and height measurements were carried out using a measuring board produced by Shorr Productions. Children younger than 24 months were measured lying down (recumbent length) on the board, while standing height was measured for older children. The scale allowed for the weighing of very young children through an automatic mother-child adjustment that eliminated the mother's weight while she was standing on the scale with her baby.

As recommended by WHO, the anthropometric measurements of children in the survey were compared with an international reference population defined by the U.S. National Centre for Health Statistics (NCHS) and accepted by the U.S. Centres for Disease Control and Prevention (CDC). Each of the three nutritional status indicators described below are expressed in standard deviation units (Z-scores) from the median of the reference population. The use of this reference population is based on the finding that well nourished young children in all population groups (for which data exist) follow very similar growth patterns. The reference populations are useful for comparison, facilitating the examination of differences in the anthropometric status of subgroups in a population and changes in nutritional status over time. In any large population, there is variation in height and weight; this variation approximates a normal distribution.

Each of these indices—height-for-age, weight-for-height, and weight-for-age—provides different information about growth and body composition, which is used to assess nutritional status. The height-for-age index is an indicator of linear growth retardation and cumulative growth deficits. Children whose height-for-age Z-score is below minus two standard deviations (-2 SD) from the median of the reference population are considered short for their age (stunted) and are chronically malnourished. Children who are below minus three standard deviations (-3 SD) from the median of the reference population are considered severely stunted. Stunting reflects failure to receive adequate nutrition over a long period of time and is also affected by recurrent and chronic illness. Height-for-age, therefore, represents the long-term effects of malnutrition in a population and does not vary according to recent dietary intake.

The weight-for-height index measures body mass in relation to body length and describes current nutritional status. Children whose Z-scores are below minus two standard deviations (-2 SD) from the median of the reference population are considered thin (wasted) for their height and are acutely malnourished. Wasting represents the failure to receive adequate nutrition in the period immediately preceding the survey and may be the result of inadequate food intake or a recent episode of illness causing loss of weight and the onset of malnutrition. Children whose weight-for-height is below minus three standard deviations (-3 SD) from the median of the reference population are considered severely wasted.

Weight-for-age is a composite index of height-for-age and weight-for-height. It takes into account both acute and chronic malnutrition. Children whose weight-for-age is below minus two standard deviations from the median of the reference population are classified as underweight. Children whose weight-for-age is below minus three standard deviations (-3 SD) from the median of the reference population are considered severely underweight.

Height and weight data were collected in all the households that were included in the male subsample of households. A total of 5,280 children under five were identified in the households. Five percent of children had missing information on height or weight, 8 percent had height or weight measures considered to be out of the range for their ages, and less than 1 percent had incomplete age information. The final analysis on nutritional status is based on the remaining 4,586 (87 percent) children. The results are shown in Table 11.11.

Table 11.11 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, Ethiopia 2005

	Height-for-age			Weight-for-height			Weight-for-age			
Background characteristic	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Number of children
Age in months										
<6	1.3	8.1	(0.1)	1.0	6.4	0.3	0.0	4.4	0.2	389
6-8	3.8	26.6	(1.0)	1.8	10.3	(0.2)	4.8	19.1	(1.0)	243
9-11	12.3	32.7	(1.4)	0.5	14.2	(0.6)	13.8	38.2	(1.6)	211
12-17	18.6	46.3	(1.7)	4.3	18.8	(0.9)	15.0	47.5	(1.8)	510
18-23	31.2	61.7	(2.2)	2.6	16.6	(0.8)	14.9	48.2	(1.9)	326
24-35	27.7	51.3	(1.9)	1.7	9.0	(0.6)	12.7	42.2	(1.7)	901
36-47	30.5	52.5	(2.1)	2.4	8.5	(0.7)	13.2	40.9	(1.7)	1,016
48-59	31.3	54.1	(2.1)	2.4	8.5	(0.6)	9.5	42.6	(1.7)	989
Sex										
Male	24.1	47.2	(1.8)	2.8	11.4	(0.6)	11.5	38.9	(1.6)	2,317
Female	24.2	45.8	(1.8)	1.7	9.6	(0.5)	10.7	37.9	(1.5)	2,269
Birth order[2]										
1	18.5	38.2	(1.5)	1.9	9.6	(0.5)	8.4	33.9	(1.3)	661
2-3	21.7	44.7	(1.7)	2.4	9.9	(0.6)	10.5	35.7	(1.5)	1,286
4-5	25.9	48.5	(1.9)	2.2	12.9	(0.7)	13.4	41.6	(1.6)	1,019
6+	26.8	50.5	(1.9)	1.9	9.8	(0.6)	10.8	41.2	(1.6)	1,330
Birth interval in months[2]										
First birth[3]	18.5	38.2	(1.5)	1.9	9.6	(0.5)	8.4	33.9	(1.3)	661
<24	28.6	52.8	(2.0)	0.9	11.4	(0.5)	13.2	42.4	(1.6)	711
24-47	25.4	48.2	(1.9)	1.8	9.5	(0.6)	11.1	39.7	(1.6)	2,262
48+	18.2	41.6	(1.5)	4.9	13.9	(0.7)	10.7	35.1	(1.5)	661
Size at birth[2]										
Very small	27.8	52.7	(2.0)	2.6	15.5	(0.8)	15.6	49.5	(1.8)	841
Small	25.9	48.3	(1.8)	4.4	16.3	(0.9)	16.0	45.6	(1.8)	341
Average or larger	22.5	44.5	(1.7)	1.8	8.6	(0.5)	9.1	34.8	(1.4)	3,106
Mother's age[4]										
15-19	18.6	38.4	(1.2)	0.2	6.7	(0.3)	7.6	30.0	(1.0)	204
20-24	19.9	41.3	(1.6)	2.6	12.2	(0.6)	11.2	37.8	(1.4)	835
25-29	22.6	45.9	(1.8)	1.5	9.7	(0.5)	9.2	36.2	(1.5)	1,233
30-34	26.0	48.5	(1.9)	1.9	10.9	(0.7)	13.5	40.2	(1.6)	919
35-49	27.1	49.9	(1.9)	2.9	10.6	(0.6)	11.5	41.5	(1.6)	1,217
Mother's nutritional status										
Underweight (BMI <18.5)	25.5	50.4	(2.0)	2.0	15.0	(0.9)	13.5	49.6	(1.8)	805
Normal (BMI 18.5 - 24.9)	22.3	45.2	(1.7)	2.5	9.9	(0.5)	10.8	36.5	(1.5)	2,664
Overweight (BMI >= 25)	18.7	40.5	(1.5)	2.4	6.0	(0.0)	4.1	19.9	(0.9)	120
Missing	3.0	26.9	(1.4)	0.0	12.1	(0.8)	0.0	37.0	(1.5)	20
Mother's status										
Interviewed	23.8	46.4	(1.8)	2.1	10.5	(0.6)	11.0	38.5	(1.5)	4,296
Not interviewed but in household	26.3	43.8	(1.8)	1.8	11.1	(0.5)	13.9	38.5	(1.5)	112
Not interviewed and not in household[5]	30.6	51.3	(1.8)	5.3	9.7	(0.7)	12.3	35.7	(1.6)	178

Continued...

Table 11.11—*Continued*

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, Ethiopia 2005

	Height-for-age			Weight-for-height			Weight-for-age			
Background characteristic	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Number of children
Residence										
Urban	10.2	29.8	(1.1)	2.5	6.3	(0.3)	4.8	22.9	(0.9)	362
Rural	25.3	47.9	(1.8)	2.2	10.9	(0.6)	11.6	39.7	(1.6)	4,224
Region										
Tigray	16.7	41.0	(1.7)	1.9	11.6	(1.0)	11.3	41.9	(1.7)	316
Affar	21.6	40.8	(1.5)	2.9	9.9	(0.4)	12.9	34.1	(1.2)	46
Amhara	26.5	56.6	(2.1)	3.0	14.2	(0.8)	15.0	48.9	(1.9)	973
Oromiya	21.8	41.0	(1.6)	2.4	9.6	(0.5)	8.2	34.4	(1.4)	1,867
Somali	30.3	45.2	(1.8)	5.1	23.7	(1.0)	17.8	50.9	(1.8)	177
Benishangul-Gumuz	19.7	39.7	(1.6)	3.9	16.0	(1.0)	15.4	44.6	(1.8)	46
SNNP	29.1	51.6	(2.0)	0.9	6.5	(0.4)	11.9	34.7	(1.5)	1,057
Gambela	12.6	29.3	(1.1)	3.8	6.8	(0.5)	4.1	26.7	(1.1)	11
Harari	17.0	38.7	(1.3)	0.0	9.1	(0.4)	5.8	26.7	(1.1)	10
Addis Ababa	5.4	18.4	(0.7)	0.0	1.7	(0.2)	1.5	11.0	(0.6)	67
Dire Dawa	13.8	30.8	(1.0)	4.4	11.4	(0.9)	8.4	29.6	(1.3)	16
Mother's education										
No education	26.3	49.1	(1.9)	2.3	11.2	(0.6)	12.3	41.4	(1.6)	3,450
Primary	17.9	39.8	(1.6)	1.7	10.1	(0.4)	7.6	32.0	(1.3)	754
Secondary and higher	4.7	24.0	(1.0)	0.0	1.3	0.0	2.6	13.6	(0.6)	204
Wealth quintile										
Lowest	26.5	47.9	(1.8)	3.3	13.0	(0.8)	12.6	42.9	(1.7)	1,014
Second	27.5	54.0	(2.0)	3.4	13.4	(0.7)	15.2	43.6	(1.7)	994
Middle	27.3	45.8	(1.8)	1.8	10.7	(0.5)	10.7	38.3	(1.5)	942
Fourth	20.1	46.4	(1.8)	0.8	7.6	(0.5)	8.9	34.8	(1.5)	944
Highest	16.8	34.9	(1.4)	1.6	6.2	(0.4)	6.4	29.4	(1.2)	692
Total	24.1	46.5	(1.8)	2.2	10.5	(0.6)	11.1	38.4	(1.5)	4,586

Note: Table is based on children who stayed in the household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the NCHS/CDC/WHO International Reference Population. The percentage of children who are more than three or more than two standard deviations below the median of the International Reference Population (-3 SD and -2 SD) are shown according to background characteristics. Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight. Total includes 6 children missing information on birth size who are not shown separately. Figures in parentheses are based on 25-49 unweighted cases.

[1] Includes children who are below -3 standard deviations (SD) from the International Reference Population median.

[2] Excludes children whose mothers were not interviewed

[3] First born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval.

[4] For women who were not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers were not listed in the household schedule.

[5] Includes children whose mothers are deceased

Forty-seven percent of children under five are stunted and 24 percent are severely stunted. Eleven percent of children under five are wasted and 2 percent are severely wasted. The weight for-age indicator shows that 38 percent of children under five are underweight and 11 percent are severely underweight.

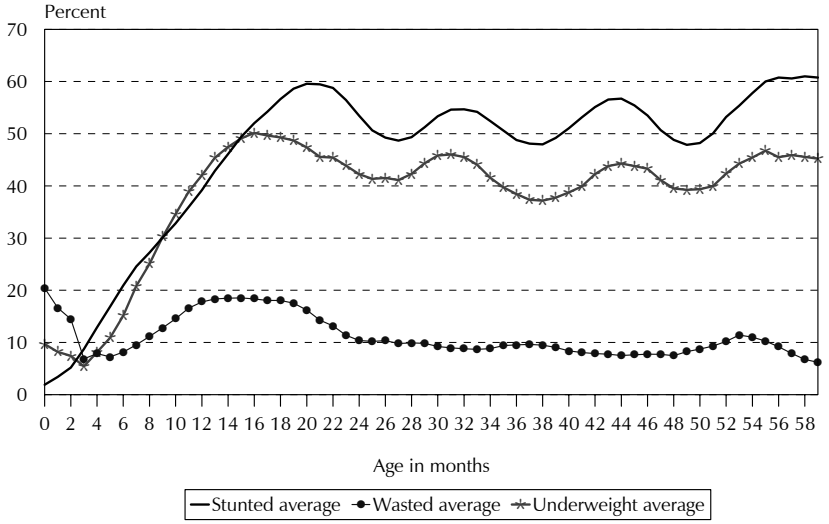
Table 11.11 and Figure 11.3 indicate that stunting is apparent even among children less than 6 months of age (8 percent). Stunting increases with the age of the child; this is evidenced by the increase in stunting from 27 percent among children age 6-8 months to 62 percent among children age 18-23 months. The level then declines slowly to between 51 and 54 percent among children age two years and older. There is very little difference in the level of stunting by gender. Stunting increases with increasing birth order of the child but decreases with increasing birth interval. Size at birth is an important indicator of the nutritional status of children. Stunting is higher among children who were reported to have been very small at birth (53 percent) than among children who were small, average,

or larger in size at birth. The percentage of children stunted decreases with increasing level of mother's education and increases with increasing age of mother. Children whose biological mothers were not in the household are more likely to be stunted (51 percent) than children whose mothers were interviewed (46 percent). The relationship between stunting and wealth status is not uniform, though children in the highest wealth quintile are least likely to be stunted compared with those in the other wealth quintiles than those in the other groups. Rural children are more stunted (48 percent) than urban children (30 percent). Regional variation in nutritional status of children is substantial. Stunting levels are above the national average in the Amhara (57 percent) and SNNP (52 percent) regions.

The prevalence of wasting is higher than the national average among children age 9-23 months. The percentage of children classified as wasted is highest among children of birth order 4 and 5 (13 percent). The proportion of children wasted is higher in rural areas (11 percent) than in urban areas (6 percent). Wasting is higher than the national average in Somali (24 percent), Benishangul-Gumuz (16 percent), Amhara (14 percent), Tigray (12 percent) and Dire Dawa (11 percent). The level of wasting decreases with increasing wealth.

Table 11.11 and Figure 11.3 show that the percentage of children underweight increases sharply from 4 percent among children under age 6 months to 19 percent among children age 6-8 months, doubles among children age 9-11 months, and peaks at 48 percent among children age 12-23 months with very small decreases thereafter. This may be due to inappropriate and/or inadequate feeding practices because increasing levels of children underweight by age coincides with the age at which normal complementary feeding starts. The percentages of underweight children in Somali (51 percent), Amhara (49 percent) and Benishangul-Gumuz (45 percent) are above the national average. Differentials for the other background characteristics are very similar to those discussed under stunting and wasting.

Figure 11.3 **Nutritional Status of Children Under Age Five**



EDHS 2005

11.8.2 Trends in Children's Nutritional Status

Data from the 2005 EDHS can be compared with similarly collected data from the 2000 EDHS. A comparison of the data shows that there have been some improvements in the nutritional status of children in the past five years. The percentage of children stunted fell by 10 percent from 52 percent in 2000 to 47 percent in 2005. Similarly, the percentage of children underweight declined by 19 percent from 47 percent in 2000 to 38 percent in 2005. There was, however, no change over the five-year period in the percentage of children wasted.

11.8.3 Nutritional Status of Women

The 2005 EDHS collected information on the height and weight of women in the reproductive age group. The data are used to derive a measure of adult nutritional status known as body mass index (BMI). In this report, two indicators of nutritional status are presented—height and body mass index (BMI).

The height of a woman is associated with past socioeconomic status and nutrition during childhood and adolescence. A woman's height is used to predict the risk of difficulty in delivery because small stature is often associated with small pelvis size and the potential for obstructed labour. The risk of giving birth to a low birth weight baby is influenced by the mother's nutritional status. The cutoff point for the height at which mothers can be considered at risk varies between populations but normally falls between 140 and 150 centimetres. As in other DHS surveys, a cutoff point of 145 cm is used for the 2005 EDHS.

The index used to measure thinness or obesity is known as the body mass index (BMI), or the Quetelet index. BMI is defined as weight in kilogrammes divided by height squared in metres (kg/m^2). A cut-off point of 18.5 is used to define thinness or acute undernutrition and a BMI of 25 or above usually indicates overweight or obesity.

Table 11.12 presents the mean values of the two indicators of nutritional status and the proportions of women falling into high-risk categories, according to background characteristics. Women for whom there was no information on height and/or weight and for whom a BMI could not be estimated are excluded from this analysis. The data analysis on BMI is based on 5,901 women, while the height analysis is based on 6,636 women age 15-49 years. The mean height of women is 157 centimetres, which is above the critical height of 145 centimetres. Overall, 3 percent of women are shorter than 145 cm. There are very small differences in the mean height of women by background characteristics. Women in the Somali and Gambela regions, on the average are taller than women in the other regions. Women in Amhara have the shortest mean height and, along with Affar, the highest proportion below 145 cm. Women with at least some secondary education are at least 1 cm taller than women who have not attended school. There is no clear difference in the pattern of height by other characteristics.

Table 11.12 shows that there are large differentials across background characteristics in the percentage of women assessed as malnourished (BMI less than 18.5) or "thin" and overweight (BMI 25 or higher). Twenty-seven percent of women were found to be chronically malnourished (BMI less than 18.5), while only 4 percent were overweight or obese. Three in ten women age 15-19 and women age 45-49 are thin or undernourished. Variation between urban and rural women is marked. More women have a BMI less than 18.5 in rural areas (28 percent) than in urban areas (19 percent). However, the percentage of overweight or obese women is higher in urban areas (14 percent) than in rural areas (2 percent). Gambela (39 percent) and Tigray (38 percent) have the highest percentage of undernourished women and Addis Ababa has the lowest percentage (15 percent). The percentage of overweight or obese women increases with increasing educational level. It is also elevated for the highest wealth quintile.

Table 11.12 Nutritional status of women by background characteristics

Among women age 15-49, mean height, percentage under 145 cm, mean body mass index (BMI), and percentage with specific BMI levels, by background characteristics, Ethiopia 2005

	Height			BMI (kg/m^2)								
Background characteristic	Mean height in cm	Percentage below 145 cm	Number of women	Mean BMI	18.5-24.9 (normal)	<18.5 (thin)	17.0-18.4 (mildly thin)	<17.0 (moderately and severely thin)	≥25.0 (overweight or obese)	25.0-29.9 (overweight)	≥30.0 (obese)	Number of women
Age												
15-19	155.5	4.8	1,608	19.7	64.5	32.5	17.0	15.5	3.0	2.8	0.1	1,517
20-29	156.8	3.1	2,358	20.3	75.8	20.8	15.6	5.2	3.4	3.0	0.4	2,002
30-39	156.9	2.4	1,596	20.4	68.9	24.8	17.6	7.2	6.3	5.4	0.9	1,359
40-49	156.9	2.1	1,074	20.2	63.2	30.9	23.0	7.9	6.0	4.2	1.8	1,024
Residence												
Urban	156.9	1.9	1,145	21.5	67.0	18.8	11.6	7.2	14.2	11.9	2.3	1,112
Rural	156.4	3.4	5,492	19.9	69.6	28.3	19.1	9.1	2.2	1.8	0.3	4,789
Region												
Tigray	156.8	2.8	443	19.3	60.8	37.5	22.0	15.6	1.6	1.6	0.0	390
Affar	156.4	4.3	69	20.0	62.9	33.0	18.5	14.4	4.1	3.6	0.5	61
Amhara	155.1	4.3	1,609	19.9	70.5	27.0	17.6	9.4	2.4	2.0	0.4	1,471
Oromiya	156.9	2.2	2,331	20.4	71.1	24.3	17.6	6.7	4.6	3.9	0.7	2,036
Somali	162.0	1.9	230	20.1	55.4	34.9	17.5	17.4	9.7	8.6	1.1	202
Benishangul-Gumuz	156.5	1.6	61	19.6	65.3	32.9	22.6	10.3	1.8	1.8	0.0	53
SNNP	156.3	4.1	1,490	20.0	70.2	26.7	18.5	8.2	3.0	2.9	0.2	1,295
Gambela	160.5	1.2	23	19.4	59.5	38.5	23.2	15.3	2.0	1.9	0.2	20
Harari	158.6	1.7	19	21.0	69.4	20.6	13.3	7.3	10.0	6.7	3.4	17
Addis Ababa	156.8	2.1	329	22.0	67.2	15.4	9.8	5.5	17.5	13.0	4.5	325
Dire Dawa	158.7	1.3	32	21.3	61.4	24.2	14.7	9.5	14.3	10.8	3.6	31
Education												
No education	156.5	3.3	4,336	20.0	69.7	27.4	19.3	8.1	2.9	2.4	0.4	3,761
Primary	156.1	3.8	1,535	20.0	68.4	28.1	16.3	11.8	3.5	3.1	0.4	1,393
Secondary and higher	157.7	1.5	766	21.4	67.1	18.8	12.3	6.5	14.1	11.4	2.7	747
Wealth quintile												
Lowest	157.1	3.3	1,225	19.8	68.5	29.9	19.9	10.0	1.6	0.9	0.7	1,071
Second	155.3	3.9	1,295	19.8	66.6	30.2	20.8	9.4	3.2	2.8	0.4	1,104
Middle	156.3	3.7	1,251	19.8	69.0	29.3	18.8	10.5	1.7	1.5	0.2	1,068
Fourth	156.6	3.7	1,223	19.9	71.6	26.6	17.9	8.7	1.8	1.8	0.1	1,091
Highest	157.2	1.7	1,642	21.1	69.6	19.5	13.2	6.3	10.9	9.2	1.7	1,567
Total	156.5	3.2	6,636	20.2	69.1	26.5	17.7	8.8	4.4	3.7	0.7	5,901

Note: The Body Mass Index (BMI) is expressed as the ratio of weight in kilogrammes to the square of height in metres (kg/m^2).
[1] Excludes pregnant women and women with a birth in the preceding 2 months

MALARIA 12

12.1 INTRODUCTION

Malaria is a leading public health problem in Ethiopia. In 2004-05, the disease was reported as the primary cause of health problems, accounting for 17 percent of outpatient visits, 15 percent of hospital admissions, and 29 percent of in-patient deaths (MOH, 2005a). Almost 75 percent of the land is malarious and an estimated 50 million people (68 percent) live in areas at risk of malaria. Areas at altitude below 2000 metres above sea level are generally considered malarious. However, local transmission has also been detected in areas at altitudes as high as 2,500 metres. The transmission pattern is unstable and often characterized by focal and cyclic large scale epidemics. The most recent malaria epidemic, which occurred in 2003, affected 211 districts where more than 2 million clinical cases were recorded (Negash et al., 2005).

The malaria transmission season runs from September to December, following the major rainy season from June to August, with a minor transmission season from April to May in areas that receive rains during the short rainy season from February to March. Localized or widespread malaria epidemics can occur during the transmission season. The widespread epidemics have a cyclical pattern of 5 to 8 years that follows major climatic changes. The 2005 EDHS was fielded from the end of April 2005 to the end of August 2005, before the main malaria transmission season began.

The type and application of malaria prevention and control interventions is determined by the transmission characteristics of the disease in different parts of the country. Insecticide treated nets (ITNs) are generally distributed in areas where malaria transmission occurs for more than 3 months of the year. The ITN distribution system through the public sector gives priority for free distribution to pregnant mothers and children under five years of age in targeted high priority areas. A private sector ITN distribution at subsidized or market prices also operates in Ethiopia (MOH, 2004a). Indoor residual spraying with DDT or Malathion, as per WHO recommendations, is generally limited to localities in the highland fringe areas that are prone to epidemics.

Implementation of the first five-year strategic plan for malaria prevention and control (2001-2005) was completed in December 2005. The period is in line with the DHS surveys conducted in 2000 and 2005. Findings from the EDHS 2005 provide population-based estimates on the current coverage of major malaria prevention and control interventions and can be used as a baseline for the next plans.

12.1.1 Malaria Vector Control

Ownership of Mosquito Nets

The use of ITNs is one of the major components of the selective vector control strategy in Ethiopia. The effectiveness of this intervention depends on high coverage and effective utilization. The ITN distribution in Ethiopia primarily targets households with children less than five years of age and pregnant women in targeted areas (MOH, 2004a). In Ethiopia there are various types of ITNs distributed through the public and private sector. This includes the ordinary ITNs that require re-treatment with insecticide every 6 months and the long-lasting insecticide treated nets (LLINs) that can retain effective concentration of insecticides for up to 20 washes. During the EDHS 2005 survey, information was collected on the ownership and use of mosquito nets, both treated and untreated.

In an effort to make mosquito nets more affordable and to ensure equitable distribution, the government of Ethiopia endorses a segmented market approach whereby the most vulnerable and at-

risk groups are given free ITNs. In addition, in selected areas the private sector subsidizes the sale of ITNs. To boost ITN distribution through both the public and private sectors, the government has since 2002 reduced the tax and tariff on ITNs.

Table 12.1 shows the percentage of households with at least one and with more than one mosquito net (treated or untreated) and the percentage of households with at least one and with more than one ITN by background characteristics. The data show that only about 6 percent of households in Ethiopia own a mosquito net whether treated or untreated. The percentage of households having more than one net is about 1 percent. Five percent of households own at least one ever-treated net. Urban households are more likely to own any kind of net (11 percent) compared with rural households (5 percent). Mosquito net ownership is highest in the Gambela Region (31 percent) and lowest in Addis Ababa (1 percent). Comparable data from the 2000 EDHS show that only 1 percent of households in Ethiopia had bednets at that time, with urban households slightly more likely than rural households to possess bednets (3 percent and 1 percent, respectively). In 2000, households in the Affar, Gambela, and Somali regions were more likely to have bednets (31 percent, 12 percent, and 6 percent, respectively) primarily because the prevalence of malaria is high in those regions.

Table 12.1 Household possession of mosquito nets

Percentage of households with at least one and more than one mosquito net (treated or untreated), ever-treated mosquito net, and insecticide-treated net (ITN), and the average number of nets per household, by background characteristics, Ethiopia 2005

	Any type mosquito net			Ever-treated mosquito net[1]			Insecticide-treated mosquito net[2] (ITNs)			
Background characteristics	Percentage with at least one	Percentage with more than one	Average number of nets per household	Percentage with at least one	Percentage with more than one	Average number of ever-treated nets per household	Percentage with at least one	Percentage with more than one	Average number of ITNs per household	Number of households
Residence										
Urban	10.8	2.8	0.1	8.4	1.9	0.1	5.4	1.0	0.1	1,974
Rural	4.8	0.6	0.1	3.8	0.3	0.0	3.1	0.2	0.0	11,747
Region										
Tigray	16.3	3.0	0.2	13.5	2.4	0.2	8.9	1.2	0.1	940
Affar	21.4	6.2	0.3	9.5	2.0	0.1	6.3	0.9	0.1	138
Amhara	3.8	1.0	0.0	2.3	0.6	0.0	1.3	0.3	0.0	3,709
Oromiya	2.8	0.5	0.0	2.4	0.3	0.0	1.9	0.1	0.0	4,790
Somali	6.6	1.4	0.1	4.8	0.9	0.1	4.2	0.8	0.1	540
Benishangul-Gumuz	15.4	2.3	0.2	8.3	1.2	0.1	4.5	0.7	0.1	128
SNNP	8.2	0.4	0.1	7.5	0.3	0.1	6.6	0.2	0.1	2,802
Gambela	30.6	12.9	0.5	17.9	6.7	0.3	10.8	3.8	0.2	47
Harari	6.0	0.4	0.1	3.5	0.2	0.0	1.9	0.1	0.0	39
Addis Ababa	1.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	525
Dire Dawa	22.4	0.3	0.2	18.6	0.3	0.2	17.0	0.1	0.2	64
Wealth quintile										
Lowest	4.7	0.6	0.1	3.5	0.4	0.0	2.9	0.2	0.0	2,757
Second	3.4	0.5	0.0	2.5	0.2	0.0	2.1	0.1	0.0	2,838
Middle	4.3	0.6	0.1	3.2	0.3	0.0	2.9	0.2	0.0	2,670
Fourth	5.1	0.4	0.1	4.4	0.2	0.0	3.4	0.1	0.0	2,531
Highest	10.5	2.4	0.1	8.3	1.6	0.1	5.5	0.8	0.1	2,925
Altitude										
0 - 999	36.1	13.3	0.5	22.5	6.9	0.3	14.1	3.4	0.2	279
1000 - 1499	12.4	2.5	0.2	10.7	2.1	0.1	7.8	0.9	0.1	853
1500 - 1999	9.0	1.1	0.1	7.1	0.6	0.1	5.8	0.3	0.1	5,085
2000+	1.5	0.2	0.0	1.2	0.1	0.0	0.8	0.1	0.0	7,376
Total	5.7	0.9	0.1	4.4	0.6	0.1	3.4	0.3	0.0	13,721

Note: Total includes 138 households missing information on altitude and not shown separately.

[1] An ever-treated net is a pretreated net or a non-pretreated net which has subsequently been soaked with insecticide at any time.

[2] An insecticide-treated net (ITN) is 1) a factory-treated net that does not require any further treatment, or 2) a pretreated net obtained within the last 12 months, or 3) a net that has been soaked with insecticide within the past 12 months.

Consistent with the degree of risk of malaria, ownership of mosquito net varies inversely with altitude. For example, 36 percent of households in areas below 1,000 metres own some kind of net, while the corresponding figure for households at and above 2,000 metres is only 2 percent.

Three percent of households reported owning an ITN. Households in Addis Ababa reported almost no ownership of ITNs, while those in the Dire Dawa Administrative Council have the highest level of ITN ownership (17 percent), followed by the Gambela Region (11 percent). Subsequent to the fielding of the 2005 EDHS, the largest ever distribution campaign in Ethiopia was conducted from September to December 2005, in which more than 3 million ITNs were distributed. Sixty percent of these nets were LLINs.

Use of Mosquito Nets by Children

Children under five years of age are especially vulnerable to malaria and are targeted as a high priority group for ITNs. Therefore, households in targeted areas with children under five years of age have a greater chance of getting free ITNs through the public distribution system.

Table 12.2 presents information on the percentage of children under age five who slept under a mosquito net (treated or untreated) the night before the survey. Overall, just over 2 percent of children slept under a net the night prior to the survey, while less than 2 percent slept under ever-treated nets and ITNs the night prior to the survey.

Little variation was observed in the use of nets by age or sex of children. Children in urban areas are almost five times as likely to sleep under a mosquito net (9 percent) as children in rural areas (2 percent). The proportion of children who sleep under any type of mosquito net is highest in Dire Dawa (20 percent), followed by Affar (14 percent) and Gambela (12 percent). It is lowest is in Addis Ababa (1 percent).

The proportion sleeping under a net is highest among children in the highest wealth quintile. This could be indicative of high income as a contributor to better awareness and ability to buy nets. This emphasizes the need for better communication to improve utilization of nets by the most vulnerable groups at high risk of malaria. Use of nets varies inversely with altitude, with large differences in mosquito net use between children living at altitudes less than 1,000 metres (19 percent) and those living at altitudes above 1,000 metres (4 percent and less).

Table 12.2 Use of mosquito nets by children

Percentage of children under five years of age who slept under a mosquito net (treated or untreated), an ever-treated mosquito net, or an insecticide-treated net (ITN) the night before the interview, by background characteristics, Ethiopia 2005

Background characteristic	Percentage of children who slept under any net the preceding night	Percentage of children who slept under an ever-treated net the preceding night[1]	Percentage of children who slept under an ITN the preceding night	Number of children
Age in months				
< 12	2.9	2.0	1.8	2,284
12-23	2.5	2.0	1.7	1,955
24-35	2.1	1.5	0.8	1,969
36-47	1.7	1.5	1.4	2,243
48-59	2.4	2.1	1.6	2,239
Sex				
Male	2.3	1.8	1.6	5,426
Female	2.4	1.8	1.4	5,266
Residence				
Urban	9.3	6.7	3.6	780
Rural	1.8	1.5	1.3	9,911
Region				
Tigray	2.1	2.0	1.6	686
Affar	13.8	5.4	3.1	101
Amhara	2.1	1.2	0.9	2,440
Oromiya	1.0	0.8	0.4	4,220
Somali	5.5	4.0	3.7	453
Benishangul-Gumuz	3.7	2.1	1.4	102
SNNP	3.6	3.4	3.2	2,449
Gambela	12.2	4.7	2.2	30
Harari	2.0	1.2	1.0	22
Addis Ababa	0.6	0.1	0.1	151
Dire Dawa	20.4	19.6	19.0	38
Wealth quintile				
Lowest	1.8	1.6	1.4	2,352
Second	1.1	0.8	0.8	2,256
Middle	1.8	1.1	1.1	2,337
Fourth	2.1	1.8	1.7	2,150
Highest	6.0	4.7	2.8	1,596
Altitude				
0 - 999	19.3	11.5	8.4	213
1000 - 1499	2.8	2.5	2.1	777
1500 - 1999	3.8	3.1	2.6	4,080
2000+	0.5	0.4	0.3	5,498
Total	2.3	1.8	1.5	10,691

Note: Total includes 115 children missing information on altitude who are not shown separately.
[1] An ever-treated net is a pretreated net or a non-pretreated net that has been soaked with insecticide at any time.
[2] An insecticide-treated net (ITN) is 1) a factory-treated net that does not require any further treatment, or 2) a pretreated net obtained within the past 12 months, or 3) a net that has been soaked with insecticide in the past 12 months.

Use of Mosquito Nets by Women

As in the case of children under five years of age, pregnant women are also one of the target groups of high priority for ITNs, with households in targeted areas where pregnant women reside having a greater chance of getting free ITNs through the public distribution system. The 2004-05 health and health-related indicators of the Federal Ministry of Health identify malaria as the primary cause of health problems among female patients attending health facilities, and accounts for 15

percent of out-patient consultations, 19 percent of admissions, and 29 percent of in-patients deaths (MOH, 2005a). Given that the level of fertility in the population is high, the burden of malaria on women, especially pregnant women, is high. Despite this, the level of utilization of ITNs by all women and by pregnant women is not sufficient for what the problem calls for.

Table 12.3 shows the percentage of all women and pregnant women who slept under any mosquito net and the proportion who slept under an ITN the night prior to the interview, by background characteristics. Generally, a very small proportion of women slept under a mosquito net (2 percent), and only 1 percent of pregnant women slept under an ITN. Thus, the data show little difference in the use of nets between pregnant and non-pregnant women (both 2 percent). Women in urban areas are more than twice as likely as women in rural areas to sleep under a mosquito net. Urban pregnant women are more than ten times as likely to sleep under a net as rural pregnant women.

Table 12.3 Use of mosquito nets by women

Percentage of all women age 15-49 and pregnant women age 15-49 who slept under a mosquito net (treated or untreated), an ever-treated mosquito net, or an insecticide-treated net (ITN) the night before the interview, by background characteristics, Ethiopia 2005

	Percentage of all women age 15-49 who:				Percentage of pregnant women age 15-49 who:			
Background characteristic	Slept under any net the preceding night	Slept under an ever-treated net the preceding night[1]	Slept under an ITN[2] the preceding night	Number of women	Slept under any net the preceding night	Slept under an ever-treated net the preceding night[1]	Slept under an ITN[2] the preceding night	Number of pregnant women
Residence								
Urban	4.4	3.4	2.3	2,569	11.0	9.5	6.4	60
Rural	1.9	1.5	1.3	11,915	1.1	0.8	0.8	1,121
Region								
Tigray	2.1	2.1	1.6	946	3.1	3.1	2.8	80
Affar	12.3	6.6	3.8	150	13.3	8.0	5.9	12
Amhara	1.7	1.0	0.7	3,582	1.5	0.3	0.3	253
Oromiya	1.2	0.9	0.6	5,154	0.0	0.0	0.0	450
Somali	4.8	3.2	2.9	504	2.2	1.5	1.5	46
Benishangul-Gumuz	5.5	2.8	2.0	129	1.2	0.0	0.0	13
SNNP	4.2	4.0	3.5	3,085	2.9	2.9	2.4	308
Gambela	12.0	6.4	4.1	45	6.7	5.6	2.7	3
Harari	1.1	0.9	0.5	40	0.0	0.0	0.0	2
Addis Ababa	0.1	0.0	0.0	776	(0.0)	(0.0)	(0.0)	11
Dire Dawa	8.9	8.4	7.9	71	*	*	*	3
Education								
No education	1.9	1.5	1.2	9,416	1.1	0.7	0.7	868
Primary	3.0	2.5	2.1	3,469	2.6	2.6	2.2	257
Secondary and higher	3.4	2.2	1.5	1,599	4.1	3.0	1.5	55
Wealth quintile								
Lowest	1.7	1.3	1.2	2,526	1.1	1.0	0.9	246
Second	1.3	0.9	0.8	2,732	1.1	0.3	0.3	292
Middle	1.6	1.1	1.1	2,789	0.2	0.0	0.0	287
Fourth	2.0	1.8	1.6	2,721	1.4	1.2	1.2	221
Highest	4.3	3.4	2.2	3,716	7.0	6.1	4.7	135
Altitude								
0 - 999	17.5	10.8	7.7	280	13.2	9.5	7.8	19
1000 - 1499	3.3	2.7	2.1	861	5.1	4.4	4.0	73
1500 - 1999	4.2	3.4	2.8	5,391	1.7	1.2	1.0	473
2000+	0.4	0.3	0.2	7,821	0.8	0.7	0.5	599
Total	2.3	1.8	1.4	14,484	1.6	1.2	1.1	1,181

Note: Total includes 137 women and 17 pregnant women for whom information on altitude is not known. 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] An ever-treated net is a pretreated net or a non-pretreated net that has been soaked with insecticide at any time.

[2] An insecticide-treated net (ITN) is 1) a factory-treated net that does not require any further treatment, or 2) a pretreated net obtained within the past 12 months, or 3) a net that has been soaked with insecticide in the past 12 months.

The use of mosquito nets among all women is highest in the Affar and Gambela regions (12 percent each) and lowest in Addis Ababa (negligible use). The highest percentage of women sleeping under an ever-treated net or ITN the night before the survey was reported in Dire Dawa (8 percent). Among pregnant women, use of mosquito nets is highest in Affar (13 percent slept under any net, 8 percent slept under an ever-treated net, and 6 percent slept under an ITN). In general, the use of mosquito nets (treated and untreated) increases among women and pregnant women as the level of wealth increases. A higher proportion of women in low altitude areas use mosquito nets than those in higher altitudes, and the highest coverage (18 percent) is reported in areas of less than 1,000 metres. Eight percent of pregnant women living in areas less than 1,000 metres slept under an ITN the night before the interview.

Use of Mosquito Nets by Population age Five and Older

The malaria transmission pattern in Ethiopia is highly seasonal and unstable. Because of this unstable transmission and infrequent exposure to infection, immunity is generally underdeveloped and all age groups are at risk of malarial disease. Although pregnant mothers and children under five years of age are the most vulnerable, the population age five and older is also at high risk, and adult deaths from malaria during epidemics are relatively high.

Table 12.4 shows the percentage of the population age five and older who slept under a mosquito net whether treated or untreated, and the proportion who slept under an ITN the night prior to the interview, by background characteristics. Generally, a very low percentage of this population slept under any net (2 percent), an ever-treated-net (1 percent), or an ITN (1 percent).

The pattern of use of mosquito nets in this population is similar to that for pregnant women and children under age five. Persons age five and older in urban areas are more likely to sleep under a mosquito net than those in the rural areas. Use of mosquito nets among this group is highest in Gambela (9 percent use any net, 5 percent use an ever-treated net, and 3 percent use an ITN), followed by Affar (8 percent use any net, 4 percent use an ever-treated net, and 2 percent use an ITN). The population age five and older sleeping under an ITN the night before the interview was highest in Dire Dawa (6 percent), followed by Gambela (3 percent) and SNNP (3 percent).

In general, the use of mosquito nets (treated and untreated) among this group increases slightly as the level of wealth increases. Use of mosquito nets is higher in areas at altitudes below 1,000 metres, with 12 percent using any net, 7 using an ever-treated net, and 5 percent using an ITN.

Table 12.4 Use of mosquito nets by population age five and older

Percentage of population age five and older who slept under a mosquito net (treated and untreated), under an ever-treated mosquito net, or an insecticide-treated net (ITN) the night before the interview, by background characteristics, Ethiopia 2005

Background characteristic	Percentage who slept under any net the preceding night	Percentage who slept under an ever-treated net the preceding night[1]	Percentage who slept under an ITN[2] the preceding night	Number of persons age 5 and older
Sex				
Male	1.5	1.2	1.0	28,219
Female	1.7	1.4	1.0	28,626
Residence				
Urban	3.4	2.7	1.8	7,395
Rural	1.3	1.1	0.9	49,450
Region				
Tigray	1.6	1.5	1.2	3,587
Affar	7.8	3.7	2.3	606
Amhara	0.9	0.5	0.3	14,356
Oromiya	0.8	0.6	0.5	20,546
Somali	3.2	2.3	2.0	2,292
Benishangul-Gumuz	3.1	1.6	1.1	485
SNNP	3.1	2.9	2.5	12,299
Gambela	9.1	5.1	3.4	169
Harari	0.6	0.4	0.2	135
Addis Ababa	0.1	0.0	0.0	2,127
Dire Dawa	6.2	6.0	5.6	241
Wealth quintile				
Lowest	1.2	1.0	0.9	11,064
Second	0.9	0.7	0.6	11,175
Middle	1.2	0.9	0.9	11,243
Fourth	1.3	1.2	1.1	11,347
Highest	3.1	2.5	1.7	12,016
Altitude				
0 - 999	11.6	7.1	5.2	1,124
1000 - 1499	2.7	2.4	1.8	3,443
1500 - 1999	2.8	2.4	2.0	21,122
2000+	0.2	0.2	0.1	30,554
Total	1.6	1.3	1.0	56,845

Note: Total includes 611 persons missing information on altitude who are not shown separately.

[1] An ever-treated net is 1) a pretreated net or a non-pretreated net that has been soaked with insecticide at any time.

[2] An insecticide-treated net (ITN) is 1) a factory-treated net that does not require any further treatment, or 2) a pretreated net obtained within the past 12 months, or 3) a net that has been soaked with insecticide in the past 12 months.

Indoor Residual Spraying of Insecticide

The malaria vector control programme in Ethiopia employs an integrated application of vector control interventions that augment each other for maximum reduction in vector longevity and hence transmission. The selection and application of vector control interventions is based on the principles of integrated vector management whereby the judicious use of insecticides is ensured in an economically and environmentally agreeable manner. The service is fully funded by the government and the public receives services at no cost.

Indoor residual spraying with DDT or Malathion, as per WHO recommendations, is one of the major malaria vector control interventions applied to preempt malaria epidemics in selected epidemic-prone localities. The intervention annually is estimated to cover 20-30 percent of the malaria

epidemic-prone localities (MOH, unpublished sources). The operation demands substantial financial input and coordinated logistics. The amount of insecticide utilized each year costs an estimated US$2.5 million and the operational cost is much higher.

This intervention has been applied in the country since the 1950s. The level of coverage is usually reported in activity reports. However, efforts to collect data on the percentage of unit structures that received spraying and where the sprayed walls remained intact without being re-plastered (mud, white wash, reconstructed) have not been implemented. For the first time, population-based data on the coverage and status of sprayed unit structures have been collected through the household questionnaire of the 2005 EDHS. Table 12.5 shows the percentage of houses sprayed within the past six months and the percentage of houses with white insecticide powder visible on the sprayed walls.

Table 12.5 Coverage of spraying programs

Percentage of households occupying a dwelling in which the inner walls were ever sprayed with insecticide to prevent malaria, percentage of households occupying a dwelling whose inner walls were sprayed with insecticide 0-6 months preceding the survey, and percentage of households occupying a dwelling with white insecticide powder visible on the inner walls, by background characteristics, Ethiopia 2005

Background characteristic	Percentage of households occupying a dwelling ever sprayed with insecticide to prevent malaria	Percentage of households occupying a dwelling sprayed with insecticide to prevent malaria 0-6 months preceding the survey	Percentage of households occupying a dwelling with white insecticide powder visible on the inner walls	Number of households
Residence				
Urban	7.0	3.2	2.5	1,974
Rural	11.1	2.1	2.8	11,747
Region				
Tigray	22.4	2.5	4.1	940
Affar	11.0	3.5	1.4	138
Amhara	13.1	2.8	3.7	3,709
Oromiya	8.5	2.1	2.3	4,790
Somali	0.6	0.4	0.1	540
Benishangul-Gumuz	25.6	0.4	0.6	128
SNNP	9.1	2.1	2.8	2,802
Gambela	25.7	1.9	2.5	47
Harari	5.5	2.3	0.3	39
Addis Ababa	0.5	0.2	0.0	525
Dire Dawa	23.3	17.0	12.7	64
Wealth quintile				
Lowest	10.4	2.2	3.1	2,757
Second	10.4	2.6	3.0	2,838
Middle	11.9	1.5	2.6	2,670
Fourth	11.2	2.1	2.6	2,531
Highest	8.8	2.8	2.5	2,925
Altitude				
0 - 999	18.6	2.6	4.2	279
1000 - 1499	18.4	4.1	4.8	853
1500 - 1999	17.0	3.9	4.7	5,085
2000+	4.9	0.9	1.1	7,376
Total	10.5	2.3	2.8	13,721

Note: Total includes 138 households missing information on altitude that are not shown separately.

Eleven percent of households were reported as ever having been sprayed with insecticide to prevent malaria, with 2 percent having been sprayed in the past six months. Only 3 percent were reported to have white powder visible on the inner walls.

The coverage of houses ever sprayed is highest in Gambela and Benshangul-Gumuz regions (26 percent each) followed by Dire Dawa (23 percent) and Tigray (22 percent). The percentage of houses sprayed in the six months preceding the survey is highest in Dire Dawa (17 percent), while it is below 4 percent in all other regions. The highest percentage of houses with visible insecticide powder on sprayed walls is in Dire Dawa (13 percent) followed by Tigray and Amhara (4 percent each) and SNNP (3 percent).

Houses located at altitudes less than 2,000 metres are more likely to have ever been sprayed and more likely to have been sprayed within the past 6 months than houses located at or above 2,000 metres. For example, more than 17 percent of households located below 2,000 meters were sprayed at some time, compared with less than 5 percent of households at or above 2,000 metres.

Malaria Prophylaxis in Pregnancy

The malaria prevention and control guidelines in the country recommend the use of chemoprophylaxis as a preventive measure. The drug recommended for chemoprophylaxis starting July 2004 is mefloquine (MOH, 2004b). Chemoprophylaxis is recommended for visitors to malarious areas and pregnant mothers residing in malaria endemic areas. Intermittent preventive treatment (IPT) using sulfadoxine-pyrimethamine for the prevention of malaria during pregnancy has never been officially adopted and introduced by the Ministry of Health. This intervention is recommended for areas with stable transmission. Therefore, its application in Ethiopia where transmission is generally seasonal and unstable is not recommended. Even in some parts of the country like Gambela, where the malaria transmission season is relatively long (more than 6 months), the intervention has not been implemented because of the co-existence of P. vivax infections (approximately 40 percent), for which sulfadoxine-pyrimethamine is not effective. The high level of resistance to sulfadoxine-pyrimethamine (36 percent, range 20-54) that led to the change of the first-line, anti-malarial drug for the treatment of *falciparum* malaria to the ACT drug Artemether-Lumefantrine was the other reason for not applying the intervention (Jima et al., 2005) .

Table 12.6 indicates summary findings on the preventive use of anti-malarial drugs and use of IPT. Four percent of pregnant women took an anti-malarial drug, 2 percent took SP/Fansidar, 1 percent received two or more doses of SP/Fansidar, less than 1 percent received any SP/Fansidar during an antenatal visit, and a negligible percent received two or more doses of SP/Fansidar at least once during an ANC visit (IPT). Since SP/Fansidar is not recommended as a prophylactic drug and has never been introduced for IPT, it is not surprising that the percentage who received it during an ANC visit is low and probably reflects individual practice by service providers and users.

Table 12.6 Prophylactic use of antimalarial drugs and use of intermittent preventive treatment (IPT) by women during pregnancy

Percentage of women who took any antimalarial drugs for prevention, who took SP/Fansidar, and who received intermittent preventive treatment (IPT), during the pregnancy for their last live birth in the two years preceding the survey, by background characteristics, Ethiopia 2005

		SP/Fansidar		Intermittent preventive treatment (IPT)[1]		
Background characteristic	Percentage who took any antimalarial drug	Percentage who took any SP/Fansidar	Percentage who took 2+ doses	Percentage who received any SP/Fansidar during an ANC visit	Percentage who received 2+ doses, at least once during an ANC visit	Number of women
Residence						
Urban	5.4	2.9	1.0	1.0	0.3	322
Rural	4.3	2.0	1.2	0.5	0.3	3,999
Region						
Tigray	4.5	2.5	1.8	0.5	0.3	256
Affar	11.6	5.1	2.3	0.9	0.7	41
Amhara	7.0	3.9	1.6	0.8	0.2	1,046
Oromiya	1.5	0.6	0.4	0.4	0.4	1,668
Somali	0.7	0.7	0.7	0.0	0.0	168
Benishangul-Gumuz	13.3	5.8	2.2	1.1	0.3	40
SNNP	6.6	2.8	2.0	0.5	0.5	1,005
Gambela	9.8	4.3	2.3	0.8	0.3	11
Harari	2.9	1.4	0.0	0.0	0.0	10
Addis Ababa	0.0	0.0	0.0	0.0	0.0	61
Dire Dawa	1.4	1.4	0.8	1.4	0.8	15
Education						
No education	4.1	2.1	1.2	0.5	0.3	3,363
Primary	5.5	2.2	1.7	0.8	0.7	768
Secondary and higher	3.6	1.6	0.2	0.2	0.2	190
Wealth quintile						
Lowest	2.4	1.6	1.2	0.3	0.2	918
Second	2.7	1.7	1.1	0.4	0.3	926
Middle	6.3	2.3	1.4	0.6	0.4	957
Fourth	4.7	2.9	1.6	0.6	0.4	859
Highest	6.2	2.0	0.6	0.8	0.4	660
Altitude						
0 - 999	14.3	6.0	4.3	0.6	0.4	80
1000 - 1499	11.4	3.8	2.4	0.7	0.5	285
1500 - 1999	5.5	2.8	1.6	0.9	0.6	1,659
2000+	2.2	1.2	0.6	0.2	0.1	2,262
Total	4.4	2.1	1.2	0.5	0.3	4,321

Note: Total includes 30 women missing information on altitude who are not shown separately.
[1] IPT = Intermittent preventive treatment (received SP/Fansidar during an antenatal (ANC) visit).

12.1.2 Malaria Diagnosis and Treatment

Treatment of Malaria in Children

Child illness and death in Ethiopia are due primarily to five common childhood illnesses, namely, pneumonia (ARI), diarrhoea, malaria, measles and malnutrition, and often to a combination of these conditions (MOH 2005b).

The level of childhood mortality in Ethiopia is one of the highest in the world. The 2004-05 health and health-related indicators of the Ministry of Health identified malaria as the primary cause of health problems in infants, accounting for 19 percent of out-patient visits, 18 percent of admissions, and 28 percent of in-patients deaths (MOH, 2005a). Thus, children under five are recognized as the most vulnerable group for whom diagnosis and treatment should be given priority.

Table 12.7 presents data on the percentage of children under age five with fever who received treatment for malaria. Overall, of the 19 percent of children with fever in the two weeks preceding the survey, 3 percent took anti-malarial drugs but less than 1 percent took the anti-malarial drug the same day or the next day following the onset of fever.

Table 12.7 Prevalence and prompt treatment of children with fever

Percentage of children under age five with fever in the two weeks preceding the survey, and among children with fever, the percentage who received antimalarial drugs and the percentage who received the drugs the same or next day following the onset of fever, by background characteristics, Ethiopia 2005

	Children under age five		Children under age five with fever		
Background characteristic	Percentage with fever in the two weeks preceding the survey	Number of children	Percentage who received antimalarial drugs	Percentage who received antimalarial drugs same or next day	Number of children
Age in months					
< 6	16.8	1,152	0.6	0.0	194
6-11	27.6	1,071	4.4	0.0	295
12-23	23.3	1,877	2.7	0.8	438
24-35	21.6	1,892	1.9	1.2	408
36-47	15.1	2,105	3.5	0.1	317
48-59	11.6	2,013	4.9	1.9	233
Sex					
Male	18.2	5,129	2.7	0.8	935
Female	19.1	4,980	3.2	0.5	951
Residence					
Urban	16.0	752	4.2	1.6	121
Rural	18.9	9,357	2.9	0.6	1,765
Region					
Tigray	20.3	653	0.0	0.0	132
Affar	17.0	96	9.0	6.6	16
Amhara	14.2	2,312	2.4	0.6	329
Oromiya	19.0	4,017	1.5	0.6	764
Somali	14.0	432	0.0	0.0	60
Benishangul-Gumuz	15.3	95	4.0	1.6	15
SNNP	23.5	2,273	6.3	0.8	534
Gambela	17.8	29	11.2	6.6	5
Harari	13.7	21	1.2	0.0	3
Addis Ababa	16.1	146	3.3	1.5	23
Dire Dawa	12.3	34	(0.0)	(0.0)	4
Mother's education					
No education	18.3	7,951	2.5	0.7	1,457
Primary	21.3	1,709	4.9	0.4	364
Secondary and higher	14.4	450	4.1	1.5	65
Wealth quintile					
Lowest	19.1	2,218	0.5	0.0	422
Second	19.5	2,122	2.7	1.1	413
Middle	19.7	2,210	3.6	0.4	436
Fourth	17.7	2,015	3.5	0.5	357
Highest	16.7	1,544	5.7	1.8	258
Altitude					
0 - 999	14.8	205	12.8	4.0	30
1000 - 1499	23.6	732	3.4	0.9	173
1500 - 1999	19.8	3,857	3.9	0.4	763
2000+	17.0	5,205	1.9	0.7	886
Total	18.7	10,109	3.0	0.7	1,886

Note: Total includes 102 children under age five and 27 children under age five with fever missing information on altitude and not shown separately. Figures in parentheses are based on 25-49 unweighted cases.

Types of Anti-Malarial Drugs Used

In Ethiopia, the first-line, anti-malarial drug for the treatment of malaria has been changing over the past decade. The main reason for change was the level of efficacy of the drugs. Chloroquine was the first-line, anti-malarial drug for the treatment of uncomplicated malaria until 1998. However, because of the high level of failure (65 percent) of chloroquine for the treatment of uncomplicated *falciparum* malaria that was detected through a nationwide study conducted at 18 sentinel sites in 1997-1998, the drug was replaced by SP/Fansidar (WHO 2001).

At the time of the introduction of SP/Fansidar as the first-line drug, the level of treatment failure observed was about 7 percent (WHO, 2001). In subsequent years, however, unpublished reports from isolated studies indicated higher treatment failure rates. As a result, a nationwide study on the therapeutic efficacy of SP/Fansidar for the treatment of uncomplicated *falciparum* malaria was conducted at 10 sentinel sites from October to December 2003. A mean treatment failure rate of 36 percent (ranging from 20-54 percent) was reported.

Cognizant of the high treatment failure rates of SP/Fansidar and the need to shift to more effective anti-malarial drugs, the Ministry of Health—after a series of consultative meetings with experts in the field and based on WHO recommendations—decided to introduce the Artemisinin-based combination therapy (ACT) drug Artemether-Lumefantrine in July 2004 (MOH, 2004b). The introduction of the new ACT drug and the phasing out of the old drug was estimated to take up to two years given the limited supply of the new drug and the size of the country. Since the introduction of the new ACT drug over 5.5 million treatment courses have been distributed with much of the ACT drug distributed from September to December 2005 (MOH, 2006). The new ACT drug is used in all health facilities. However, its distribution for home and community use has not yet been implemented, pending local evidence regarding the ease and economic feasibility of using the ACT drug at home and at the community level.

Table 12.8 presents data on the percentage of children treated with specific anti-malarial drugs. The most common anti-malarial drugs used are SP/Fansidar and chloroquine (about 1 percent each) and quinine (less than 1 percent). Artemether-Lumefantrine use was reported in only one region, Harari, and the number of febrile cases treated with the drug in the region was about 1 percent.

HIV/AIDS-RELATED KNOWLEDGE, ATTITUDES, AND BEHAVIOUR

13

The chapter presents current levels of HIV/AIDS knowledge, attitudes, and related behaviours for the general adult population. The chapter then focuses on HIV/AIDS knowledge and patterns of sexual activity among young people, as youth are the main target of many HIV prevention efforts. The findings in this chapter will assist the AIDS control program in Ethiopia to identify particular groups of people most in need of information and services and most vulnerable to the risk of HIV infection.

13.1 KNOWLEDGE OF HIV/AIDS AND OF TRANSMISSION AND PREVENTION METHODS

13.1.1 Awareness of AIDS

In Ethiopia, knowledge of AIDS is widespread but not universal; 90 percent of women 15-49 and 97 percent of men 15-49 have heard of AIDS (Table 13.1).[1] The level of awareness of AIDS is lowest in the Somali and Gambela regions. In the Somali Region, only half of women and 64 percent of men know about AIDS while, in Gambela, 63 percent of women and 88 percent of men have heard about AIDS. Knowledge of AIDS exceeds 90 percent among men in all other groups while among women, knowledge levels are more variable but exceed 80 percent among all other groups.

Table 13.1 Knowledge of AIDS

Percentage of women and men age 15-49 who have heard of AIDS, by background characteristics, Ethiopia 2005

Background characteristic	Women: Has heard of AIDS	Women: Number of women	Men: Has heard of AIDS	Men: Number of men
Age				
15-24	90.2	5,813	95.3	2,399
15-19	89.2	3,266	94.0	1,335
20-24	91.5	2,547	97.1	1,064
25-29	89.1	2,517	96.9	741
30-39	89.4	3,410	98.2	1,405
40-49	90.4	2,330	96.6	919
Marital status				
Never married	91.1	3,516	95.0	2,417
Ever had sex	96.3	223	99.8	412
Never had sex	90.8	3,293	94.0	2,005
Married/living together	89.1	9,066	97.6	2,890
Divorced/separated/ widowed	91.4	1,488	99.4	157
Residence				
Urban	98.6	2,499	99.7	854
Rural	88.0	11,571	95.9	4,610
Region				
Tigray	97.0	919	99.7	315
Affar	85.4	146	96.4	59
Amhara	87.9	3,482	96.2	1,347
Oromiya	94.7	5,010	98.4	2,041
Somali	50.0	486	64.3	180
Benishangul-Gumuz	67.7	124	94.6	50
SNNP	87.3	2,995	97.2	1,143
Gambela	62.9	44	87.7	19
Harari	98.2	39	99.8	15
Addis Ababa	99.2	756	99.4	266
Dire Dawa	96.9	69	97.8	27
Education				
No education	86.1	9,271	92.5	2,164
Primary	95.6	3,123	98.8	2,140
Secondary and higher	99.8	1,675	99.9	1,160
Wealth quintile				
Lowest	80.4	2,428	91.2	980
Second	87.8	2,643	96.0	1,052
Middle	89.2	2,732	97.5	980
Fourth	91.5	2,647	97.6	1,088
Highest	97.0	3,621	99.1	1,364
Total 15-49	89.9	14,070	96.5	5,464
Total men 15-59	na	na	96.6	6,033

na = Not applicable

13.1.2 Knowledge of Ways to Reduce HIV/AIDS Transmission

HIV/AIDS prevention programmes focus their messages and efforts on three important aspects of behaviour: delaying sexual debut in young persons (abstinence), limiting the number of sexual partners/ staying faithful to one partner, and use of condoms (the ABC message). To ascertain whether programmes have effectively communicated these messages, EDHS respondents were prompted with specific questions about whether it is possible to

[1] For tables in this chapter that relate to the general adult population, the base population includes women and men age 15-49. For the male tables, an additional row has been added to provide information for all men ages 15-59.

reduce the chances of getting the AIDS virus by having just one faithful sexual partner, using a condom at every sexual encounter, and abstaining from sex.

Table 13.2 presents levels of knowledge for the various HIV/AIDS prevention methods by background characteristics. Women and men are most aware that the chances of getting the AIDS virus can be reduced by limiting sex to one uninfected partner who has no other partners (63 percent and 79 percent, respectively) or by abstaining from sexual intercourse (62 percent and 80 percent, respectively). Knowledge of condoms and the role that they can play in preventing transmission of the AIDS virus is much less common, particularly among women. Around four in ten women and six in ten men are aware that using a condom during sexual encounters can reduce HIV/AIDS transmission. Even fewer women and men are aware that using condoms and limiting sex to one uninfected partner can reduce the risk of getting the AIDS virus (35 percent and 57 percent, respectively).

As Table 13.2 shows, young women age 15-24 are generally somewhat more knowledgeable of the various modes of prevention than older women, while the opposite pattern is observed among men. Considering the relationship with marital status, among women, knowledge of HIV/AIDS prevention methods is highest among the never-married group and lowest among those who are currently in union. Never-married women who ever had sex are the most likely to report knowledge of the various modes of prevention. Among men, the differences in knowledge of various prevention modes by marital status are not as great as those among women. As is the case with women, however, never-married men who ever had sex are the most knowledgeable about ways to reduce the risk of getting the AIDS virus.

Among both women and men, levels of knowledge of preventive methods are higher in urban than in rural areas. There is considerable variability across regions in knowledge of prevention methods. Among women, knowledge levels for the various methods are highest in Addis Ababa and lowest in the Somali Region. Among men, knowledge levels tend to be higher in Tigray, Harari, Addis Ababa, and Dire Dawa than in other regions and lowest in the Somali Region.

Women and men with higher levels of schooling are more likely than those with less schooling to be aware of various preventive methods. Similarly, women and men in higher wealth quintiles are more likely than those in lower quintiles to be aware of ways to prevent the transmission of the HIV virus.

Table 13.2 Knowledge of methods of HIV prevention

Percentage of women and men age 15-49 who, in response to a prompted question, say that people can reduce the risk of getting the AIDS virus by using condoms every time they have sexual intercourse, by having one sex partner who is not infected and has no other partners, and by abstaining from sexual intercourse, by background characteristics, Ethiopia 2005

	Women					Men				
Background characteristic	Use condoms[1]	Limit sex to one uninfected partner[2]	Use condoms[1] and limit sex to one uninfected partner[2]	Abstain from sexual intercourse	Number of women	Use condoms[1]	Limit sex to one uninfected partner[2]	Use condoms[1] and limit sex to one uninfected partner[2]	Abstain from sexual intercourse	Number of men
Age										
15-24	47.4	66.1	41.1	64.2	5,813	65.7	76.5	58.2	77.8	2,399
15-19	47.4	65.0	40.8	63.7	3,266	66.4	73.2	57.4	77.5	1,335
20-24	47.4	67.5	41.4	64.9	2,547	64.9	80.6	59.1	78.2	1,064
25-29	38.6	60.8	33.8	61.2	2,517	62.4	82.6	54.7	83.8	741
30-39	34.2	58.9	29.1	61.0	3,410	64.3	81.3	56.2	82.8	1,405
40-49	32.7	60.2	27.7	60.3	2,330	61.8	79.5	56.0	80.4	919
Marital status										
Never married	54.2	70.5	48.0	68.5	3,516	65.3	76.4	57.6	77.5	2,417
Ever had sex	70.2	78.8	64.7	71.9	223	74.2	85.1	65.9	83.1	412
Never had sex	53.1	69.9	46.9	68.3	3,293	63.5	74.6	55.9	76.3	2,005
Married/living together	34.5	59.5	29.2	59.8	9,066	63.2	81.1	55.9	82.6	2,890
Divorced/separated/ widowed	42.1	61.4	36.0	62.4	1,488	68.1	80.9	63.5	81.6	157
Residence										
Urban	72.2	81.8	65.5	75.9	2,499	82.5	89.0	75.5	89.5	854
Rural	33.3	58.3	28.0	59.3	11,571	60.9	77.2	53.4	78.6	4,610
Region										
Tigray	52.3	72.1	47.4	76.8	919	77.9	92.3	73.8	96.0	315
Affar	27.2	36.9	22.2	41.5	146	60.6	73.5	52.3	73.5	59
Amhara	35.9	56.8	29.5	54.5	3,482	74.9	79.7	65.7	86.3	1,347
Oromiya	41.0	68.3	35.6	69.4	5,010	61.8	81.5	54.1	78.1	2,041
Somali	10.6	26.2	9.3	22.8	486	15.8	32.0	14.6	36.3	180
Benishangul-Gumuz	29.0	43.3	23.2	41.9	124	58.2	72.1	51.7	80.6	50
SNNP	35.9	57.9	30.4	58.1	2,995	57.2	77.1	50.9	78.1	1,143
Gambela	25.3	34.0	18.2	39.1	44	54.2	60.9	46.7	60.3	19
Harari	60.7	77.5	54.8	73.9	39	74.0	95.9	72.9	96.2	15
Addis Ababa	78.5	87.4	72.6	82.3	756	77.8	83.1	68.2	89.9	266
Dire Dawa	56.7	69.3	49.8	70.1	69	70.9	85.6	67.1	83.1	27
Education										
No education	28.3	54.4	23.5	56.4	9,271	51.6	72.2	44.9	73.6	2,164
Primary	54.1	72.7	46.5	68.8	3,123	66.7	80.9	59.1	82.6	2,140
Secondary and higher	80.1	88.0	74.3	82.7	1,675	83.2	88.4	75.1	88.8	1,160
Wealth quintile										
Lowest	21.9	46.0	18.2	47.7	2,428	52.3	69.8	47.1	68.5	980
Second	29.7	55.5	25.1	57.2	2,643	59.8	75.9	51.2	79.1	1,052
Middle	33.6	61.1	28.8	61.4	2,732	62.3	77.6	54.1	79.0	980
Fourth	39.5	63.8	32.9	65.4	2,647	63.0	79.9	54.5	82.7	1,088
Highest	65.7	78.6	58.3	74.1	3,621	78.7	88.4	72.2	88.8	1,364
Total 15-49	40.2	62.5	34.6	62.3	14,070	64.3	79.0	56.9	80.3	5,464
Total men 15-59	na	na	na	na	na	62.9	78.6	55.7	80.0	6,033

na=Not applicable
[1] Every time they have sexual intercourse
[2] Who has no other partners

13.1.3 Knowledge about Transmission

The 2005 EDHS included questions to assess the prevalence of common misconceptions about AIDS and HIV transmission. Respondents were asked whether they think it is possible for a healthy-looking person to have the AIDS virus. They were asked whether a person can get AIDS from mosquito bites, by supernatural means, or by eating from the same plate as a person who has AIDS.

The results in Tables 13.3.1 and 13.3.2 indicate that many Ethiopian adults lack accurate knowledge about the ways in which the AIDS virus can and cannot be transmitted. Particularly critical is the fact that only 51 percent of women and 69 percent of men know that a healthy-looking person can have (and thus transmit) the virus that causes AIDS. Many women and men also erroneously believe that AIDS can be transmitted by mosquito bites; only 47 percent of women and 57 percent of men reject this common misconception. Larger proportions of women and men are aware that the AIDS virus cannot be transmitted by supernatural means (70 percent and 84 percent, respectively) and by sharing food with a person who has AIDS (63 percent and 80 percent, respectively). Overall, only a minority of women (27 percent) and men (42 percent) both reject two of the more common misconceptions in Ethiopia—that AIDS can be transmitted by mosquito bites and that a person can become infected with the AIDS virus by sharing food or utensils with someone who is infected—and believe that a healthy-looking person can have the AIDS virus.

Tables 13.3.1 and 13.3.2 provide an assessment of the level of comprehensive knowledge of HIV/AIDS prevention and transmission. Comprehensive knowledge is defined as: 1) knowing that both condom use and limiting sex partners to one uninfected person are HIV/AIDS prevention methods, 2) being aware that a healthy-looking person can have HIV, and 3) rejecting the two most common local misconceptions—that HIV/AIDS can be transmitted through mosquito bites and by sharing food. According to the EDHS results, 16 percent of women and 30 percent of men in Ethiopia have comprehensive knowledge of HIV/AIDS prevention and transmission.

Finally, Tables 13.3.1 and 13.3.2 document considerable variation in HIV/AIDS knowledge. Although the patterns are not completely consistent, particularly among men, the proportions of women and men who reject the most common misconceptions, who know that a healthy-looking person can have the AIDS virus, or who have comprehensive knowledge about AIDS generally decrease with age. Sexually active, never-married women and men tend to be more knowledgeable than men and women in other marital status categories.

For all indicators, the proportion of women and men with correct knowledge about HIV/AIDS prevention and transmission is higher in urban than rural areas. Variations in knowledge levels by region are marked among both women and men, with the highest levels observed among residents of Addis Ababa and the lowest levels found in the Somali Region (Figure 13.1).

Education and wealth are directly related to both correct knowledge concerning common misconceptions and comprehensive knowledge of HIV/AIDS prevention and transmission. Among women, for example, 53 percent of women with a secondary or higher education have comprehensive knowledge about prevention and transmission modes compared with 7 percent of women with no education. Among men, the level of comprehensive knowledge varies from 18 percent among those with no education to 57 percent of those with a secondary or higher education.

Table 13.3.1 Misconceptions 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, Ethiopia 2005

Background characteristic	Percentage of women who say that: A healthy-looking person can have the AIDS virus	AIDS cannot be transmitted by mosquito bites	AIDS cannot be transmitted by super-natural means	A person cannot become infected by sharing food with a person who has AIDS	Percentage who say that a healthy-looking person can have the AIDS virus and who reject the two most common local misconceptions[1]	Percentage with a comprehensive knowledge about AIDS[2]	Number of women
Age							
15-24	55.5	53.1	72.6	68.9	32.7	20.5	5,813
15-19	55.8	54.8	72.7	68.8	34.1	21.1	3,266
20-24	55.1	51.0	72.5	69.0	30.9	19.7	2,547
25-29	49.0	44.6	72.0	64.0	24.8	14.4	2,517
30-39	44.4	43.6	66.9	57.0	21.4	11.5	3,410
40-49	48.9	39.6	66.5	58.5	21.9	11.8	2,330
Marital status							
Never married	60.2	60.4	76.5	74.4	39.7	26.5	3,516
Ever had sex	72.1	66.8	87.5	85.3	51.0	40.8	223
Never had sex	59.4	60.0	75.7	73.7	39.0	25.6	3,293
Married/living together	46.4	42.1	67.6	58.8	21.5	11.5	9,066
Divorced/separated/ widowed	53.4	46.0	70.8	65.9	28.1	16.2	1,488
Residence							
Urban	78.8	71.2	91.0	90.4	56.8	42.4	2,499
Rural	44.5	41.9	65.6	57.6	20.3	10.0	11,571
Region							
Tigray	36.7	35.6	65.6	60.4	16.6	13.1	919
Affar	40.9	41.2	48.3	46.5	21.6	12.8	146
Amhara	53.5	48.2	75.0	67.4	31.0	15.2	3,482
Oromiya	58.6	44.2	67.9	60.5	25.4	15.3	5,010
Somali	10.6	17.4	22.3	22.4	6.2	3.9	486
Benishangul-Gumuz	33.9	38.9	52.2	51.3	20.8	11.1	124
SNNP	36.2	52.8	72.5	64.2	21.4	11.5	2,995
Gambela	32.2	37.5	50.4	48.3	21.1	8.9	44
Harari	50.1	64.3	76.8	81.9	35.1	28.3	39
Addis Ababa	88.8	71.7	96.0	95.1	64.5	50.1	756
Dire Dawa	50.3	65.7	83.9	79.9	36.8	27.2	69
Education							
No education	41.2	36.8	62.2	53.3	16.6	7.3	9,271
Primary	60.3	58.5	79.9	76.0	34.8	20.9	3,123
Secondary and higher	84.4	82.6	95.6	96.3	68.3	53.0	1,675
Wealth quintile							
Lowest	31.3	30.4	53.0	43.0	12.6	6.2	2,428
Second	42.7	39.4	61.7	52.4	18.0	8.1	2,643
Middle	46.5	43.9	67.9	58.5	20.6	9.7	2,732
Fourth	51.3	46.2	73.2	67.3	24.4	11.8	2,647
Highest	71.7	66.8	87.3	86.0	49.2	35.3	3,621
Total 15-49	50.6	47.1	70.1	63.4	26.8	15.8	14,070

[1] AIDS can be transmitted through mosquito bites and by sharing food.
[2] Respondent knows that using a condom at every sexual intercourse and having just one uninfected and faithful partner can reduce the risk of getting the AIDS virus, knows that a healthy-looking person can have the AIDS virus, and rejects the two most common local misconceptions about AIDS transmission.

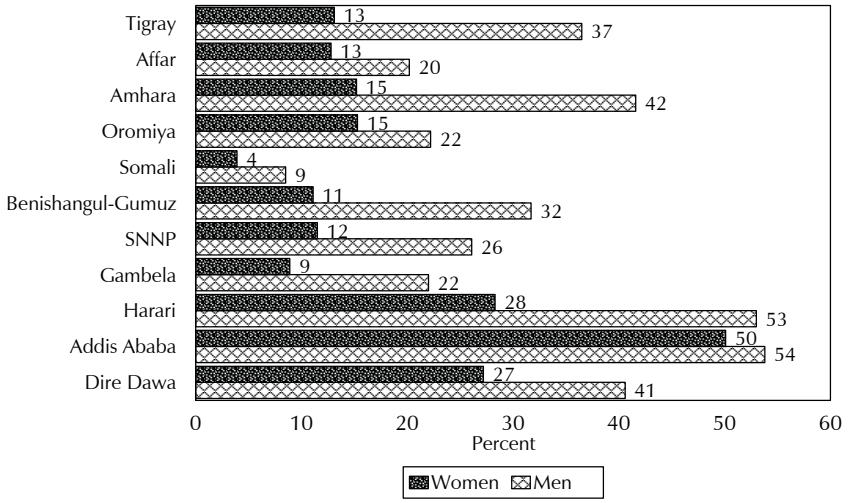
Table 13.3.2 Misconceptions and comprehensive knowledge about AIDS: men

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 or prevention, and the percentage with a comprehensive knowledge about AIDS, by background characteristics, Ethiopia 2005

Background characteristic	Percentage of men who say that: A healthy-looking person can have the AIDS virus	AIDS cannot be transmitted by mosquito bites	AIDS cannot be transmitted by super-natural means	A person cannot become infected by sharing food with a person who has AIDS	Percentage who say that a healthy-looking person can have the AIDS virus and who reject the two most common local misconceptions[1]	Percentage with a comprehensive knowledge about AIDS[2]	Number of men
Age							
15-24	70.1	60.4	82.6	81.0	45.7	33.3	2,399
15-19	68.0	59.0	82.2	78.0	44.1	32.1	1,335
20-24	72.9	62.0	83.2	84.7	47.7	34.8	1,064
25-29	69.5	55.1	84.3	82.9	39.7	25.9	741
30-39	69.3	53.1	85.2	80.0	37.3	26.7	1,405
40-49	65.7	56.4	82.8	74.5	39.6	29.6	919
Marital status							
Never married	70.4	61.1	82.6	80.8	46.1	33.4	2,417
Ever had sex	80.9	67.4	88.4	91.5	54.7	42.4	412
Never had sex	68.2	59.8	81.5	78.6	44.3	31.5	2,005
Married/living together	67.9	54.1	84.1	79.2	38.3	27.0	2,890
Divorced/separated/ widowed	72.1	51.9	86.9	78.0	37.5	31.1	157
Residence							
Urban	90.2	79.6	93.3	93.6	71.5	56.7	854
Rural	65.2	53.0	81.7	77.4	36.2	25.0	4,610
Region							
Tigray	77.3	55.1	87.0	81.3	44.6	36.5	315
Affar	66.3	45.9	63.9	71.3	30.9	20.2	59
Amhara	76.1	64.1	91.1	82.0	51.8	41.6	1,347
Oromiya	69.6	46.8	76.3	77.7	33.4	22.2	2,041
Somali	31.7	34.8	37.9	36.1	16.2	8.5	180
Benishangul-Gumuz	57.0	59.7	85.5	80.4	40.0	31.7	50
SNNP	58.8	66.2	91.4	84.1	40.4	26.1	1,143
Gambela	50.2	56.1	76.9	73.1	34.2	22.0	19
Harari	78.4	76.4	91.1	92.1	62.1	53.0	15
Addis Ababa	92.3	80.2	97.5	96.4	74.6	53.8	266
Dire Dawa	76.1	64.5	89.4	89.8	51.0	40.6	27
Education							
No education	55.7	42.6	76.5	67.1	26.1	17.5	2,164
Primary	71.6	58.8	85.5	84.6	40.8	28.2	2,140
Secondary and higher	89.5	81.3	93.1	95.2	72.4	56.5	1,160
Wealth quintile							
Lowest	53.7	40.8	69.8	63.8	24.6	17.7	980
Second	63.6	52.4	81.1	76.7	34.0	23.7	1,052
Middle	70.1	53.0	82.7	79.8	37.9	24.3	980
Fourth	66.8	59.5	88.4	82.7	40.5	26.7	1,088
Highest	85.4	73.7	92.0	91.8	63.7	50.4	1,364
Total 15-49	69.1	57.1	83.5	79.9	41.7	30.0	5,464
Total men 15-59	68.4	55.9	83.5	78.7	40.2	28.7	6,033

[1] AIDS can be transmitted through mosquito bites and by sharing food.
[2] Respondent knows that using a condom at every sexual intercourse and having just one uninfected and faithful partner can reduce the risk of getting the AIDS virus, knows that a healthy-looking person can have the AIDS virus, and rejects the two most common local misconceptions about AIDS transmission.

Figure 13.1 **Percentage of Women and Men Age 15-49 with Comprehensive Knowledge about AIDS**



Note: Comprehensive knowledge is defined as: 1) knowing that both condom use and limiting sex partners to one uninfected partner are HIV-prevention methods; 2) being aware that a healthy-looking person can have HIV; and 3) rejecting the two most common local misconceptions--that HIV/AIDS can be transmitted through mosquito bites and by sharing food.

EDHS 2005

13.1.4 Knowledge about Mother-to-Child Transmission

Increasing knowledge of ways in which HIV can be transmitted from mother to child and the fact that the risk of transmission can be reduced by using antiretroviral drugs is critical to reducing mother-to-child transmission (MTCT). To obtain information on these issues, respondents in the 2005 EDHS were asked if the virus that causes AIDS can be transmitted from a mother to a child during breastfeeding and whether a mother with HIV can reduce the risk of transmission to the baby by taking certain drugs (antiretrovirals) during pregnancy (see Table 13.4).

Although 69 percent of women and 75 percent of men know that HIV can be transmitted by breastfeeding, only slightly more than around one-fifth of women and one-fourth of men know that the risk of MTCT can be reduced through the use of certain drugs during pregnancy. Twenty percent of women and 26 percent of men are aware of both aspects of MTCT transmission.

There are marked differences in MTCT knowledge among women and men by age, marital status, residence, education, and wealth. Knowledge about mother-to-child transmission is highest among men and women living in urban areas, especially among those in Addis Ababa. Knowledge levels are lowest among women and men who have no education, who are in the lowest wealth quintile, and who live in the Somali Region. Particularly notable is the comparatively low level of knowledge among pregnant women; just 10 percent of pregnant women are aware that HIV can be transmitted from mother to child during breastfeeding and that mother-to-child transmission can be reduced by taking certain drugs during pregnancy.

Table 13.4 Knowledge of prevention of mother to child transmission of HIV

Percentage of women and men age 15-49 who know that HIV can be transmitted from mother to child by breastfeeding and that the risk of mother-to-child transmission (MTCT) of HIV can be reduced by the mother taking special drugs during pregnancy, by background characteristics, Ethiopia 2005

	Women[1]				Men			
Background characteristic	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of women	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of men
Age								
15-24	70.8	26.0	23.7	2,872	73.4	31.4	27.9	2,399
15-19	70.2	27.2	25.3	1,645	71.8	28.7	25.6	1,335
20-24	71.6	24.3	21.6	1,228	75.4	34.8	30.9	1,064
25-29	70.4	20.0	18.5	1,167	74.4	30.8	26.6	741
30-39	69.1	17.3	16.5	1,622	76.1	28.2	25.0	1,405
40-49	64.6	15.5	14.3	1,090	75.2	21.7	20.3	919
Marital status								
Never married	74.0	33.9	31.2	1,703	72.6	33.7	29.9	2,417
Ever had sex	78.8	49.7	44.9	104	77.8	47.4	40.6	412
Never had sex	73.7	32.8	30.3	1,599	71.6	30.9	27.7	2,005
Married/living together	67.8	16.2	14.9	4,317	76.0	24.6	22.0	2,890
Divorced/separated/ widowed	67.1	20.7	19.7	731	77.5	33.1	29.7	157
Pregnancy status								
Pregnant	62.2	11.7	10.0	566	na	na	na	na
Not pregnant	70.0	22.0	20.4	6,185	na	na	na	na
Residence								
Urban	85.4	55.6	51.5	1,173	79.9	62.0	53.1	854
Rural	65.9	13.9	12.8	5,579	73.6	22.7	20.7	4,610
Region								
Tigray	77.0	20.5	18.8	448	83.7	36.2	33.2	315
Affar	36.0	13.3	12.1	72	62.2	32.9	28.0	59
Amhara	62.5	20.7	18.7	1,640	75.2	29.4	26.2	1,347
Oromiya	78.4	18.4	17.5	2,368	76.8	28.8	26.1	2,041
Somali	12.9	6.2	6.1	243	36.2	6.2	5.5	180
Benishangul-Gumuz	43.2	15.5	15.1	62	72.9	27.7	25.4	50
SNNP	68.9	15.7	14.6	1,504	74.3	19.2	17.4	1,143
Gambela	44.8	12.0	11.4	23	65.7	34.7	30.9	19
Harari	78.5	52.4	47.7	20	75.2	60.7	49.9	15
Addis Ababa	83.9	77.6	69.4	339	73.0	69.6	56.9	266
Dire Dawa	72.4	41.8	40.5	33	78.5	54.1	46.3	27
Education								
No education	61.4	12.4	11.5	4,419	65.4	14.8	13.9	2,164
Primary	81.5	25.0	22.9	1,552	78.5	27.5	24.5	2,140
Secondary and higher	90.0	62.8	58.0	781	84.3	57.7	50.2	1,160
Wealth quintile								
Lowest	52.1	8.6	8.0	1,251	65.5	16.3	15.3	980
Second	64.7	13.1	12.3	1,321	73.0	19.0	17.2	1,052
Middle	68.3	14.0	12.5	1,273	75.0	25.9	23.2	980
Fourth	71.7	15.0	13.9	1,234	77.5	24.5	21.4	1,088
Highest	84.9	46.9	43.4	1,672	79.5	51.2	45.0	1,364
Total 15-49	69.3	21.2	19.5	6,751	74.5	28.9	25.7	5,464
Total men 15-59	na	na	na	na	74.4	27.9	24.9	6,033

Note: Only women in households selected for the male subsample were administered questions on MTCT.
na = Not applicable

13.2 Stigma Associated with AIDS and Attitudes Related to HIV/AIDS

Knowledge and beliefs about AIDS affect how people treat those they know to be living with HIV. In the 2005 EDHS, a number of questions were posed to respondents to measure their attitudes towards HIV-infected people including questions about their willingness to buy vegetables from an infected vegetable seller, to let others know the HIV status of family members, and to take care of relatives who have the AIDS virus in their own household. They were also asked whether an HIV-positive female who is not sick should be allowed to continue teaching. Tables 13.5.1 and 13.5.2 show the percentages who express positive attitudes towards people with HIV among women and men who have heard about HIV/AIDS by background characteristics.

Both women and men tend to express more positive attitudes in response to the questions concerning behaviour towards HIV-infected relatives than to the questions about shopkeepers or teachers. Sixty-five percent of women and 77 percent of men say that they would not want to keep secret that a family member was infected with the AIDS virus and 59 percent of women and 72 percent of men say they would be willing to care for a family member with the AIDS virus in their home. In contrast, only 42 percent of women and 52 percent of men say that an HIV-positive teacher should be allowed to continue teaching and only 20 percent of women and 26 percent of men would buy fresh food from a shopkeeper with AIDS. The percentage expressing accepting attitudes on all four measures is low, 11 percent among women and 17 percent among men.

Higher education, wealth, and urban residence are related to more accepting attitudes towards those who are HIV positive. Among men, for example, the percentage expressing accepting attitudes towards those living with AIDS on all four measures exceeds 40 percent among urban residents, those with a secondary or higher education, and those living in Addis Ababa, Dire Dawa or Harari. Among women, the percentage expressing accepting attitudes on all four measures exceeds 40 percent among those with a secondary or higher education and those living in Addis Ababa and Harari.

Table 13.5.1 Accepting attitudes toward those living with HIV: women

Among women who have heard of HIV/AIDS, percentage expressing specific accepting attitudes toward people with HIV, by background characteristics, Ethiopia 2005

Background characteristic	Percentage of women who: Are willing to care for family member with the AIDS virus in the respondent's home	Would buy fresh vegetables from shopkeeper who has the AIDS virus	Say that a female teacher with the AIDS virus and is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus	Percentage expressing accepting attitudes on all four indicators	Number of women who have heard of HIV/AIDS
Age						
15-24	64.0	25.7	48.6	64.8	14.5	5,244
15-19	64.7	27.1	51.4	65.9	15.2	2,913
20-24	63.2	23.9	45.1	63.4	13.5	2,331
25-29	55.5	18.1	39.3	66.1	10.1	2,243
30-39	55.5	14.8	34.8	64.3	7.2	3,049
40-49	55.4	15.0	35.9	66.3	7.1	2,107
Marital status						
Never married	69.2	35.3	58.5	64.9	20.4	3,204
Ever had sex	81.1	59.3	76.6	66.6	38.4	214
Never had sex	68.4	33.6	57.2	64.8	19.2	2,990
Married/living together	54.3	13.8	34.5	65.1	6.8	8,078
Divorced/separated/ widowed	63.1	20.3	42.8	66.4	11.2	1,361
Residence						
Urban	86.0	58.4	78.9	71.1	37.3	2,463
Rural	52.5	10.6	32.4	63.7	4.3	10,180
Region						
Tigray	84.9	29.5	39.0	60.3	14.2	892
Affar	60.9	14.4	36.8	53.9	5.1	125
Amhara	71.0	16.5	43.9	68.5	8.6	3,061
Oromiya	44.9	15.3	34.8	68.6	8.0	4,742
Somali	68.5	22.4	24.4	47.0	8.6	243
Benishangul-Gumuz	73.8	17.2	45.8	55.0	10.7	84
SNNP	49.4	12.3	37.8	57.7	5.7	2,613
Gambela	69.5	27.9	55.2	52.2	15.1	28
Harari	69.4	50.6	66.8	85.5	42.4	38
Addis Ababa	94.3	73.9	91.9	68.5	46.9	750
Dire Dawa	76.9	49.8	64.8	78.7	37.1	67
Education						
No education	51.6	9.0	29.3	63.2	3.4	7,986
Primary	62.0	22.9	49.0	67.6	11.7	2,985
Secondary and higher	88.8	66.7	86.4	70.2	44.1	1,672
Wealth quintile						
Lowest	51.8	7.6	22.6	59.6	2.5	1,952
Second	50.2	9.0	27.8	61.5	3.4	2,321
Middle	48.8	9.8	31.8	65.6	3.0	2,437
Fourth	55.4	11.7	38.4	65.6	5.3	2,421
Highest	78.3	46.7	70.0	70.0	29.2	3,513
Total 15-49	59.0	19.9	41.5	65.2	10.7	12,643

Table 13.5.2 Accepting attitudes toward those living with HIV: men

Among men who have heard of HIV/AIDS, percentage expressing specific accepting attitudes toward people with HIV, by background characteristics, Ethiopia 2005

Background characteristic	Percentage of men who: Are willing to care for family member with the AIDS virus in the respondent's home	Would buy fresh vegetables from shopkeeper who has the AIDS virus	Say that a female teacher with the AIDS virus and is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus	Percentage expressing accepting attitudes on all four indicators	Number of men who have heard of HIV/AIDS
Age						
15-24	72.4	30.7	54.6	76.2	18.9	2,287
15-19	70.0	30.5	53.4	75.6	19.1	1,255
20-24	75.3	30.9	56.2	76.9	18.8	1,033
25-29	70.5	27.0	54.2	76.0	17.6	718
30-39	71.8	21.1	49.0	79.2	13.9	1,380
40-49	70.4	21.7	47.1	77.1	14.4	888
Marital status						
Never married	73.2	33.1	56.0	76.7	20.9	2,297
Ever had sex	82.3	48.5	68.3	80.9	33.3	411
Never had sex	71.2	29.7	53.3	75.8	18.2	1,885
Married/living together	69.8	20.3	47.7	77.2	13.0	2,820
Divorced/separated/ widowed	80.7	30.5	65.4	81.2	21.2	157
Residence						
Urban	90.8	64.5	82.8	79.2	45.3	851
Rural	67.9	18.8	45.9	76.7	11.2	4,422
Region						
Tigray	86.6	38.0	59.2	86.1	27.5	314
Affar	84.6	32.6	48.6	68.3	15.0	57
Amhara	82.7	25.9	62.9	75.3	19.7	1,295
Oromiya	58.8	22.5	42.6	82.0	13.6	2,009
Somali	79.9	24.2	68.5	51.7	13.0	116
Benishangul-Gumuz	72.4	23.4	59.8	71.0	14.6	47
SNNP	70.2	17.5	43.3	71.4	8.3	1,111
Gambela	77.3	51.0	67.6	80.8	32.5	17
Harari	85.1	54.7	76.4	83.5	43.0	15
Addis Ababa	94.2	71.4	82.8	74.9	44.0	265
Dire Dawa	78.1	52.0	66.6	84.8	43.3	27
Education						
No education	63.3	12.2	39.4	75.8	7.2	2,002
Primary	69.0	22.9	48.4	76.0	12.5	2,114
Secondary and higher	90.7	56.2	79.5	81.3	40.6	1,158
Wealth quintile						
Lowest	59.7	13.3	35.9	76.5	6.7	893
Second	64.6	15.6	41.1	75.7	8.2	1,011
Middle	69.3	17.0	46.9	77.0	10.5	955
Fourth	71.8	22.1	50.8	76.3	13.4	1,062
Highest	86.2	52.1	74.6	79.3	36.5	1,353
Total 15-49	71.6	26.1	51.8	77.1	16.7	5,273
Total men 15-59	71.2	25.4	50.8	77.4	15.9	5,826

13.3 ATTITUDES TOWARDS NEGOTIATING SAFER SEX

Knowledge about HIV transmission and ways to prevent it are of little use if people feel powerless to negotiate safer sex practices with their partner. In an effort to assess the ability of women to negotiate safer sex with a spouse who has an STI, EDHS respondents were asked two attitudinal questions: is a wife justified in refusing to have sex with her husband when she knows he has a disease that can be transmitted through sexual contact, and is a woman in the same circumstances justified in asking her husband to use a condom?

Table 13.6 shows that 85 percent of women and 89 percent of men believe that, if she knows her husband has an STI, a woman is justified in *either* refusing to have sex with him *or* asking him to wear a condom. Considering the two actions separately, the majority of both women (81 percent) and men (85 percent) say that a woman can refuse to have sex. Far fewer women (42 percent) and somewhat fewer men (65 percent) agree that a woman would be justified in asking the man to use a condom.

Table 13.6 Attitudes toward negotiating safer sex with husband

Percentage of women and men age 15-49 who believe that if a husband has a sexually transmitted disease his wife is justified in either refusing to have sexual relations with him or asking that he use a condom, by background characteristics, Ethiopia 2005

	Women who believe that wife is justified in:				Men who believe that wife is justified in:			
Background characteristic	Refusing to have sexual relations	Asking that they use a condom	Either refusing sexual relations or asking to use a condom	Number of women	Refusing to have sexual relations	Asking that they use a condom	Either refusing sexual relations or asking to use a condom	Number of men
Age								
15-24	82.1	48.3	85.4	5,813	83.5	63.8	87.5	2,399
15-19	80.3	48.3	83.5	3,266	81.3	60.7	85.3	1,335
20-24	84.4	48.2	87.8	2,547	86.4	67.8	90.2	1,064
25-29	82.3	40.8	85.9	2,517	87.1	68.2	91.0	741
30-39	79.5	36.2	82.6	3,410	86.3	67.6	91.1	1,405
40-49	80.9	34.0	83.7	2,330	86.1	59.2	88.4	919
Marital status								
Never married	82.0	54.7	85.5	3,516	82.5	63.6	86.9	2,417
Ever had sex	90.9	76.8	94.9	223	90.0	82.0	94.2	412
Never had sex	81.4	53.2	84.8	3,293	80.9	59.9	85.4	2,005
Married/living together	80.5	36.2	83.8	9,066	87.2	64.9	90.7	2,890
Divorced/separated/ widowed	84.2	44.0	86.5	1,488	89.2	73.9	91.8	157
Residence								
Urban	90.4	74.7	95.0	2,499	92.7	84.0	97.0	854
Rural	79.3	34.5	82.3	11,571	83.8	61.0	87.6	4,610
Region								
Tigray	81.9	41.8	84.3	919	95.1	68.3	98.3	315
Affar	60.1	21.7	64.4	146	79.5	67.2	84.4	59
Amhara	86.7	42.6	89.3	3,482	93.4	74.8	95.4	1,347
Oromiya	82.6	43.1	85.9	5,010	79.1	67.8	84.8	2,041
Somali	59.4	7.9	59.9	486	85.7	22.9	86.5	180
Benishangul-Gumuz	67.1	33.1	70.6	124	78.4	53.2	81.8	50
SNNP	74.6	33.0	79.1	2,995	81.9	47.0	85.7	1,143
Gambela	54.7	21.8	58.7	44	65.0	63.0	78.2	19
Harari	85.1	62.0	90.2	39	94.3	81.5	98.2	15
Addis Ababa	94.3	87.4	98.0	756	94.5	88.3	97.3	266
Dire Dawa	85.5	56.4	87.7	69	94.1	70.2	95.4	27
Education								
No education	77.9	29.7	80.5	9,271	83.4	54.4	86.1	2,164
Primary	84.6	54.7	89.2	3,123	83.6	64.2	88.2	2,140
Secondary and higher	94.0	83.2	98.2	1,675	91.3	84.4	96.0	1,160
Wealth quintile								
Lowest	74.2	24.8	76.2	2,428	79.1	49.0	82.0	980
Second	79.3	29.9	81.6	2,643	83.5	58.6	87.0	1,052
Middle	79.3	35.4	82.6	2,732	85.5	64.7	89.9	980
Fourth	82.4	40.1	85.7	2,647	85.1	64.8	89.1	1,088
Highest	88.1	67.3	92.9	3,621	90.6	80.3	95.0	1,364
Total 15-49	81.3	41.6	84.5	14,070	85.2	64.6	89.1	5,464
Total men 15-59	na	na	na	na	85.3	63.9	89.0	6,033

na = Not applicable

The majority of respondents in all groups support a woman's right to negotiate safer sex. However, there are differences by background characteristics in the percentages of respondents holding this opinion. For example, the higher a respondent's educational attainment, the more likely he or she is to say that a woman can refuse sex or propose using a condom. Support for women's negotiating rights also increases across wealth quintiles among both women and men. The proportions supporting a woman's right to negotiate safer sex vary considerably across regions. Among women, the percentage saying that a woman is justified in refusing sex and asking that a condom be used ranges from a low of 59 percent in Gambela to 98 percent in Addis Ababa. Among men, support for women's negotiating rights is also lowest in Gambela (78 percent) and highest in Tigray, Harari (98 percent each) and Addis Ababa (97 percent).

13.4 Higher-Risk Sex

Given that most HIV infections in Ethiopia are contracted through heterosexual contact, information on sexual behaviour is important in designing and monitoring intervention programmes to control the spread of the epidemic. In the context of HIV/AIDS prevention, limiting the number of sexual partners and having protected sex are crucial to combating the epidemic.

The 2005 EDHS included questions on respondents' sexual partners during the 12 months preceding the survey. For male respondents, an additional question was asked on whether they paid for sex during the 12 months preceding the interview. Information on the use of condoms at the last sexual encounter with each type of partner was collected from both women and men. Finally, sexually active women and men were asked about the total number of partners they had during their lifetime. These questions are of course sensitive, and in interpreting the results in this section it is important to remember that respondents' answers are likely subject to at least some reporting bias.

13.4.1 Multiple Sexual Partners and Higher-Risk Sex

Tables 13.7.1 and 13.7.2 present several indicators based on information collected from women and men who had ever had intercourse about their sexual partners during the 12-month period before the survey and over their lifetime. The first two indicators in the tables assess the prevalence of multiple partners and of higher-risk sexual intercourse among women and men who reported having intercourse during the 12 months prior to the survey. Higher-risk sex involves sexual intercourse with a partner who is neither a spouse nor a cohabiting partner. The third indicator relates to condom use during the last higher-risk sexual encounter. The fourth indicator, the mean number of sexual partners that a woman or man has had during their lifetime, provides an assessment of lifetime exposure to one of the elements of higher-risk sex, multiple partners.

The tables show that, among those who had sex in the previous 12 months, less than 1 percent of women age 15-49 and only 4 percent of men age 15-49 report having had two or more sexual partners during the period. Somewhat larger proportions—3 percent of women and 9 percent of men—report having had higher-risk sexual intercourse in the past 12 months (i.e., sexual intercourse with someone other than their spouse or cohabiting partner).

The differentials presented in the tables suggest that higher-risk sex, particularly among women, is concentrated in a limited number of population subgroups. First the prevalence of higher-risk sex is virtually universal among never-married women and men who reported having sexual intercourse during the 12-month period prior to the EDHS.[2] Looking at the other marital status categories, very few women and men who were currently in union (less than 1 percent) reported higher-risk sexual encounters during the 12 months prior to the survey,, while 25 percent of women and 33 percent of men who were widowed, divorced or separated said they had engaged in higher-risk sex during the period.

[2] To determine marital status, the EDHS asked respondents whether or not they were currently or had ever been married or lived together with a partner. Thus, by definition, most sexual intercourse among respondents classified as never-married is high risk, i.e., it involves a nonmarital, noncohabiting partner.

Table 13.7.1 Multiple sexual partners and higher-risk sexual intercourse in the past 12 months: 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, and among those having higher-risk intercourse in the past 12 months, the percentage reporting that a condom was used at last higher-risk intercourse, and among women who ever had sexual intercourse, the mean number of sexual partners during lifetime, by background characteristics, Ethiopia 2005

	Women who had sexual intercourse in past 12 months			Women who had higher-risk intercourse[1] in past 12 months		Women who ever had sexual intercourse	
Background characteristic	Percentage who had 2+ partners in past 12 months	Percentage who had higher-risk intercourse[1] in past 12 months	Number of women	Percentage who reported using a condom at last higher-risk intercourse[1]	Number of women	Mean number of sexual partners in lifetime	Number of women
Age							
15-24	0.5	5.8	1,212	28.4	71	1.2	1,360
15-19	0.4	7.2	411	27.1	29	1.2	469
20-24	0.6	5.1	800	29.3	41	1.3	891
25-29	0.1	1.7	977	(32.7)	17	1.3	1,075
30-39	0.2	1.6	1,360	*	21	1.6	1,585
40-49	0.0	1.3	805	*	10	1.6	1,086
Marital status							
Never married and ever had sex	1.0	99.7	63	28.7	63	2.4	104
Married/living together	0.2	0.5	4,142	(7.8)	20	1.4	4,291
Divorced/separated/ widowed	1.0	24.5	148	(23.2)	36	1.8	711
Residence							
Urban	0.4	13.5	492	39.9	66	1.7	709
Rural	0.2	1.4	3,862	3.0	53	1.4	4,396
Region							
Tigray	0.0	5.2	290	*	15	1.5	347
Affar	0.7	2.0	55	*	1	1.3	63
Amhara	0.1	2.9	1,140	*	33	1.8	1,374
Oromiya	0.2	2.8	1,558	*	43	1.2	1,764
Somali	0.0	0.0	161	*	0	1.1	196
Benishangul-Gumuz	0.7	2.0	47	*	1	1.6	52
SNNP	0.4	0.5	942	*	5	1.2	1,070
Gambela	0.6	5.0	14	*	1	1.5	19
Harari	0.4	3.7	12	*	0	1.3	14
Addis Ababa	0.3	15.7	117	(34.9)	18	2.3	182
Dire Dawa	1.5	9.2	18	*	2	1.5	24
Education							
No education	0.3	1.4	3,318	(9.0)	47	1.5	3,876
Primary	0.0	4.0	740	(30.2)	30	1.3	853
Secondary and higher	0.1	14.4	296	34.9	43	1.5	376
Wealth quintile							
Lowest	0.2	1.3	888	*	12	1.4	1,047
Second	0.3	1.8	936	*	16	1.4	1,064
Middle	0.3	1.1	877	*	10	1.4	988
Fourth	0.2	1.5	827	*	13	1.4	939
Highest	0.3	8.3	826	40.8	68	1.6	1,067
Total	0.2	2.7	4,354	23.6	119	1.4	5,106

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Sexual intercourse with a nonmarital, noncohabiting partner

Table 13.7.2 Multiple sexual partners and higher-risk sexual intercourse in the past 12 months: 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, and among those having higher-risk intercourse in the past 12 months, the percentage reporting that a condom was used at last higher-risk intercourse, and among men who ever had sexual intercourse, the mean number of sexual partners during lifetime, by background characteristics, Ethiopia 2005

	Men who had sexual intercourse in past 12 months			Men who had higher-risk intercourse[1] in past 12 months		Men who ever had sexual intercourse	
Background characteristic	Percentage who had 2+ partners in past 12 months	Percentage who had higher-risk intercourse[1] in past 12 months	Number of men	Percentage who reported using a condom at last higher-risk intercourse[1]	Number of men	Mean number of sexual partners in lifetime	Number of men
Age							
15-24	4.8	37.4	446	50.2	167	2.0	561
15-19	3.9	68.0	78	44.0	53	2.0	96
20-24	5.0	31.0	368	53.1	114	2.0	465
25-29	3.2	9.1	531	47.1	48	2.2	600
30-39	4.0	3.1	1,291	57.2	39	2.6	1,355
40-49	4.6	1.1	853	*	9	4.0	902
Marital status							
Never married and ever had sex	9.7	98.0	227	53.0	222	3.0	407
Married/living together	3.7	0.8	2,840	(28.3)	24	2.7	2,861
Divorced/separated/ widowed	3.3	33.2	53	(70.0)	18	3.7	150
Residence							
Urban	3.2	29.9	393	79.9	118	4.4	490
Rural	4.3	5.4	2,728	29.4	146	2.5	2,928
Region							
Tigray	4.5	15.9	187	(53.7)	30	2.7	194
Affar	7.1	15.9	45	(38.7)	7	3.5	47
Amhara	2.0	3.5	775	*	27	3.3	845
Oromiya	3.5	8.8	1,147	(46.0)	101	2.5	1,255
Somali	3.2	2.6	116	*	3	1.8	124
Benishangul-Gumuz	12.7	5.0	34	*	2	2.8	35
SNNP	6.5	4.6	657	*	31	2.2	705
Gambela	12.4	28.2	12	45.3	4	5.7	15
Harari	2.2	20.8	10	(76.9)	2	3.5	11
Addis Ababa	6.1	44.4	123	70.9	55	4.8	170
Dire Dawa	7.6	22.3	15	(70.9)	3	3.1	17
Education							
No education	4.0	2.7	1,532	9.8	41	2.5	1,642
Primary	4.6	7.8	1,077	46.1	84	2.5	1,156
Secondary and higher	3.5	27.1	512	67.9	139	4.1	620
Wealth quintile							
Lowest	3.4	4.8	566	15.2	27	2.1	615
Second	4.6	5.3	645	(32.7)	34	2.6	686
Middle	4.9	4.8	648	(34.8)	31	2.2	676
Fourth	4.7	6.9	604	(29.0)	42	2.8	648
Highest	3.0	19.7	658	76.2	129	3.9	794
Total 15-49	4.1	8.5	3,121	51.9	264	2.8	3,418
Total men 15-59	4.1	7.3	3,630	51.7	266	3.0	3,974

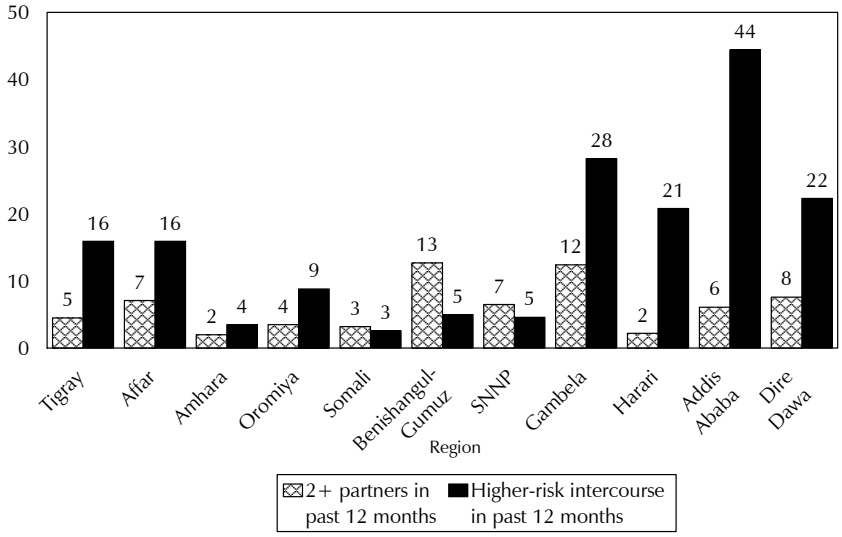
Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Sexual intercourse with a nonmarital, noncohabiting partner

Because many respondents in the 15-24 age group are likely to be never-married, it is expected that higher-risk sex would be more prevalent in these cohorts than among older women and men. What is somewhat surprising is the size of the gender differential in the reporting of these sexual behaviours among respondents in this age range. For example, 37 percent of men age 15-24 who had sexual intercourse during the 12-month period prior to the survey reported that they had engaged in higher-risk sex compared with 6 percent of women in the same cohort. The size of the differential suggests that there may be significant underreporting of recent sexual activity among never-married women in this age cohort. As noted in Chapter 6, only 6 percent of never-married women reported that they had ever had sex.

Considering the other variables in Tables 13.7.1 and 13.7.2, higher-risk sex among both women and men is most prevalent among those living in urban areas, in Addis Ababa, those with a secondary or higher education, and those in the highest wealth quintile. Among men, the prevalence of higher-risk sex is also notably high among men living in Gambela, Dire Dawa, Harari, Tigray and Affar (Figure 13.2).

Figure 13.2 **Multiple Sexual Partners and Higher-Risk Sexual Intercourse in the Past 12 Months among Men Age 15-49**



Note: Higher-risk sexual intercourse refers to intercourse with a nonmarital, noncohabiting partner.

EDHS 2005

As mentioned above, 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 sexual encounters to cover are those considered to be "higher risk.", i.e., sex with a nonmarital, noncohabitating partner in the 12 months preceding the survey. Tables 13.7.1 and 13.7.2 show that, among women reporting they engaged in higher-risk sex during the 12-month period prior to the survey, 24 percent reported a condom was used the last time they had higher-risk intercourse. Men who engaged in higher-risk sex during the year before the survey were much more likely to report condom use; around half said that a condom was used during their last higher-risk sexual encounter. The numbers of respondents, particularly women, reporting higher-risk sex are frequently quite small, making it difficult to assess differences in the prevalence of condom use across subgroups. However, the results sugge st that, among men who engaged in higher-risk sex, condom use is highest among urban residents, those with a secondary or higher education, and those in the highest wealth quintile.

Finally, Tables 13.7.1 and 13.7.2 show that men who have ever been sexually active report having an average (mean number) of 2.8 lifetime sexual partners, more than twice the average reported by women who have ever been sexually active (1.4 partners). The mean number of sexual partners for both women and men increases with age and is higher among urban than rural residents. Regions in which the mean number of lifetime partners among women is comparatively higher include Addis Ababa (2.3) and Amhara (1.8). Among men, the highest mean numbers of lifetime sexual partners were reported in Gambela (5.7 partners) and Addis Ababa (4.8 partners).

13.4.2 Paid Sex

Paid sex is considered a special category of higher-risk sex. Male respondents in the 2005 EDHS were asked whether they had paid money in exchange for sex in the past 12 months or if any of their last three partners in the past 12 months was a commercial sex worker.

Less than 1 percent of men had engaged in paid sex in the year before the survey (Table 13.8). The highest percentages of men reporting that they had engaged in paid sex are observed among men in Gambela (5 percent), Affar (2 percent), and Tigray (2 percent) and men who were divorced, separated or widowed (3 percent).

Finally, about one-third of the small number of men reporting they engaged in higher-risk sex used a condom at last sex with a prostitute (data not shown).

13.5 Testing for HIV

Knowledge of HIV status helps HIV-negative individuals make specific decisions to reduce risk and increase safer sex practices so they can remain disease free. For those who are HIV infected, knowledge of their status allows them to take action to protect their sexual partners, to access treatment, and to plan for the future. Testing of pregnant women is especially important so action can be taken to prevent mother-to-child transmission.

To obtain information on the prevalence of HIV testing, all respondents were asked whether they had ever been tested for HIV. If they said that they had, respondents were asked whether they had received the results of their last test. Women giving birth in the two-year period before the survey were asked additional questions regarding testing that may have occurred as part of any antenatal care they received prior to the birth.

Table 13.8 Payment by men for sexual intercourse

Percentage of men age 15-49 reporting payment for sexual intercourse in the past 12 months, by background characteristics, Ethiopia 2005

Background characteristic	Percentage reporting sex with commercial sex worker in past 12 months[1]	Number of men
Age		
15-24	0.8	2,399
15-19	0.5	1,335
20-24	1.2	1,064
25-29	0.8	741
30-39	1.2	1,405
40-49	0.5	919
Marital status		
Never married	0.9	2,417
Married or living together	0.7	2,890
Divorced/separated/ widowed	2.9	157
Residence		
Urban	1.1	854
Rural	0.8	4,610
Region		
Tigray	2.0	315
Affar	2.4	59
Amhara	0.6	1,347
Oromiya	1.1	2,041
Somali	0.0	180
Benishangul-Gumuz	1.9	50
SNNP	0.2	1,143
Gambela	4.8	19
Harari	1.3	15
Addis Ababa	1.6	266
Dire Dawa	1.5	27
Education		
No education	0.9	2,164
Primary	0.8	2,140
Secondary and higher	0.9	1,160
Wealth quintile		
Lowest	0.3	980
Second	1.3	1,052
Middle	1.1	980
Fourth	0.6	1,088
Highest	1.0	1,364
Total 15-49	0.9	5,464
Total men 15-59	0.8	6,033

[1] Includes men who reported that at least one of their last three sexual partners in the past 12 months was a commercial sex worker.

Tables 13.9.1 and 13.9.2 show that, among the adult population age 15-49, 4 percent of women and 6 percent of men have been tested for HIV at some time. The majority of women and men who were tested indicated that that they had received the results of their test. Around half of the women who had ever been tested and received the test results said that they had received results from an HIV test taken during the 12 months prior to the survey. Among both women and men, the proportions ever tested are higher among those under age 30 than among those age 30 and older. Considering marital status, testing rates are highest among never-married women and men who have ever had sex and widowed, divorced and separated men. Considering the other characteristics for which results are presented in the tables, the highest testing rates are observed among urban residents, residents of Addis Ababa, Harari, and Dire Dawa, those with a secondary or higher education, and those in the highest wealth quintile.

Table 13.9.1 Coverage of prior HIV testing: women

Percent distribution of women by whether tested for HIV and by whether received the results of the test, and the percentage of women who received their test results the last time they were tested for HIV in the past 12 months, according to background characteristics, Ethiopia 2005

	Ever tested						
Background characteristic	Received results	Did not receive results	Don't know/ missing whether received results	Never tested/ don't know/ missing	Total	Percentage who received results from HIV test taken in past 12 months	Number of women
Age							
15-24	4.9	0.2	0.3	94.6	100.0	2.9	2,872
15-19	3.6	0.4	0.3	95.7	100.0	2.4	1,645
20-24	6.7	0.0	0.2	93.1	100.0	3.6	1,228
25-29	4.5	0.1	0.0	95.4	100.0	1.7	1,167
30-39	2.5	0.1	0.0	97.3	100.0	1.0	1,622
40-49	1.8	0.0	0.0	98.2	100.0	0.6	1,090
Marital status							
Never married	6.6	0.3	0.3	92.8	100.0	3.8	1,703
Ever had sex	29.0	0.0	0.0	70.9	100.0	12.2	104
Never had sex	5.1	0.3	0.3	94.2	100.0	3.2	1,599
Married/living together	2.3	0.1	0.1	97.5	100.0	0.9	4,317
Divorced/separated/ widowed	5.7	0.0	0.0	94.3	100.0	3.1	731
Residence							
Urban	16.6	0.5	0.5	82.4	100.0	7.8	1,173
Rural	1.0	0.1	0.0	98.8	100.0	0.6	5,579
Region							
Tigray	3.0	0.2	0.0	96.8	100.0	1.9	448
Affar	2.7	0.0	0.0	97.3	100.0	1.8	72
Amhara	1.8	0.0	0.1	98.1	100.0	1.0	1,640
Oromiya	2.9	0.1	0.2	96.7	100.0	1.4	2,368
Somali	1.9	0.1	0.0	98.0	100.0	1.3	243
Benishangul-Gumuz	3.0	0.1	0.0	96.9	100.0	0.8	62
SNNP	2.4	0.3	0.0	97.3	100.0	1.4	1,504
Gambela	0.8	0.2	0.0	99.0	100.0	0.6	23
Harari	13.9	0.8	2.2	83.1	100.0	7.8	20
Addis Ababa	26.5	0.6	0.1	72.9	100.0	10.9	339
Dire Dawa	12.5	0.4	0.0	87.1	100.0	5.2	33
Education							
No education	0.6	0.0	0.0	99.3	100.0	0.3	4,419
Primary	4.0	0.3	0.2	95.5	100.0	2.2	1,552
Secondary and higher	20.8	0.6	0.7	77.9	100.0	10.0	781
Wealth quintile							
Lowest	0.0	0.1	0.0	99.9	100.0	0.1	1,251
Second	0.7	0.0	0.0	99.3	100.0	0.2	1,321
Middle	0.9	0.1	0.2	98.9	100.0	0.8	1,273
Fourth	2.0	0.3	0.0	97.7	100.0	1.2	1,234
Highest	12.5	0.2	0.3	86.9	100.0	5.7	1,672
Total	3.8	0.2	0.1	96.0	100.0	1.9	6,751

Note: Only women in households selected for the male subsample were administered questions on prior testing.

Table 13.9.2 Coverage of prior HIV testing: men

Percent distribution of men by whether tested for HIV and by whether received the results of the test, and the percentage of women who received their test results the last time they were tested for HIV in the past 12 months, according to background characteristics, Ethiopia 2005

Background characteristic	Ever tested: Received results	Ever tested: Did not receive results	Ever tested: Don't know/ missing whether received results	Never tested/ don't know/ missing	Total	Percentage who received results from HIV test taken in past 12 months	Number of men
Age							
15-24	4.7	0.3	0.1	94.8	100.0	2.6	2,399
15-19	2.0	0.0	0.2	97.7	100.0	1.5	1,335
20-24	8.1	0.7	0.0	91.2	100.0	4.0	1,064
25-29	8.7	0.5	0.0	90.8	100.0	4.1	741
30-39	4.5	0.8	0.1	94.6	100.0	1.6	1,405
40-49	3.1	0.6	0.0	96.4	100.0	1.0	919
Marital status							
Never married	5.4	0.3	0.1	94.2	100.0	3.0	2,417
Ever had sex	17.6	0.0	0.0	82.3	100.0	8.5	412
Never had sex	2.9	0.3	0.2	96.6	100.0	1.8	2,005
Married/living together	4.2	0.7	0.0	95.0	100.0	1.6	2,890
Divorced/separated/ widowed	10.6	0.3	0.0	89.0	100.0	3.4	157
Residence							
Urban	17.4	1.7	0.5	80.4	100.0	7.8	854
Rural	2.6	0.3	0.0	97.1	100.0	1.2	4,610
Region							
Tigray	4.8	0.6	0.9	93.7	100.0	2.5	315
Affar	3.0	0.6	0.0	96.4	100.0	1.2	59
Amhara	4.0	0.6	0.0	95.4	100.0	2.5	1,347
Oromiya	3.9	0.5	0.0	95.5	100.0	1.7	2,041
Somali	0.0	0.0	0.0	100.0	100.0	0.0	180
Benishangul-Gumuz	2.7	0.2	0.0	97.1	100.0	1.5	50
SNNP	3.5	0.4	0.0	96.1	100.0	1.3	1,143
Gambela	2.4	0.8	0.0	96.8	100.0	0.6	19
Harari	17.1	0.7	1.4	80.8	100.0	7.4	15
Addis Ababa	26.4	0.8	0.5	72.4	100.0	11.0	266
Dire Dawa	13.9	1.2	0.0	84.9	100.0	7.3	27
Education							
No education	1.6	0.1	0.0	98.3	100.0	0.9	2,164
Primary	3.7	0.6	0.0	95.8	100.0	1.3	2,140
Secondary and higher	13.6	1.1	0.3	85.0	100.0	6.7	1,160
Wealth quintile							
Lowest	1.1	0.3	0.0	98.6	100.0	0.3	980
Second	1.0	0.2	0.0	98.8	100.0	0.6	1,052
Middle	2.5	0.4	0.0	97.1	100.0	1.4	980
Fourth	4.2	0.3	0.0	95.5	100.0	1.6	1,088
Highest	13.1	1.1	0.3	85.5	100.0	6.1	1,364
Total 15-49	4.9	0.5	0.1	94.5	100.0	2.3	5,464
Total men 15-59	4.6	0.5	0.1	94.9	100.0	2.1	6,033

Table 13.10 presents data on HIV/AIDS information and counselling during antenatal care. Among women who gave birth in the past two years, 3 percent received information and counselling about HIV/AIDS during antenatal care for their most recent birth. Less than 1 percent of the women reported that they were offered and accepted an HIV test during antenatal care. Taking both these elements into account, the EDHS results indicate that less than 1 percent of women giving birth during the two-year period prior to the survey were counselled about HIV, voluntarily accepted an offer of an HIV test, and received the test results. Women who gave birth during the two-year period before the survey were most likely to have received HIV/AIDS counselling and/or testing services during antenatal care if they lived in an urban area, especially in Addis Ababa, had a secondary or higher education, or were in the highest wealth quintile.

In interpreting the findings in Table 13.10, it is important to recognize that the very low coverage of HIV counselling and testing among women giving birth during the two-year period before the survey is in part due to the fact that only a minority of pregnant women obtain antenatal care.

Table 13.10 Pregnant women counselled and tested for HIV

Among women who gave birth in the two years preceding the survey, the percentage who received HIV counselling during antenatal care for their most recent birth, and among those who accepted an offer of HIV testing, percentage who received and did not receive their test results, by background characteristics, Ethiopia

Background characteristic	Percentage who received HIV counselling during antenatal care[1]	Among those who accepted an offer of an HIV test during antenatal care, percentage who:[2]		Percentage who were counselled, were offered and accepted an HIV test, and received results[2]	Number of women who gave birth in the past 2 years[3]
		Received results	Did not receive results		
Age					
15-24	3.3	0.9	0.0	0.5	672
15-19	1.8	0.3	0.2	0.0	176
20-24	3.8	1.1	0.0	0.6	496
25-29	2.3	1.0	0.1	0.5	592
30-39	3.3	0.7	0.3	0.7	679
40-49	3.9	0.7	0.0	0.5	176
Marital status					
Never married and ever had sex	0.9	0.9	0.0	*	9
Married/living together	3.0	0.8	0.1	0.6	2,015
Divorced/separated/ widowed	4.0	2.2	0.3	0.0	95
Residence					
Urban	20.0	6.7	1.8	5.5	156
Rural	1.7	0.4	0.0	0.2	1,963
Region					
Tigray	4.7	0.0	0.0	0.0	134
Affar	2.6	0.0	1.3	0.0	25
Amhara	2.0	0.4	0.0	0.0	491
Oromiya	0.9	0.3	0.0	0.0	799
Somali	0.0	0.0	0.0	0.0	90
Benishangul-Gumuz	0.9	0.4	0.0	0.0	21
SNNP	4.8	0.6	0.2	0.6	512
Gambela	6.9	0.7	0.0	0.7	6
Harari	8.6	7.1	0.0	6.0	5
Addis Ababa	50.0	33.1	4.2	26.8	29
Dire Dawa	9.8	6.2	0.0	6.2	7
Education					
No education	1.5	0.4	0.0	0.1	1,630
Primary	4.5	1.1	0.4	1.0	395
Secondary and higher	24.1	8.0	0.7	7.4	93
Wealth quintile					
Lowest	0.3	0.0	0.0	0.0	460
Second	1.8	0.3	0.0	0.3	466
Middle	0.8	0.9	0.0	0.0	470
Fourth	3.4	0.4	0.3	0.4	426
Highest	12.3	3.6	0.5	2.9	297
Total	3.1	0.8	0.1	0.6	2,119

Note: Only women in households selected for the male subsample were administered questions on MTCT. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] In this context, "counselled" means that someone talked with the respondent about all three of the following topics: 1) babies getting the AIDS virus from their mother, 2) preventing the virus, and 3) getting tested for the virus.

[2] Only women who were offered the test are included here; women who were either required or asked for the test are excluded from the numerator of this measure.

[3] Denominator for percentages includes women who did not receive antenatal care for their last birth in the past two years.

13.6 Reports of Recent Sexually Transmitted Infections

Information about the incidence of sexually transmitted infections (STIs) is not only useful as a marker of unprotected sexual intercourse but also as a cofactor for HIV transmission. The 2005 EDHS asked respondents who had ever had sex whether they had had an STI in the past 12 months. They were also asked whether, in the past year, they had experienced a genital sore or ulcer, and whether they had any genital discharge. These symptoms have been shown useful in identifying STIs in men. They are less easily interpreted in women because women are likely to experience more non-STI conditions of the reproductive tract that produce a discharge.

Table 13.11 shows that about 2 percent each of women and men who have ever been sexually active had an STI and/or STI symptoms in the 12 months prior to the survey. Those reporting STI symptoms were somewhat more likely to say they had had an abnormal genital discharge than to report a genital ulcer. It is likely that these figures, which are quite low, underestimate the actual prevalence of STIs among the sexually active population in Ethiopia.

Table 13.11 Self-reported prevalence of sexually-transmitted infections (STI) and STI symptoms

Among women and men age 15-49 who ever had sexual intercourse, the percentage reporting having had an STI and/or symptoms of an STI in the past 12 months, by background characteristics, Ethiopia 2005

	Women					Men				
Background characteristic	STI	Abnormal genital discharge	Genital sore or ulcer	STI, genital discharge, sore or ulcer	Number of women who ever had sexual intercourse	STI	Abnormal genital discharge	Genital sore or ulcer	STI, genital discharge, sore or ulcer	Number of men who ever had sexual intercourse
Age										
15-19	0.3	1.0	0.2	1.4	904	0.4	0.1	0.1	0.5	97
20-24	0.4	1.1	0.4	1.5	1,850	0.4	0.7	0.5	1.2	469
25-29	0.6	1.6	0.5	2.4	2,314	0.9	0.8	0.2	1.4	601
30-39	0.4	1.3	1.1	1.9	3,357	0.4	0.8	0.3	1.2	1,367
40-49	0.6	1.5	1.2	2.3	2,323	1.0	1.8	0.7	2.3	916
Marital status										
Never married	0.5	2.6	0.2	3.1	223	0.6	0.6	0.3	1.2	412
Married or living together	0.5	1.2	0.8	1.9	9,058	0.4	0.9	0.3	1.3	2,886
Divorced/separated/ widowed	0.2	1.8	1.0	2.5	1,467	5.1	3.7	3.3	6.1	152
Residence										
Urban	0.7	1.6	1.1	2.5	1,518	1.0	1.4	0.8	1.6	506
Rural	0.5	1.3	0.7	1.9	9,230	0.6	0.9	0.4	1.5	2,943
Region										
Tigray	0.1	1.1	0.4	1.3	721	0.5	0.4	0.5	1.3	198
Affar	0.0	1.0	1.0	1.5	126	0.5	0.4	0.4	0.5	49
Amhara	0.4	1.1	0.4	1.6	2,917	0.0	0.5	0.4	0.7	848
Oromiya	0.8	1.4	1.0	2.2	3,770	1.1	0.5	0.6	1.5	1,270
Somali	0.2	0.8	1.2	1.7	399	2.5	8.3	0.6	8.8	126
Benishangul-Gumuz	0.1	0.6	1.0	1.6	105	0.0	0.0	0.0	0.0	35
SNNP	0.3	1.6	0.9	2.2	2,179	0.2	1.3	0.2	1.3	706
Gambela	0.6	1.6	1.7	2.7	38	0.7	2.1	1.3	2.8	15
Harari	0.4	0.3	0.4	0.6	27	0.4	0.4	0.4	0.4	12
Addis Ababa	1.1	2.3	1.4	3.5	415	1.1	0.9	0.4	1.6	173
Dire Dawa	0.3	0.2	0.1	0.4	50	0.8	0.0	0.8	0.8	18
Education										
No education	0.5	1.4	0.8	2.0	8,242	0.7	1.3	0.3	1.9	1,653
Primary	0.3	1.3	0.8	1.9	1,695	0.5	0.8	0.8	1.2	1,163
Secondary and higher	0.5	1.4	0.8	1.9	810	0.7	0.5	0.2	1.1	635
Wealth quintile										
Lowest	0.5	1.5	1.0	2.2	2,055	1.0	1.8	0.5	2.4	617
Second	0.4	1.4	0.9	2.1	2,189	0.3	1.2	0.5	1.7	689
Middle	0.3	1.0	0.5	1.4	2,137	0.0	0.2	0.2	0.2	683
Fourth	0.8	1.3	0.7	2.0	2,052	1.0	0.6	0.3	1.5	651
Highest	0.5	1.5	0.8	2.2	2,315	1.1	1.2	0.6	1.8	810
Total 15-49	0.5	1.4	0.8	2.0	10,748	0.7	1.0	0.4	1.5	3,450
Total men 15-59	na	na	na	na	na	0.8	1.0	0.4	1.5	4,019

na = Not applicable

13.7 MALE CIRCUMCISION

Circumcision of men is widely practiced in Ethiopia and often serves as a rite of passage to adulthood. Some studies have shown that absence of circumcision may be a contributory factor to the risk of contracting STIs, including HIV. To investigate this relationship the EDHS asked all men if they had been circumcised. Table 13.12 shows that 93 percent of Ethiopian men age 15-59 are circumcised. Circumcision is highest among men age 40-44 and lowest among those age 15-19.

Currently married men are slightly more likely to be circumcised than formerly married men. Men who have never married are least likely to be circumcised. Circumcision is highest among Orthodox Christians and lowest among men of other unspecified religions.

With the exception of men in Gambela and SNNP, circumcision is nearly universal among men in the other regions. Less than one in two men living in Gambela is circumcised, while three in four men living in SNNP are circumcised.

There is no clear relationship between education and male circumcision. However, men with at least secondary education are most likely to be circumcised.

Table 13.12 Prevalence of male circumcision

Percentage of men circumcised, according to selected background characteristics, Ethiopia 2005

Background characteristic	Percentage of men who are circumcised	Number of men
Age		
15-19	86.7	1,335
20-24	93.3	1,064
25-29	93.2	741
30-34	94.5	754
35-39	92.5	651
40-44	97.8	497
45-49	93.8	422
50-54	96.7	335
55-59	94.4	235
Marital status		
Never married	90.3	2,419
Married or living together	94.1	3,424
Divorced/separated/widowed	92.7	190
Residence		
Urban	97.9	916
Rural	91.6	5,117
Region		
Tigray	98.0	366
Affar	98.5	65
Amhara	97.3	1,521
Oromiya	94.2	2,222
Somali	99.2	202
Benishangul-Gumuz	97.6	54
SNNP	79.6	1,244
Gambela	46.8	21
Harari	99.5	16
Addis Ababa	98.5	292
Dire Dawa	99.7	30
Education		
No education	93.0	2,589
Primary	90.1	2,252
Secondary and higher	96.1	1,192
Wealth quintile		
Lowest	88.9	1,100
Second	90.8	1,184
Middle	91.8	1,081
Fourth	93.2	1,200
Highest	96.6	1,469
Religion		
Orthodox	97.3	2,974
Catholic	78.4	61
Protestant	80.1	1,038
Moslem	94.3	1,788
Other	74.5	55
Total	92.5	6,033

13.8 INJECTIONS

Injection overuse in a health care setting can contribute to the transmission of blood-borne pathogens because it amplifies the effect of unsafe practices such as reuse of injection equipment. As a consequence, the proportion of injections given with reused injection equipment is an important prevention indicator in an initiative to control the spread of HIV/AIDS.

Table 13.13 presents data on the prevalence of injections among respondents. Respondents were asked if they had had any injections given by a health worker in the 12 months preceding the survey, and if so, the number of injections they had received and whether their last injection was given with a syringe from a new, unopened package. It should be noted that medical injections can be self-administered (e.g., insulin for diabetes). These injections were not included in the calculation.

Women are more likely than men to report receiving at least one injection (26 percent and 19 percent, respectively). These may in part reflect the fact that a substantial proportion of women are currently using injectable contraceptives. The average number of injections received from a health provider was 1.1 among women and 1.0 among men.

Table 13.13 shows that the largest variations in the injection prevalence indicator are across regions. Among women, for example, the percentage reporting they had received at least one injection from a health worker during the 12 months prior to the survey varies from 6 percent in the Somali Region to 32 percent among women in SNNP and Addis Ababa. Among men, the likelihood of having received an injection is lowest in the Somali Region (4 percent) and highest in Benishangul-Gumuz (29 percent). Urban residents are more likely than rural residents to have received at least one injection from a health provider, although the differential is greater for women than for men. The percentage receiving at least one injection from a health provider varies directly with education among both women and men. Among women, there is also a direct association between wealth quintile and the likelihood of receiving at least one injection. Among men, however, the association between wealth and receipt of an injection is not consistent.

Table 13.13 Prevalence of injections

Percent of women and men age 15-49 who received at least one injection from a health worker[1] in the past 12 months, the average number of medical injections[1] per person, and among those who received an injection, the percentage for whom the health worker took the syringe and needle from a new and unopened package for the last injection, by background characteristics, Ethiopia 2005

	Women					Men				
Background characteristic	Percentage who received an injection from a health worker in the past 12 months	Average number of medical injections per year	Number of women	Last injection, syringe and needle taken from newly opened package	Number receiving injections from a health worker in the past 12 months	Percentage who received an injection from a health worker in the past 12 months	Average number of medical injections per year	Number of men	Last injection, syringe and needle taken from newly opened package	Number receiving injections from a health worker in the past 12 months
Age										
15-19	22.7	0.8	3,266	92.8	741	18.1	0.7	1,335	96.6	242
20-24	26.1	1.1	2,547	93.1	665	21.2	1.1	1,064	94.6	226
25-29	28.7	1.2	2,517	89.9	722	18.2	1.1	741	97.3	135
30-39	25.9	1.3	3,410	89.1	882	19.5	1.0	1,405	93.1	274
40-49	25.6	1.2	2,330	88.9	596	17.1	1.1	919	94.5	157
Residence										
Urban	30.4	1.8	2,499	98.6	759	20.3	1.1	854	98.4	173
Rural	24.6	1.0	11,571	88.6	2,847	18.7	0.9	4,610	94.4	860
Region										
Tigray	16.5	0.7	919	93.4	152	16.2	0.8	315	95.9	51
Affar	15.3	1.2	146	88.9	22	14.7	0.9	59	(99.2)	9
Amhara	23.4	1.0	3,482	82.0	815	15.5	0.6	1,347	91.2	208
Oromiya	26.6	1.1	5,010	91.9	1,333	22.4	1.4	2,041	96.2	458
Somali	5.7	0.4	486	80.9	28	3.8	0.2	180	*	7
Benishangul-Gumuz	25.3	1.2	124	94.4	31	28.5	1.5	50	97.6	14
SNNP	31.6	1.2	2,995	94.6	945	17.7	0.7	1,143	94.7	203
Gambela	25.2	1.9	44	96.8	11	25.0	1.5	19	96.4	5
Harari	26.2	1.2	39	98.8	10	19.5	0.8	15	100.0	3
Addis Ababa	31.9	2.2	756	96.5	241	26.5	1.4	266	97.6	71
Dire Dawa	24.9	1.9	69	96.7	17	17.6	1.4	27	94.5	5
Education										
No education	23.1	1.0	9,271	86.7	2,139	13.9	0.7	2,164	93.4	300
Primary	29.6	1.2	3,123	95.5	924	21.8	1.1	2,140	95.0	466
Secondary and higher	32.4	1.7	1,675	98.4	542	23.0	1.2	1,160	97.0	267
Wealth quintile										
Lowest	17.0	0.7	2,428	81.8	412	16.6	1.1	980	97.1	162
Second	21.3	0.8	2,643	90.6	563	20.6	1.1	1,052	90.3	217
Middle	25.1	1.0	2,732	85.1	687	16.6	0.8	980	96.5	163
Fourth	29.3	1.1	2,647	91.0	776	20.3	0.9	1,088	94.3	221
Highest	32.2	1.7	3,621	97.1	1,167	19.8	1.0	1,364	97.3	270
Total 15-49	25.6	1.1	14,070	90.7	3,606	18.9	1.0	5,464	95.0	1,033
Total men 15-59	na	na	na	na	na	19.1	1.0	6,033	94.3	1,155

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
na = Not applicable
[1] Includes injections given by a doctor, nurse, pharmacist, dentist or other health worker

The majority of recent injections (91 percent among women and 95 percent among men) were given with a needle and syringe taken from a newly opened package. Women living in Somali (81 percent) and Amhara (82 percent) and women in the lowest wealth quintile (82 percent) are the least likely to report that the injection was given using a needle and syringe from a previously unopened package.

13.9 HIV/AIDS-Related Knowledge and Behaviour among Youth

Knowledge of HIV/AIDS issues and related sexual behaviour among youth age 15-24 is of particular interest because the period between sexual initiation and marriage is for many young people a time of sexual experimentation that may involve high-risk behaviours. This section considers a number of issues that relate to both transmission and prevention of HIV/AIDS among youth, including the extent to which youth have comprehensive knowledge of HIV/AIDS transmission and prevention modes and knowledge of a source where they can obtain condoms. Issues such as abstinence, age at sexual debut, age differences between partners, and condom use are also covered in this section.

13.9.1 Knowledge about HIV/AIDS and Source for Condoms

Knowledge of how HIV is transmitted is crucial to enabling young people to avoid AIDS. Young people are often at greater risk because they may have shorter relationships with more partners or engage in other risky behaviours. As discussed earlier, comprehensive knowledge is defined as knowing that: 1) people can reduce their chances of getting the AIDS virus by having sex with only one uninfected, faithful partner and by using condoms consistently; 2) a healthy-looking person can have the AIDS virus; and 3) HIV cannot be transmitted by mosquito bites or by sharing food with a person who has AIDS.

Table 13.14 shows that only around one-fifth of women and one-third of men age 15-24 know all of these facts about HIV/AIDS. The level of comprehensive knowledge about HIV/AIDS does not vary greatly by age within the youth population. Among young women, comprehensive knowledge is highest among the never-married, especially those who have ever had sex. Among young men, comprehensive knowledge is most common among the small numbers who were divorced, separated or widowed.

As expected, comprehensive HIV/AIDS knowledge is much more common among urban than rural youth. Among young women, the level of comprehensive knowledge ranges from a low of 1 percent in the Somali Region to a high of 50 percent in Addis Ababa. Among young men, comprehensive knowledge is lowest in the Somali Region (7 percent) and highest in Harari (54 percent) and Addis Ababa (53 percent). Young women with a secondary education or higher are more than six times as likely as those with no schooling to have comprehensive knowledge of HIV/AIDS while highly educated young men are more than three times as likely as those with no education to have comprehensive knowledge. Youth in the highest wealth quintile are much more likely to have comprehensive knowledge than other youth.

Because of the important role that condoms play in combating the transmission of HIV, respondents were asked whether they knew where condoms could be obtained. Only responses about "formal" sources were counted, so that friends and family and other similar sources were not included.

As shown in Table 13.14, young men are more likely than young women to know where to obtain a condom (56 and 34 percent, respectively). Among either sex, knowledge of a condom source does not vary consistently with age. Never-married young women, particularly those who have had sex, are much more likely to know about a source for condoms than those who have ever married. Among young men, the variations in knowledge by marital status are comparatively minor. Among both young women and men, those in urban areas are more likely than those in rural areas to know of

a condom source. Knowledge of a condom source is lowest in the Somali Region (7 percent of women and 20 percent of men) and highest in Addis Ababa (87 percent of women and 82 percent of men). Consistent with the patterns observed for other indicators, youth who are better educated and live in wealthier households are more likely than other youth to know a source of condoms.

Finally, to gauge the extent of support for programmes to increase condom knowledge among youth, all EDHS respondents (youth and adults) were asked whether they thought that children age 12-14 should be taught about using condoms to avoid AIDS.

Table 13.14 Comprehensive knowledge about AIDS and a source for condoms among youth

Percentage of young women and men age 15-24 with comprehensive knowledge about AIDS and percentage with knowledge of a source of condoms, by background characteristics, Ethiopia 2005

	Women			Men		
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	21.1	34.4	3,266	32.1	51.8	1,335
15-17	21.3	34.2	1,952	31.5	50.6	822
18-19	20.7	34.7	1,313	33.0	53.7	513
20-24	19.7	34.4	2,547	34.8	60.3	1,064
20-22	19.6	32.5	1,797	34.4	61.3	740
23-24	19.9	38.9	751	35.8	58.1	324
Marital status						
Never married	26.1	42.2	3,165	32.9	55.5	2,081
Ever had sex	40.3	66.6	136	38.0	53.2	257
Never had sex	25.5	41.1	3,030	32.2	55.8	1,824
Married/living together	13.4	23.8	2,284	34.2	56.8	284
Divorced/separated/ widowed	15.7	32.9	363	(47.3)	(51.3)	35
Residence						
Urban	44.4	81.4	1,242	54.4	81.5	431
Rural	14.0	21.6	4,571	28.6	49.9	1,968
Region						
Tigray	17.5	45.8	387	46.8	60.4	145
Affar	17.4	34.7	54	20.3	39.9	18
Amhara	19.9	35.6	1,392	44.8	58.7	614
Oromiya	20.2	27.3	2,131	25.2	53.5	907
Somali	1.4	6.7	155	7.4	19.6	60
Benishangul-Gumuz	15.1	28.9	51	42.8	52.0	18
SNNP	15.9	27.6	1,197	28.2	52.2	491
Gambela	10.6	29.7	17	21.4	53.4	8
Harari	30.1	66.7	17	53.7	63.5	6
Addis Ababa	49.8	87.3	382	52.6	82.2	120
Dire Dawa	29.7	63.2	29	43.8	68.4	12
Education						
No education	8.0	12.8	2,841	14.1	30.7	630
Primary	22.9	39.0	1,996	31.3	53.8	1,135
Secondary and higher	51.7	87.8	975	55.8	83.4	634
Wealth quintile						
Lowest	8.2	10.6	836	20.4	37.0	425
Second	11.5	17.0	1,045	29.0	46.2	421
Middle	13.5	20.0	1,135	29.4	49.8	391
Fourth	16.5	26.5	1,043	28.3	58.3	493
Highest	38.5	70.0	1,753	50.1	74.6	669
Total 15-24	20.5	34.4	5,813	33.3	55.6	2,399

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Respondent knows that using a condom at every sexual intercourse and having just one uninfected and faithful partner can reduce the risk of getting the AIDS virus, knows that a healthy-looking person can have the AIDS virus, and rejects the two most common local misconceptions about AIDS transmission.
[2] Friends, family members, and home are not considered sources for condoms.

Table 13.15 shows that 54 percent of women and 77 percent of men age 18-49 agree that children age 12-14 should be taught about using a condom to avoid AIDS. Women and men age 18-29 appear to be slightly more supportive of condom education for children age 12-14 than older adults. Among adult women, support for condom education is higher among urban than rural residents and increases as expected with education and wealth. There is also considerable regional variability in the level of support for condom education among women, from a low of 4 percent in the Somali Region to a high of 73 percent in Addis Ababa. Among adult men, support for condom education does not vary consistently with education and wealth, and rural residents are almost as likely as urban residents to express support. The Somali Region again stands out as having the lowest level of support from men (19 percent). In the other regions, support for condom education varies from 71 percent in Harari to 90 percent in Tigray.

Table 13.15 Adult support for education about condom use to prevent AIDS

Percentage of women and men 18-49 who agree that children 12-14 years should be taught about using a condom to avoid AIDS, by background characteristics, Ethiopia 2005

Background characteristic	Women		Men	
	Percentage	Number	Percentage	Number
Age				
18-19	57.4	689	73.9	513
20-24	59.6	1,228	79.9	1,064
25-29	56.4	1,167	78.6	741
30-39	51.8	1,622	77.6	1,405
40-49	47.2	1,090	71.9	919
Marital status				
Never married	63.8	914	76.1	1,600
Ever had sex	73.7	95	81.9	390
Never had sex	62.6	819	74.2	1,210
Married/living together	52.2	4,186	76.7	2,886
Divorced/separated/ widowed	53.3	696	83.9	156
Residence				
Urban	71.0	984	78.5	721
Rural	50.7	4,811	76.4	3,920
Region				
Tigray	67.9	371	90.3	270
Affar	30.2	64	77.1	54
Amhara	54.1	1,409	82.6	1,127
Oromiya	56.0	2,060	75.0	1,733
Somali	4.4	215	18.9	156
Benishangul-Gumuz	36.8	55	71.8	43
SNNP	53.8	1,272	78.8	972
Gambela	39.2	21	75.5	17
Harari	49.4	17	70.5	13
Addis Ababa	72.7	283	76.9	235
Dire Dawa	55.2	29	77.3	23
Education				
No education	46.9	4,090	70.4	2,008
Primary	70.3	1,074	83.1	1,655
Secondary and higher	73.7	631	78.9	979
Wealth quintile				
Lowest	38.8	1,098	66.7	825
Second	49.2	1,156	79.3	918
Middle	52.6	1,099	77.2	845
Fourth	57.3	1,045	80.2	906
Highest	69.2	1,398	78.9	1,148
Total 18-49	54.2	5,795	76.7	4,641
Total 18-59	na	na	76.1	5,211

Note: Only women in households selected for the male subsample were administered questions on MTCT.
na = Not applicable

13.9.2 Age at First Sex and Condom Use at First Sexual Intercourse

Information from the EDHS can be used to look at several important issues relating to the initiation of sexual activity among youth including age at first sex and condom use at first sexual intercourse.

Table 13.16 shows the proportions of women and men in the 15-24 age cohort who had sex before age 15 and before age 18. Sixteen percent of young women and 2 percent of young men had sex by age 15 while 35 percent of young women and 9 percent of young men had sex by age 18.

Table 13.16 Age at first sex among youth

Percentage of young women and men age 15-24 who have had sexual intercourse before exact ages 15 and 18, by background characteristics, Ethiopia 2005

	Women			Men		
Background characteristic	Percentage who have had sexual intercourse before exact age 15	Percentage who have had sexual intercourse before exact age 18	Number of women 15-24	Percentage who have had sexual intercourse before exact age 15	Percentage who have had sexual intercourse before exact age 18	Number of men 15-24
Age						
15-19	11.1	na	3,266	1.7	na	1,335
15-17	9.0	na	1,952	1.4	na	822
18-19	14.2	36.6	1,313	2.1	10.0	513
20-24	21.9	48.6	2,547	1.7	14.1	1,064
20-22	22.0	48.9	1,797	1.5	14.8	740
23-24	21.5	47.9	751	2.2	12.4	324
Marital status						
Never married	0.2	1.8	3,165	1.6	6.5	2,081
Married or living together	33.2	74.6	2,284	2.0	30.2	284
Divorced/separated/ widowed	42.5	78.1	363	4.4	(11.9)	35
Knows a condom source[1]						
Yes	9.8	25.3	1,998	2.2	11.6	1,411
No	19.0	40.3	3,815	0.9	6.3	988
Residence						
Urban	7.4	20.1	1,242	1.5	9.6	431
Rural	18.1	39.3	4,571	1.7	9.3	1,968
Region						
Tigray	20.0	39.7	387	0.0	8.5	145
Affar	13.5	47.4	54	5.5	26.6	18
Amhara	32.0	54.5	1,392	1.4	6.3	614
Oromiya	11.5	31.6	2,131	1.4	9.8	907
Somali	10.6	34.7	155	3.8	10.9	60
Benishangul-Gumuz	22.0	51.2	51	0.9	14.8	18
SNNP	7.1	22.4	1,197	2.2	9.8	491
Gambela	23.5	55.5	17	19.0	51.7	8
Harari	6.2	29.9	17	1.5	15.4	6
Addis Ababa	6.1	16.3	382	2.3	14.0	120
Dire Dawa	7.4	28.2	29	1.6	16.1	12
Education						
No education	25.4	52.6	2,841	1.0	9.2	630
Primary	8.3	22.0	1,996	1.9	8.8	1,135
Secondary and higher	3.5	11.5	975	2.0	10.6	634
Wealth quintile						
Lowest	20.0	45.2	836	1.3	8.9	425
Second	20.4	44.3	1,045	1.3	8.6	421
Middle	21.2	40.5	1,135	1.8	9.9	391
Fourth	16.3	35.4	1,043	2.9	10.3	493
Highest	7.4	21.4	1,753	1.2	9.2	669
Total 15-24	15.8	35.2	5,813	1.7	9.4	2,399

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Friends, family members, and home are not considered sources for condoms.
na = Not applicable

Looking at the age patterns for young women, the proportions of young women reporting that they had sex before age 15 are markedly lower among those under age 18 than among older girls. Young women age 18-19 were less likely than those age 20-24 to say they had initiated sex before age 18. This likely reflects the effect of rising age at marriage because only very small proportions of never-married young women report that they had sex by age 15 (0.2 percent) or by age 18 (2 percent). Other differentials in the indicators for young women reflect the influence of factors that predict delayed marriage, e.g., young women in urban areas are much less likely to have had sex by age 15 or by age 18 than young women in rural areas.

Differentials in these indicators for young men tend to be minor. This is at least in part because the proportions initiating sexual activity at an early age are not large in most subgroups with the exception of Gambela and to a lesser extent Affar. More than half of young men in Gambela and more than one-quarter of young men in Affar report that they had sex for the first time before age 18.

To assess the extent of condom use from the beginning of sexual exposure, respondents age 15-24 were asked whether they had used condoms the first time they had sex. Table 13.17 shows that only 1 percent of young women and 17 percent of young men used condoms during their first sexual encounter. Never-married women and men were much more likely than ever-married youth to have used a condom. Higher educational attainment, greater wealth, and urban residence are related to a greater likelihood that condoms were used the first time a young woman and, particularly, a young man had sex.

Table 13.17 Condom use at first sexual intercourse among youth

Percentage of young women and young men age 15-24 who used a condom the first time they had sexual intercourse, by background characteristics, Ethiopia 2005

Background characteristic	Women: Percentage who used a condom at first sexual intercourse	Women: Number who have ever had sexual intercourse	Men: Percentage who used a condom at first sexual intercourse	Men: Number who have ever had sexual intercourse
Age				
15-19	0.8	904	23.3	97
15-17	0.0	332	(26.0)	25
18-19	1.2	572	22.4	72
20-24	1.1	1,850	15.6	469
20-22	0.5	1,285	17.8	269
23-24	2.4	565	12.8	201
Marital status				
Never married	10.0	136	31.9	257
Married or living together	0.6	2,276	4.9	280
Divorced/separated/ widowed	0.1	342	(0.5)	29
Knows a condom source[1]				
Yes	3.2	744	22.0	385
No	0.2	2,009	6.2	182
Residence				
Urban	5.7	393	48.0	117
Rural	0.2	2,361	8.8	449
Region				
Tigray	0.6	196	(30.0)	34
Affar	3.7	34	(10.3)	9
Amhara	0.2	864	12.0	142
Oromiya	1.2	967	17.5	215
Somali	0.0	77	*	11
Benishangul-Gumuz	0.6	34	(14.0)	5
SNNP	1.0	441	9.8	98
Gambela	0.5	12	13.8	5
Harari	8.5	8	20.2	2
Addis Ababa	6.0	108	41.3	41
Dire Dawa	4.0	12	(49.5)	3
Education				
No education	0.2	1,916	4.6	193
Primary	1.4	602	16.1	218
Secondary and higher	7.0	235	33.4	156
Wealth quintile				
Lowest	0.2	484	8.8	93
Second	0.3	604	5.1	87
Middle	0.0	587	8.9	117
Fourth	0.3	483	6.8	98
Highest	4.0	595	38.7	171
Total 15-24	1.0	2,754	16.9	566

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Friends, family members, and home are not considered sources for condoms.

13.9.3 Recent Sexual Activity

The period between age at first sex and age at marriage is often a time of sexual experimentation. Unfortunately, in the era of HIV/AIDS, it can also be a risky time. Table 13.18 presents data on the percentage of never-married young women and men age 15-24 who have not yet engaged in sex, the percentage who had sex in the 12 months preceding the survey, and the percentage who used condoms during most recent sex.

Table 13.18 Premarital sexual intercourse and condom use among youth

Among never-married women and men age 15-24, the percentage who have never had sexual intercourse, the percentage who have had sexual intercourse in the past 12 months, and, among those who have had sexual intercourse in the past 12 months, the percentage who used a condom at last sexual intercourse, by background characteristics, Ethiopia 2005

	Women			Men				
Background characteristic	Percentage who never had sexual intercourse	Percentage who have had sexual intercourse in the past 12 months	Number of never-married women 15-24	Percentage who never had sexual intercourse	Percentage who have had sexual intercourse in the past 12 months	Number of never-married men 15-24	Percentage who used a condom at last sexual intercourse	Number of men
Age								
15-19	97.5	1.0	2,394	94.6	3.9	1,304	44.8	51
15-17	98.7	0.5	1,622	97.2	2.0	817	(28.7)	16
18-19	94.8	2.2	773	90.2	7.2	487	52.2	35
20-24	90.3	3.1	771	75.9	13.4	777	51.8	104
20-22	91.9	2.6	555	80.3	11.5	584	54.2	67
23-24	86.1	4.3	216	62.9	19.0	194	47.5	37
Knows a condom source[1]								
Yes	93.2	2.6	1,335	82.6	10.8	1,231	57.8	133
No	97.5	0.8	1,831	94.9	2.6	850	(0.0)	22
Residence								
Urban	90.5	3.3	938	76.5	15.2	410	84.5	62
Rural	97.9	0.8	2,228	90.4	5.6	1,672	26.1	93
Region								
Tigray	95.5	1.3	200	84.3	11.8	132	*	16
Affar	94.4	2.6	21	65.3	30.1	15	*	5
Amhara	95.9	0.9	523	93.2	3.4	497	*	17
Oromiya	96.0	2.1	1,210	85.7	9.0	807	(38.9)	73
Somali	100.0	0.0	77	92.8	5.4	52	*	3
Benishangul-Gumuz	95.6	1.1	19	91.3	7.3	14	*	1
SNNP	98.7	0.5	765	92.4	3.6	425	36.1	15
Gambela	84.5	7.3	7	49.9	37.1	6	(43.8)	2
Harari	91.8	3.2	10	76.2	17.1	4	*	1
Addis Ababa	87.0	3.0	314	67.3	18.3	116	75.9	21
Dire Dawa	89.1	2.9	19	75.8	16.6	11	*	2
Education								
No education	96.9	1.0	939	91.8	4.2	472	(17.1)	20
Primary	96.3	1.2	1,434	90.7	5.4	1,007	42.1	54
Secondary and higher	93.2	2.8	792	79.3	13.5	602	62.4	81
Wealth quintile								
Lowest	98.3	1.3	354	93.3	3.5	354	(22.6)	12
Second	98.5	1.2	443	91.4	5.3	363	*	19
Middle	98.2	0.6	552	88.5	7.2	310	*	22
Fourth	97.6	0.4	562	89.9	6.3	437	*	28
Highest	92.1	2.6	1,254	80.1	11.9	617	77.2	74
Total 15-24	95.7	1.5	3,165	87.6	7.5	2,081	49.5	155

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Friends, family members, and home are not considered sources for condoms.

The great majority of never-married young women (96 percent) and men (88 percent) reported that they had never had sex, and, as a result, the proportions reporting recent sexual activity (i.e., within the 12-month period before the survey) are low (2 percent among young women and 8 percent among young men). Half of never-married young men reporting recent sexual activity used a condom the last time they had sex compared with around one-third of young women (data not shown).

Given the comparatively small proportion of never-married young women reporting premarital sexual intercourse, differentials in this indicator are generally minimal. Among never-married young men, the proportion reporting premarital sexual activity tends to increase with age, education, and wealth, and is higher among urban than rural residents. Looking at regional variations, Gambela and Affar have the highest proportions of never-married young men reporting premarital sex.

13.9.4 Higher-Risk Sex

The most common mode of transmission of HIV in Ethiopia is through unprotected sex with an infected person. To prevent HIV/AIDS transmission, it is important that young people practice safe sex through the much-advocated ABC method (abstinence, being faithful to one uninfected partner, and condom use). Table 13.19 presents data on the percentage of young people engaging in higher-risk sex (sex with a nonmarital, noncohabiting partner) in the 12-month period preceding the survey, and the rate of condom use in these higher-risk sexual encounters. Among sexually active youth age 15-24, 6 percent of women and 37 percent of men engaged in higher-risk sexual activity in the past 12 months. One-quarter of these women and just under half of these men reported condom use in their last higher-risk encounter (data not shown).

Table 13.19 Higher-risk sexual intercourse among youth

Among young women and men age 15-24 who had sexual intercourse in the past 12 months, the percentage who had higher-risk sexual intercourse, and among those who had higher-risk sexual intercourse in the past 12 months, the percentage who used a condom at last higher-risk sexual intercourse, by background characteristics, Ethiopia 2005

	Women		Men	
Background characteristic	Percentage who had higher-risk sex in past 12 months	Number of women sexually active in past 12 months	Percentage who had higher-risk sex in past 12 months	Number of women sexually active in past 12 months
Age				
15-19	7.2	411	68.0	78
15-17	5.6	145	96.6	18
18-19	8.0	267	59.2	59
20-24	5.1	800	31.0	368
20-22	5.1	518	33.4	214
23-24	5.2	282	27.7	155
Marital status				
Never married	99.6	48	98.7	155
Married or living together	1.1	1,099	3.8	278
Divorced/separated/ widowed	16.5	65	24.8	13
Knows a condom source[1]				
Yes	12.8	378	47.7	295
No	2.7	834	17.3	151
Residence				
Urban	26.4	154	76.8	83
Rural	2.9	1,058	28.5	363
Region				
Tigray	7.7	94	61.3	28
Affar	4.5	14	60.3	8
Amhara	4.0	375	15.3	113
Oromiya	6.9	430	42.6	170
Somali	0.0	32	29.1	10
Benishangul-Gumuz	3.4	16	21.5	5
SNNP	2.4	209	29.3	80
Gambela	8.0	4	68.0	4
Harari	7.5	4	39.1	2
Addis Ababa	39.8	28	92.0	24
Dire Dawa	15.1	4	76.2	2
Education				
No education	2.7	823	14.9	160
Primary	7.2	280	34.6	175
Secondary and higher	25.7	109	73.9	112
Wealth quintile				
Lowest	2.2	234	22.3	77
Second	4.1	269	28.1	73
Middle	2.3	265	24.1	102
Fourth	3.9	200	38.3	78
Highest	16.7	243	64.5	116
Total 15-24	5.8	1,212	37.4	446

[1] Friends, family members, and home are not considered sources for condoms.

Among young women and men, there are significant differences in the prevalence of higher-risk sex by background characteristics. Youth with a secondary or higher education are much more likely than those with less schooling to have engaged in higher-risk sex, and higher-risk sexual activity, particularly among young women, is concentrated among those in the highest wealth quintile. Urban youth are considerably more likely than rural youth to have engaged in risky sexual behaviour. Addis Ababa and Dire Dawa stand out as regions with the highest proportions of youth reporting that they have engaged in higher-risk sex.

13.9.5 Age-Mixing in Sexual Relationships

In many societies, young women have sexual relationships with men who are considerably older than they are. This practice can contribute to the wider spread of HIV and other STIs because if a younger, uninfected partner has sex with an older, infected partner, the younger, uninfected partner can contract the virus. To investigate this practice, in the 2005 EDHS women age 15-24 who had sex with a nonmarital, noncohabiting partner in the 12 months preceding the survey were asked whether the man was younger, about the same age, or older than they were. If older, they were asked if they thought he was less than ten years older or ten or more years older. Less than 1 percent of the small number of young women who had engaged in higher-risk sex in the 12-month period prior to the survey reported that they had had intercourse with a man who was ten or more years older (not shown in table).

13.9.6 Drunkenness during Sexual Intercourse

Sexual intercourse when one or both partners are under the influence of alcohol is more likely to be unplanned than otherwise, and the partners are less likely to use condoms. Respondents who had had sex during the preceding 12 months were asked if they or their partner drank alcohol the last time they had sex, and if so, whether they or their partner were drunk. Table 13.20 shows the prevalence of sexual intercourse while drunk. The overall prevalence of sex when the respondent or partner is drunk is low, especially for young women (3 percent for women and 2 percent for men). Given the rarity of the phenomenon, differences across groups are minimal.

Table 13.20 Drunkenness during sexual intercourse among youth

Percentage of young women and men age 15-24 who had sexual intercourse in the past 12 months while being drunk, by background characteristics, Ethiopia 2005

Background characteristic	Women		Men	
	Respondent and/or partner drunk	Number who had sexual intercourse in past 12 months	Respondent and/or partner drunk	Number who had sexual intercourse in past 12 months
Age				
15-19	2.9	411	1.9	78
15-17	0.1	145	0.6	18
18-19	4.5	267	2.3	59
20-24	3.3	800	2.3	368
20-22	4.5	518	3.1	214
23-24	1.1	282	1.3	155
Marital status				
Never married	7.6	48	4.8	155
Married or living together	2.9	1,099	0.9	278
Divorced/separated/ widowed	5.6	65	0.0	13
Knows a condom source[1]				
Yes	4.3	378	2.6	295
No	2.7	834	1.6	151
Residence				
Urban	6.3	154	2.5	83
Rural	2.7	1,058	2.2	363
Region				
Tigray	0.0	94	2.8	28
Affar	2.3	14	4.6	8
Amhara	1.6	375	1.1	113
Oromiya	5.1	430	2.0	170
Somali	0.0	32	0.0	10
Benishangul-Gumuz	0.9	16	0.0	5
SNNP	3.9	209	3.0	80
Gambela	6.4	4	1.5	4
Harari	0.0	4	0.0	2
Addis Ababa	6.2	28	6.6	24
Dire Dawa	4.1	4	7.1	2
Education				
No education	2.7	823	1.6	160
Primary	4.5	280	2.2	175
Secondary and higher	3.4	109	3.3	112
Wealth quintile				
Lowest	1.6	234	1.8	77
Second	4.5	269	0.0	73
Middle	1.3	265	3.5	102
Fourth	3.0	200	2.4	78
Highest	5.5	243	2.8	116
Total 15-24	3.2	1,212	2.3	446

[1] Friends, family members, and home are not considered sources for condoms.

13.9.7 HIV Testing

Young people may believe there are barriers to accessing and using many health services and facilities, particularly for sensitive concerns relating to sexual health, such as sexually transmitted infections like HIV/AIDS. Table 13.21 presents data on the percentage of sexually active youth being tested and receiving the results within the past year. Young men are about three times as likely as young women to have been tested for HIV (6 percent and 2 percent, respectively). Given the generally low level of testing, differences across groups should be interpreted cautiously. However, there is a clear tendency for testing rates to be higher among urban youth, youth with a secondary or higher education, youth in the highest wealth quintile, and youth living in Addis Ababa.

Table 13.21 Recent HIV tests among youth

Among young women and men age 15-24 who have had sexual intercourse in the past 12 months, the percentage who have had an HIV test in the past 12 months and received the results of the test, by background characteristics, Ethiopia 2005

	Women		Men	
Background characteristic	Percentage who have been tested for HIV and received results in past 12 months	Number of women	Percentage who have been tested for HIV and received results in past 12 months	Number of men
Age				
15-19	1.8	411	8.3	78
15-17	1.1	145	(0.3)	18
18-19	2.2	267	10.8	59
20-24	1.9	800	5.6	368
20-22	2.3	518	5.7	214
23-24	1.1	282	5.5	155
Knows a condom source[1]				
Yes	4.2	378	6.6	295
No	0.8	834	5.2	151
Residence				
Urban	8.1	154	15.2	83
Rural	1.0	1,058	4.0	363
Region				
Tigray	1.2	94	(6.6)	28
Affar	0.0	14	(3.7)	8
Amhara	1.6	375	7.6	113
Oromiya	0.6	430	3.2	170
Somali	0.0	32	*	10
Benishangul-Gumuz	1.0	16	(2.9)	5
SNNP	3.2	209	(5.1)	80
Gambela	1.4	4	3.2	4
Harari	7.0	4	5.3	2
Addis Ababa	18.9	28	25.4	24
Dire Dawa	7.4	4	(13.9)	2
Education				
No education	0.4	823	6.6	160
Primary	3.0	280	1.2	175
Secondary and higher	9.8	109	13.0	112
Wealth quintile				
Lowest	0.0	234	0.1	77
Second	0.6	269	2.0	73
Middle	0.9	265	3.6	102
Fourth	1.7	200	4.7	78
Highest	6.3	243	15.8	116
Total	1.9	1,212	6.1	446

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Friends, family members, and home are not considered sources for condoms.

HIV PREVALENCE AND ASSOCIATED FACTORS 14

The 2005 EDHS is the first national survey in Ethiopia to include HIV testing. In Ethiopia, as in most of sub-Saharan Africa, national HIV prevalence estimates have been derived primarily from sentinel surveillance regarding pregnant women attending antenatal care facilities. Although the information from the ANC surveillance system has been very useful for assessing HIV levels, and especially for monitoring trends in HIV prevalence, the inclusion of HIV testing in the 2005 EDHS offers the opportunity to obtain information on the magnitude and patterns of HIV infection in the general reproductive age population in Ethiopia. Thus, the HIV prevalence data from the EDHS are expected to provide important information to plan the national response to the AIDS epidemic in Ethiopia.

This chapter first presents information on the coverage of HIV testing among eligible survey respondents and then discusses levels and differentials in HIV prevalence among those tested. The chapter also considers the similarities and differences between the 2005 EDHS HIV findings and HIV estimates from other data sources, specifically the HIV results from the 2005 round of antenatal sentinel surveillance. Lastly, it discusses the effect of nonresponse on HIV rates.

14.1 COVERAGE OF HIV TESTING IN THE EDHS

All women age 15-49 and all men age 15-59 living in the households that were chosen for the male survey (i.e., half of all households sampled for the 2005 EDHS) were eligible for the HIV testing component of the EDHS.[1] Table 14.1 shows the coverage rates for HIV testing among eligible respondents by reason for not being tested, according to gender and residence. HIV tests were conducted for 83 percent of the 7,142 eligible women and 76 percent of the 6,778 eligible men. For both sexes combined, coverage was 80 percent. Refusals were the most important reason for non-response on the HIV testing component of the survey for both women (13 percent) and men (17 percent).

Rural residents were more likely to be tested than their urban counterparts (85 percent and 67 percent, respectively). Differences in HIV testing coverage rates are also evident by region. Among both sexes, SNNP had the highest rate of testing (90 percent), followed by Tigray and Oromiya (87 percent), while the rates were lowest in Dire Dawa (60 percent) and the Somali Region (65 percent).

Table 14.2 shows coverage rates for HIV testing by age group, education, and wealth. If HIV status influenced participation in the testing, coverage would be expected to decline with age since HIV levels typically increase sharply with age before levelling off or declining at the older ages. In fact, coverage rates for testing in the EDHS tend to rise with age, although not consistently, among women and men. Considering the relationship with education, those with little or no education are more likely to have been tested, while men and women with at least some secondary education were least likely to be tested. Similarly, those in the highest quintile of the wealth index were the least likely to be tested.

In order to further explore whether nonresponse might have an impact on the HIV seroprevalence results, tables describing the relationship between participation in the HIV testing and a number of other characteristics related to HIV risk were also examined (see Tables A.3-A.6 in Appendix A). These tables show that nonresponse levels tend to increase, although often not

[1] For additional information on the HIV testing component of the 2005 EDHS, see Chapter 1.

markedly, with a number of characteristics associated with a higher risk for HIV. For example, coverage rates among women and, especially, men are lower among those who have ever been sexually active than among those who have never had sex, and lower among those reporting that they had higher-risk sexual intercourse in the 12-month period before the survey than those who did not engage in higher-risk sex.

Table 14.1 HIV testing coverage by residence and region

Percent distribution of women age 15-49 and men age 15-59 eligible for HIV testing by testing status, according to residence and region (unweighted) Ethiopia 2005

Background characteristic	Tested		Refused		Absent/other/missing		Total	Unweighted number
	Interviewed	Not interviewed	Interviewed	Not interviewed	Interviewed	Not interviewed		
WOMEN 15-49								
Residence								
Urban	72.7	0.1	18.8	3.7	1.3	3.3	100.0	2,239
Rural	88.0	0.2	7.8	1.6	0.8	1.8	100.0	4,903
Region								
Tigray	90.2	0.0	6.1	0.2	1.3	2.2	100.0	625
Affar	72.8	0.7	20.5	3.0	1.5	1.5	100.0	405
Amhara	87.7	0.1	9.4	0.7	0.7	1.3	100.0	937
Oromiya	87.6	0.3	7.4	1.8	0.5	2.4	100.0	1,101
Somali	71.3	0.3	20.2	5.2	0.6	2.5	100.0	362
Benishangul-Gumuz	89.2	0.0	6.4	1.6	1.4	1.4	100.0	436
SNNP	93.2	0.1	3.9	0.8	0.9	1.0	100.0	1,070
Gambela	82.8	0.2	8.0	4.6	1.5	2.9	100.0	413
Harari	73.6	0.0	17.9	4.5	1.3	2.8	100.0	469
Addis Ababa	73.8	0.1	17.4	3.6	0.9	4.2	100.0	912
Dire Dawa	70.9	0.0	22.6	2.4	0.7	3.4	100.0	412
Total	83.2	0.2	11.2	2.2	1.0	2.3	100.0	7,142
MEN 15-59								
Residence								
Urban	59.5	0.1	22.6	6.7	1.4	9.7	100.0	1,948
Rural	81.8	0.2	8.6	3.6	0.8	5.0	100.0	4,830
Region								
Tigray	84.2	0.0	5.5	2.7	1.2	6.4	100.0	563
Affar	60.2	0.3	20.2	8.0	0.8	10.6	100.0	387
Amhara	84.9	0.2	7.8	2.8	0.8	3.4	100.0	959
Oromiya	85.2	0.1	6.7	3.2	0.6	4.3	100.0	1,126
Somali	57.4	0.6	26.2	8.3	0.0	7.4	100.0	336
Benishangul-Gumuz	82.4	0.0	11.7	2.5	0.7	2.7	100.0	403
SNNP	86.0	0.2	5.1	3.5	0.9	4.3	100.0	956
Gambela	74.4	0.3	9.5	6.3	1.3	8.3	100.0	398
Harari	66.2	0.2	17.0	5.9	1.7	9.0	100.0	423
Addis Ababa	62.2	0.0	20.0	6.2	1.4	10.1	100.0	834
Dire Dawa	47.3	0.3	34.6	6.1	2.0	9.7	100.0	393
Total	75.4	0.2	12.6	4.5	1.0	6.3	100.0	6,778
TOTAL 15-49								
Residence								
Urban	66.9	0.1	20.4	5.0	1.4	6.2	100.0	4,054
Rural	84.9	0.2	8.2	2.6	0.8	3.4	100.0	9,263
Region								
Tigray	87.4	0.0	5.8	1.4	1.3	4.2	100.0	1,107
Affar	66.9	0.5	19.8	5.7	1.1	6.1	100.0	758
Amhara	86.1	0.2	8.7	1.8	0.8	2.5	100.0	1,791
Oromiya	86.3	0.2	7.0	2.4	0.6	3.5	100.0	2,134
Somali	64.4	0.5	23.3	6.8	0.3	4.8	100.0	665
Benishangul-Gumuz	86.3	0.0	8.8	2.0	0.9	2.0	100.0	804
SNNP	89.8	0.2	4.5	2.1	0.9	2.6	100.0	1,952
Gambela	79.2	0.3	8.7	5.4	1.4	5.1	100.0	783
Harari	70.3	0.1	17.8	5.1	1.3	5.4	100.0	864
Addis Ababa	68.3	0.1	18.4	4.9	1.2	7.1	100.0	1,681
Dire Dawa	59.8	0.1	28.1	4.1	1.3	6.6	100.0	778
Total	79.4	0.2	11.9	3.3	1.0	4.3	100.0	13,317

Table 14.2 HIV testing coverage by background characteristics

Percent distribution of women age 15-49 and men age 15-59 eligible for HIV testing by testing status, according to background characteristics (unweighted) Ethiopia 2005

Background characteristic	Tested		Refused		Absent/other/missing		Total	Unweighted number
	Interviewed	Not interviewed	Interviewed	Not interviewed	Interviewed	Not interviewed		
WOMEN 15-49								
Age								
15-19	81.8	0.5	10.4	2.8	1.2	3.3	100.0	1,718
20-24	81.5	0.1	12.6	2.8	1.0	2.1	100.0	1,329
25-29	84.1	0.1	10.8	1.8	0.7	2.5	100.0	1,311
30-34	85.2	0.0	10.8	1.4	1.1	1.5	100.0	853
35-39	82.7	0.0	12.2	2.2	0.7	2.2	100.0	821
40-44	85.7	0.0	10.3	2.2	0.5	1.3	100.0	602
45-49	84.4	0.2	12.0	1.2	1.4	0.8	100.0	508
Education								
No education	85.4	0.2	9.6	2.0	0.9	1.9	100.0	4,251
Primary	84.6	0.2	9.7	2.0	1.0	2.6	100.0	1,563
Secondary and higher	74.5	0.0	18.1	3.2	1.1	3.0	100.0	1,328
Wealth quintile								
Lowest	83.1	0.2	10.7	2.9	1.0	2.2	100.0	1,473
Second	88.0	0.2	8.2	1.1	0.5	2.0	100.0	1,070
Middle	92.1	0.1	4.6	0.6	1.2	1.4	100.0	1,006
Fourth	90.8	0.3	5.5	1.3	0.8	1.2	100.0	968
Highest	75.0	0.1	17.4	3.2	1.1	3.1	100.0	2,625
Total	83.2	0.2	11.2	2.2	1.0	2.3	100.0	7,142
MEN 15-59								
Age								
15-19	74.1	0.1	12.5	4.9	1.1	7.2	100.0	1,457
20-24	75.1	0.0	11.6	5.2	0.9	7.1	100.0	1,185
25-29	73.7	0.4	12.4	4.7	1.0	7.8	100.0	953
30-34	75.6	0.1	13.7	3.7	1.0	5.9	100.0	841
35-39	74.9	0.3	14.1	4.4	0.7	5.7	100.0	725
40-44	75.3	0.0	13.8	4.9	0.9	5.1	100.0	551
45-49	78.8	0.4	11.0	3.9	0.9	5.0	100.0	463
50-54	78.6	0.0	12.3	3.3	1.9	3.8	100.0	365
55-59	79.8	0.0	12.2	2.9	1.3	3.8	100.0	238
Education								
No education	77.0	0.3	10.6	5.2	1.1	5.9	100.0	2,745
Primary	81.6	0.1	9.9	2.8	0.7	4.9	100.0	2,111
Secondary and higher	66.3	0.1	18.6	5.4	1.3	8.4	100.0	1,919
Wealth quintile								
Lowest	75.1	0.2	12.1	4.9	0.9	6.7	100.0	1,377
Second	84.5	0.1	6.8	3.3	1.1	4.1	100.0	1,016
Middle	85.5	0.3	5.4	3.6	0.9	4.3	100.0	957
Fourth	82.7	0.2	8.7	3.1	0.7	4.6	100.0	994
Highest	64.7	0.1	19.8	5.7	1.2	8.5	100.0	2,434
Total	75.4	0.2	12.6	4.5	1.0	6.3	100.0	6,778

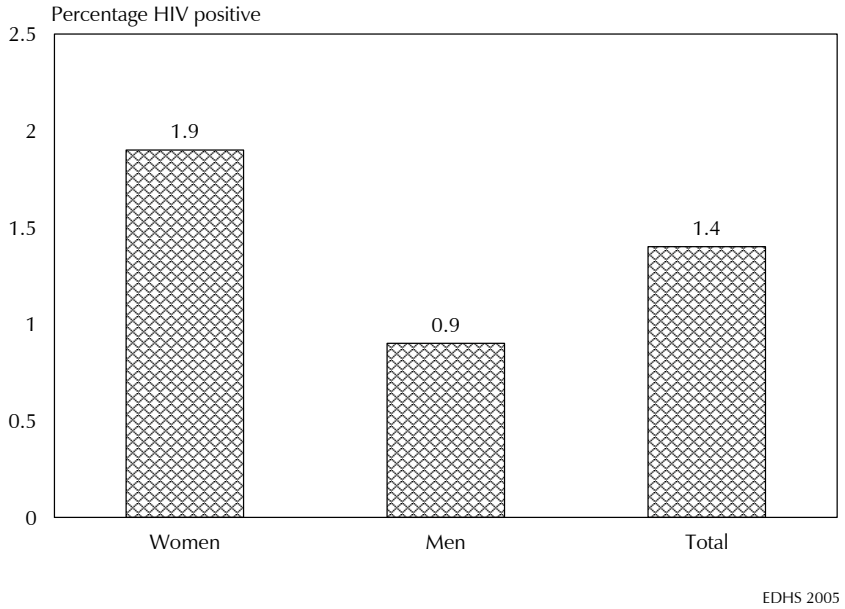
Note:Total for men includes 3 cases with missing information on education, who are not shown separately

14.2 HIV PREVALENCE

Results from the 2005 EDHS indicate that 1.4 percent of Ethiopian adults age 15-49 are infected with HIV (Figure 14.1). HIV prevalence in women is nearly 2 percent, while for men 15-49, it is just under 1 percent. The female-to-male infection ratio of 2.1 is higher than what has been previously assumed in the Ethiopian situation. However, it is consistent with female-to-male HIV infection ratios observed in a number of other countries in sub-Saharan Africa: Senegal – ratio of 2.3 (Ministry of Health, 2005), Guinea – ratio of 2.1 (National Directorate of Statistics, 2005), and Kenya - ratio of 1.9 (Central Bureau of Statistics, 2004).

Gender differences in infection levels reflect the fact that biological factors make women more susceptible to the risk of infection. They also relate to the fact that women both initiate sexual activity and marry at a much younger age than men (see Chapter 6). Also, their husbands (partners) tend to be older than them.

Figure 14.1 **HIV Prevalence among Women and Men Age 15-49**



14.2.1 HIV Prevalence by Age

Table 14.3 shows for both men and women that HIV prevalence levels rise with age, peaking among women in their late 30s and among men in their early 40s. The age patterns suggest that young women are particularly vulnerable to HIV infection compared with young men. Among women age 15-19, for example, 0.7 percent are HIV infected, compared with 0.1 percent of men age 15-19. HIV prevalence among women 20-24 is over three times that of men in the same age group (1.7 percent and 0.4 percent, respectively).

Table 14.3 HIV prevalence by age

Percentage HIV positive among women age 15-49 and men age 15-59 who were tested, by age, Ethiopia 2005

	Women 15-49		Men 15-59		Total 15-49	
Age	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
15-19	0.7	1,397	0.1	1,175	0.4	2,572
20-24	1.7	1,025	0.4	929	1.1	1,954
25-29	2.1	1,004	0.7	640	1.6	1,645
30-34	1.5	734	1.9	664	1.7	1,398
35-39	4.4	650	1.8	581	3.2	1,231
40-44	3.1	487	2.8	438	3.0	925
45-49	0.8	439	0.0	376	0.5	815
50-54	na	na	0.9	293	na	na
55-59	na	na	0.3	208	na	na
Total age 15-49	1.9	5,736	0.9	4,804	1.4	10,540
Total age 15-59	na	na	0.9	5,306	na	na

na =Not applicable

14.2.2 HIV Prevalence by Socioeconomic Characteristics

As Table 14.4 shows, urban residents have a significantly higher risk of HIV infection (6 percent) than rural residents (0.7 percent). The risk of HIV infection among rural women and men is almost identical, while urban women are more than three times as likely as urban men to be infected.

Regional variations in HIV prevalence are also presented in Table 14.4. Prevalence levels are highest in Gambela (6 percent) and Addis Ababa (5 percent). Other regions in which HIV prevalence exceeds the national average include Harari, Dire Dawa, Afar, Tigray, and Amhara. Somewhat surprisingly, SNNP Region has the lowest overall prevalence (0.2 percent). The regional variations are discussed further below when the 2005 EDHS results are compared with the results of the ANC surveillance system. In addition, the regional patterns, particularly the unexpectedly low prevalence rate in the SNNP Region, merit further investigation, including additional future surveys taking into account both information on regional differences in patterns of risk behaviour available in the 2005 EDHS and data from other sources.

HIV infection levels increase directly with education among both women and men and are markedly higher among those who have a secondary or higher education compared with those with less education. Employment (in the past 12 months) is also related to HIV levels among both women and men, with those who are employed being more likely than the unemployed to be infected. Particularly among men, those who were unemployed during the 12-month period prior to the survey are heavily concentrated in the younger age groups where HIV levels are quite low. This helps to explain why none of the men in this category were HIV positive.

Both women and men in the highest quintile of the wealth index have substantially higher rates of HIV infection than those in other wealth quintiles.

Table 14.4 HIV prevalence by socioeconomic characteristics

Percentage HIV positive among women and men age 15-49 who were tested, by socioeconomic characteristics, Ethiopia 2005

Background characteristic	Women		Men			
	Percentage HIV positive	Number	Percentage HIV positive	Number	Total	Number
Residence						
Urban	7.7	980	2.4	684	5.5	1,664
Rural	0.6	4,756	0.7	4,120	0.7	8,875
Region						
Tigray	2.6	387	1.6	274	2.1	661
Affar	3.3	61	2.4	46	2.9	107
Amhara	1.8	1,411	1.6	1,212	1.7	2,623
Oromiya	2.2	2,000	0.4	1,812	1.4	3,812
Somali	1.3	189	0.0	140	0.7	328
Benishangul-Gumuz	0.9	55	0.0	45	0.5	100
SNNP	0.1	1,290	0.4	1,010	0.2	2,300
Gambela	5.5	19	6.7	16	6.0	35
Harari	4.6	16	2.2	13	3.5	29
Addis Ababa	6.1	280	3.0	214	4.7	495
Dire Dawa	4.4	28	1.9	22	3.2	50
Education						
No education	1.0	3,745	0.8	1,920	0.9	5,665
Primary	2.5	1,349	0.5	1,912	1.3	3,260
Secondary and higher	5.5	642	2.0	972	3.4	1,614
Employment[1]						
Not currently working	1.5	3,423	0.0	609	1.3	4,032
Currently working	2.3	1,981	1.1	4,187	1.5	6,168
Wealth quintile						
Lowest	0.3	1,053	0.7	863	0.5	1,916
Second	1.0	1,108	0.3	949	0.7	2,057
Middle	0.4	1,107	0.9	898	0.6	2,006
Fourth	0.2	1,073	0.4	951	0.3	2,023
Highest	6.1	1,395	2.2	1,143	4.3	2,538
Total	1.9	5,736	0.9	4,804	1.4	10,540

Note:Total excludes numbers missing information on employment status and not shown separately.
[1] Employed at any time in the 12 months preceding the survey

14.2.3 HIV Prevalence by Other Sociodemographic Characteristics

Table 14.5 presents the relationships between HIV prevalence and a number of other sociodemographic variables. As expected, marital status is closely related to HIV prevalence. Women and men who are widowed, divorced, or separated have significantly higher rates than those who are married or living together. HIV rates are lowest for respondents who have never been in union. However, within the latter group, the small number of women who are sexually active but have never been in a marital union, have an HIV prevalence rate of 9 percent, higher than the levels found among widowed or divorced and separated women. Among never-married men who have ever had sex, the HIV rate approaches but is lower than the level among men who are currently married or living with a partner. Finally, a small proportion of individuals who say they have never had sex are HIV positive. This suggests either reporting errors in sexual behaviour or non-sexual transmission of HIV.

Considering the type of current union, HIV rates do not differ between those in a polygynous union and those who are not.

Table 14.5 looks at how HIV rates relate to two measures of male mobility. The results indicate that the number of times a man slept away from home is more closely associated with HIV prevalence than is the total amount of time that a man spent away. The HIV rate is 3 percent among men who slept away six or more times in the 12-month period prior to the survey compared with less than 1 percent among men who never slept away and men who slept away fewer than six times.

Table 14.5 HIV prevalence by demographic characteristics

Percentage HIV positive among women and men age 15-49 who were tested, by demographic characteristics, Ethiopia 2005

Demographic characteristic	Women		Men		Total	
	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Marital status						
Never married	0.7	1,449	0.3	2,084	0.5	3,532
Ever had sexual intercourse	9.3	92	1.0	330	2.8	422
Never had sexual intercourse	0.1	1,356	0.2	1,754	0.1	3,110
Married/living together	1.6	3,685	1.3	2,583	1.5	6,268
Divorced or separated	8.1	206	*	16	8.4	222
Widowed	5.6	396	1.9	121	4.7	517
Type of union						
In polygynous union	(1.5)	455	1.3	152	1.4	607
Not in polygynous union	1.5	3,194	1.3	2,431	1.4	5,624
Missing polygyny, don't know	(7.6)	36	na	0	(7.6)	36
Not currently in union	2.4	2,051	0.5	2,221	1.4	4,272
Times slept away from home in past 12 months						
0	na	na	0.8	3,389	na	na
1-2	na	na	0.9	821	na	na
3-5	na	na	0.4	332	na	na
6+	na	na	3.1	259	na	na
Time away in past 12 months						
More than 1 month	na	na	0.8	289	na	na
Less than 1 month	na	na	1.3	1,110	na	na
Never away	na	na	0.8	3,389	na	na
Missing	na	na	*	16	na	na
Currently pregnant						
Yes	1.1	480	na	na	na	na
Not pregnant/not sure	1.9	5,256	na	na	na	na
Antenatal care for births in past 3 years						
No birth	2.0	3,308	na	na	na	na
Birth and ANC by health professional	3.5	702	na	na	na	na
Birth and no ANC by health professional	1.0	1,726	na	na	na	na
Delivery care for births in past 3 years						
No birth	2.0	3,308	na	na	na	na
Birth and delivery care by health professional	9.9	143	na	na	na	na
Birth and no delivery care by health professional	1.2	2,285	na	na	na	na
Total	1.9	5,736	0.9	4,804	1.4	10,540

Note:Figures in parentheses are based on 25-49 unwei ghted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
na =Not applicable

HIV prevalence among women who are currently pregnant is 1 percent, roughly half the level found among nonpregnant women. This is a somewhat unexpected pattern since, as discussed in the introduction to this chapter, pregnant women are generally assumed to have a higher risk of HIV infection than nonpregnant women. It may be related to the fact that fertility is much lower among urban women than rural women and, thus, the currently pregnant population is likely to be disproportionately rural and, thus, less exposed to the risk of infection.

Finally, HIV rates are markedly higher among women who received antenatal care at a health facility and especially among the comparatively few women who received delivery care from a health professional for births that occurred in the three-year period prior to the survey (4 percent and 10 percent, respectively). Again these relationships are likely related to the fact that women who receive antenatal and delivery care are much more likely than other women to live in urban areas, be highly educated, and fall into the highest wealth quintile. All of these latter factors are associated with much higher than average risk of HIV infection.

14.2.4 HIV Prevalence by Sexual Risk Behaviour

Table 14.6 presents HIV prevalence rates by sexual behaviour indicators among respondents who have ever had sexual intercourse. In reviewing these results, it is important to remember that responses about sexual risk behaviours may be subject to reporting bias. Also, sexual behaviour in the 12 months preceding the survey may not adequately reflect lifetime sexual risk.

For women, there is a clear pattern of higher HIV prevalence with sexual debut at ages 16-19 while the age at which men initiated sex appears to be unrelated to their HIV status. The pattern among women is somewhat unexpected in view of the assumption that early sexual debut would be associated with a longer average period of sexual activity and thus, greater exposure to the transmission of the HIV virus. It may reflect the fact that individuals initiating sex at very young ages are concentrated in groups with lower HIV prevalence (e.g., they live in rural areas or are less educated).

EDHS respondents are considered to have had a higher-risk sexual encounter if they had intercourse with a nonmarital, noncohabiting partner. Table 14.6 shows that both women and men who had a higher-risk sexual partner in the 12-month period before the survey are more likely to be HIV-infected than those who were sexually active but did not have sex with a higher-risk partner. The differential is especially large for women, with the small number of women who report having a higher-risk sexual encounter being seven times as likely to be HIV positive as women who had sex but not with a higher-risk partner, and more than two times as likely to be HIV positive as women who did not have sex during the 12-month period. In turn, the comparatively high prevalence among the latter group of women is probably because many are widowed or divorced or separated women who, as was shown earlier, have much higher than average risk of HIV infection.

HIV risk is also assumed to increase with the number of lifetime sexual partners that an individual has. The results in Table 14.6 suggest that HIV risk does not rise directly with the number of sexual partners but that having a large number of partners (five or more for women and ten or more for men) is associated with significantly higher rates of HIV infection.

Table 14.6 HIV prevalence by sexual behaviour

Percentage HIV positive among women and men age 15-49 who ever had sexual intercourse and were tested, by sexual behaviour characteristics, Ethiopia 2005

Sexual behaviour characteristic	Women		Men		Total	
	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Age at first sexual intercourse						
15 or less	2.2	2,146	0.5	234	2.0	2,379
16-17	3.5	840	2.2	399	3.1	1,238
18-19	2.7	609	1.3	704	2.0	1,313
20+	2.2	542	1.3	1,661	1.5	2,202
Non-numeric	0.0	228	4.3	46	0.7	274
Higher-risk intercourse in past 12 months[1]						
Had higher risk sexual intercourse	12.3	106	1.8	218	5.2	324
Had sexual intercourse, not higher risk	1.6	3,618	1.3	2,557	1.5	6,175
No sexual intercourse in past 12 months	5.4	640	2.0	268	4.4	908
Number of sexual partners in past 12 months						
0	5.4	636	2.1	259	4.5	895
1	1.9	3,719	1.2	2,665	1.6	6,385
2	*	5	4.2	106	4.6	111
3+	*	1	*	7	*	8
Number of higher-risk partners[2] in past 12 months						
0	2.2	4,228	1.4	2,811	1.8	7,039
1	9.4	132	1.9	206	4.8	338
2+	*	2	(0.3)	19	5.7	21
Don't know/missing	*	2	*	6	*	9
Condom use						
Ever used condom	20.0	88	2.1	322	5.9	410
Never used condom	2.0	4,276	1.3	2,721	1.8	6,998
Condom use at last sexual intercourse in past 12 months						
Used condom	22.4	40	1.6	117	7.0	157
Did not use condom	1.7	3,681	1.3	2,659	1.5	6,340
Condom use at last higher-risk intercourse[1] in past 12 months						
Used condom	(30.8)	28	1.8	97	8.2	125
Did not use condom	5.8	79	1.7	121	3.3	199
Number of lifetime partners						
1	1.4	3,148	0.6	1,419	1.2	4,567
2	4.7	863	1.8	679	3.4	1,542
3-4	4.1	280	1.3	576	2.3	857
5-9	(10.5)	54	1.4	210	3.3	265
10+	*	4	6.1	134	7.1	137
Paid for sexual intercourse in past 12 months[3]						
Used condom	na	na	(1.6)	15	na	0
Did not use condom	na	na	(2.7)	28	na	0
No paid sexual intercourse	na	na	1.3	2,722	na	0
Total	2.4	4,364	1.4	3,043	2.0	7,407

Note:Total includes men women and men missin g information on whether paid for sexual intercourse in the past 12 months, not shown separately. 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] Sexual intercourse with a nonmarital, noncohabiting partner

[2] Nonmarital, noncohabiting partners among the last two partners for women and the last three partners for men in the past 12 months

[3] Includes men who report having a prostitute as at least one of their last three partners in the past 12 months

na = Not applicable

Table 14.6 examines the relationship between condom use (ever use and recent use). When used properly, condoms are an effective way of preventing the transmission of HIV and other STIs. Although this would suggest that HIV rates should be lower among condom users, there are a number of factors that may influence the direction of the relationship. For example, condom use rates may be higher among individuals who are infected because they are seeking to protect an uninfected partner. Also, reported condom use cannot be assumed to be "correct condom use." Thus, it is not surprising that the association between condom use and infection levels is not uniform in Table14.6. Among women, condom use is associated with markedly higher levels of HIV infection, while among men, it is associated with only slightly elevated risk of infection.

Finally, among men, the small number who said that they paid for sex in the 12 months preceding the survey have higher HIV prevalence than those who reported no paid sex.

In summary, the results presented in Table 14.6 do not demonstrate a consistent relationship between sexual risk behaviour and HIV prevalence. More detailed analysis is clearly necessary to understand these relationships because they are often confounded by factors such as age, residence, and educational status that are associated with both the behavioural measures and HIV prevalence.

14.2.5 HIV Prevalence by Other Characteristics Related to HIV Risk

Table 14.7 presents HIV prevalence by other characteristics related to HIV risk among women and men who have ever had sex. The table shows that women and men with a history of a sexually transmitted infection (STI) or STI symptoms have slightly higher rates of HIV infection than those with no history or symptoms.

Table 14.7 HIV prevalence by STI status and prior HIV testing status

Percentage HIV positive among women and men age 15-49 who have ever had sexual intercourse and were tested for HIV, by whether they had an STI in the past 12 months and by prior HIV testing status, Ethiopia 2005

	Women		Men		Total	
STI in past 12 months/ Prior HIV testing	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
STI in past 12 months						
Had STI or STI symptoms	3.4	96	2.2	41	3.0	137
No STI, no symptoms	2.4	4,196	1.4	2,984	2.0	7,181
Prior HIV testing						
Previously tested	7.1	196	2.2	97	5.5	293
Previously tested, received results of last test	7.5	179	2.2	95	5.7	273
Previously tested, did not receive results of last test	*	17	*	2	(2.4)	19
Not tested previously	2.2	3,870	1.5	2,668	1.9	6,538
Total	2.4	4,364	1.4	3,043	2.0	7,407

Note:Total includes numbers missing information on sexually transmitted infections in past 12 months and HIV testing status not shown separately. 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.

The table also shows that the small number of women and men who have been tested for HIV have higher rates of HIV infection than those who have never been tested. The differential is especially large among women; 7 percent of women who had been tested for HIV prior to the survey were HIV positive compared with 2 percent who had not been tested previously.

14.3 HIV Prevalence and Male Circumcision

Although studies have not always found a uniform relationship, lack of circumcision is considered a risk factor for HIV infection, in part because of physiological differences that increase the susceptibility to HIV infection among uncircumcised men. The 2005 EDHS obtained information on male circumcision status, and these results can be used to examine the relationship between HIV prevalence and male circumcision status. Table 14.8 shows that the relationship between male circumcision and HIV levels in Ethiopia conforms to the expected pattern of higher rates among uncircumcised men than circumcised men (0.9 percent and 1.1 percent, respectively). However, the difference in HIV prevalence is very small and not significant.

Table 14.8 HIV prevalence by male circumcision

Among men age 15-59 who were tested for HIV, percentage HIV positive by whether circumcised and background characteristics, Ethiopia 2005

Background characteristic	Circumcised		Uncircumcised	
	Percentage HIV positive	Number	Percentage HIV positive	Number
Age				
15-19	0.0	1,015	0.9	159
20-24	0.4	862	0.1	67
25-29	0.7	599	1.3	41
30-34	2.0	625	(0.5)	39
35-39	1.6	537	(4.6)	45
40-44	2.9	429	*	9
45-49	0.0	353	(0.0)	23
50-54	0.9	284	*	9
55-59	0.4	196	*	12
Residence				
Urban	2.4	713	(10.7)	20
Rural	0.6	4,187	0.6	386
Region				
Tigray	2.0	312	*	6
Affar	2.2	50	*	0
Amhara	1.5	1,332	*	38
Oromiya	0.3	1,845	1.7	125
Somali	0.0	158	*	2
Benishangul-Gumuz	0.0	47	*	1
SNNP	0.3	879	0.7	219
Gambela	2.3	8	9.8	9
Harari	2.1	13	*	0
Addis Ababa	3.4	231	*	4
Dire Dawa	1.7	24	*	0
Education				
No education	0.8	2,129	0.9	165
Primary	0.6	1,816	0.2	197
Secondary and higher	1.9	955	6.0	43
Wealth quintile				
Lowest	0.7	858	0.2	110
Second	0.3	965	0.2	97
Middle	0.7	911	2.2	80
Fourth	0.4	981	0.2	72
Highest	2.1	1,184	(4.5)	47
Total	0.9	4,900	1.1	406

Note:Figures in parentheses are ba sed on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

14.4 HIV Prevalence among Couples

Over 2,674 cohabiting couples were tested for HIV in the 2005 EDHS. Results shown in Table 14.9 indicate that, for 98 percent of cohabiting couples, both partners tested negative for HIV. The majority of the remaining couples (1.8 percent out of a total of 2.1 percent) are discordant, that is, one partner is infected and the other is not. There is clearly an unmet need for VCT services oriented towards couples, because most of these couples do not mutually know their HIV status.

Table 14.9 HIV prevalence among couples

Among cohabiting couples both of whom were tested, percent distribution by HIV test results, according to background characteristics, Ethiopia 2005

Background characteristic	Both partners HIV positive	Male partner positive, female negative	Female partner positive, male partner negative	Both partners HIV negative	Total	Number
Woman's age						
15-19	0.0	0.4	1.1	98.5	100.0	235
20-29	0.1	1.2	0.9	97.9	100.0	1,151
30-39	0.6	0.3	1.2	97.9	100.0	838
40-49	0.5	1.0	0.9	97.6	100.0	450
Man's age						
15-19	*	*	*	*	*	18
20-29	0.1	0.3	1.5	98.1	100.0	555
30-39	0.5	1.2	0.9	97.3	100.0	1,029
40-49	0.3	0.5	0.9	98.2	100.0	699
50-59	0.0	0.8	0.8	98.4	100.0	373
Age difference between partners						
Man older by 15+ years	0.3	0.8	1.0	97.9	100.0	2,674
Marital status						
Married	0.3	0.8	0.9	98.0	100.0	2,640
Living together	(0.1)	(1.0)	(8.0)	(90.9)	(100.0)	34
Type of union						
Monogamous	0.3	0.9	0.9	97.9	100.0	2,463
Polygynous	0.0	0.0	1.2	98.8	100.0	195
Residence						
Urban	3.1	2.2	5.6	89.1	100.0	202
Rural	0.1	0.7	0.6	98.6	100.0	2,472
Region						
Tigray	0.0	3.3	1.6	95.1	100.0	155
Affar	3.8	0.0	0.0	96.2	100.0	26
Amhara	0.2	1.4	0.7	97.6	100.0	730
Oromiya	0.4	0.2	1.5	97.9	100.0	995
Somali	0.0	0.0	1.3	98.7	100.0	76
Benishangul-Gumuz	0.0	0.0	0.0	100.0	100.0	27
SNNP	0.0	0.2	0.1	99.6	100.0	595
Gambela	2.6	3.1	5.6	88.7	100.0	8
Harari	0.8	1.8	1.6	95.8	100.0	5
Addis Ababa	2.7	3.7	3.7	89.9	100.0	51
Dire Dawa	0.0	0.0	1.6	98.4	100.0	6
Woman's education						
No education	0.1	0.8	0.5	98.6	100.0	2,068
Primary	0.6	0.8	1.8	96.9	100.0	487
Secondary and higher	3.5	0.4	6.8	89.3	100.0	119
Man's education						
No education	0.0	0.8	0.4	98.8	100.0	1,487
Primary	0.0	0.5	1.0	98.5	100.0	898
Secondary and higher	2.6	1.8	4.3	91.2	100.0	289
Wealth quintile						
Lowest	0.0	1.1	0.0	98.9	100.0	502
Second	0.0	0.0	1.2	98.8	100.0	594
Middle	0.1	0.7	0.6	98.6	100.0	608
Fourth	0.0	0.3	0.0	99.6	100.0	530
Highest	1.7	2.2	3.6	92.6	100.0	440
Total	0.3	0.8	1.0	97.9	100.0	2,674

Note:Total includes number missing information on type of union not shown separately. 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.

14.5 EDHS AND ANC SURVEILLANCE RESULTS

As noted above, prior to the 2005 EDHS, national prevalence estimates for the general adult population in Ethiopia were derived from information obtained through the national ANC surveillance system. The most recent round of ANC surveillance conducted in 2005 included 79 sites in government health facilities from all 11 regions of the country.

While the rate of HIV infection in pregnant women has been shown to be a reasonable proxy for the level in the combined male and female adult population in a number of settings (WHO and UNAIDS, 2000), there are several limitations in estimating the HIV rate in the general adult population from data derived exclusively from pregnant women attending antenatal clinics. First, it is recognized that ANC data may overstate the risk of HIV infection in the general population for several reasons. Most obviously is the fact that the rates among pregnant women are not a good proxy for male HIV rates, which are typically lower than the rates for women. In addition, ANC data do not reflect HIV prevalence levels in non-pregnant women, many of whom are at lower risk of HIV infection either because they are not sexually active or because they use condoms to prevent pregnancy or to avoid sexually transmitted infections including HIV. The ANC results also do not represent women who either do not attend a clinic for pregnancy care or receive antenatal care at facilities not represented in the surveillance system. These women tend to be concentrated in more rural localities and, thus, are likely to be at lower risk of HIV infection. Although most of the potential biases in ANC surveillance are related to lower risks of infection, ANC data also potentially exclude some women who have contracted HIV because HIV infection reduces fertility and because knowledge of HIV status may influence fertility choices among infected women.

Table 14.10 compares HIV prevalence results from the 2005 EDHS with estimates derived from the 2005 round of ANC surveillance. The national estimate based on the ANC surveillance results is 3.5 percent. This compares to the level of 1.4 percent found in the EDHS. Additional analysis will be needed to understand both the differences and similarities between the ANC and DHS results. However, initial comparisons of the EDHS and ANC findings suggest that the differences are owed principally to: (1) the relatively limited coverage of antenatal care services in Ethiopia and (2) differences in geographic coverage of the EDHS and the ANC surveillance systems.

With respect to the first point, the EDHS results suggest that only around one in four pregnant women in Ethiopia goes for antenatal care, with coverage levels much higher among urban than rural women (see Chapter 9). Thus, at least part of the difference between the ANC-based HIV rate and the EDHS figure may rest in the selective nature of the population attending antenatal care. Some confirmation for this hypothesis is seen in Figure 14.2. The first two bars in the figure show the HIV rates for two groups of EDHS respondents: (1) respondents who gave birth during the three-year period before the survey *and* received antenatal care and (2) EDHS respondents who either gave birth but did not receive antenatal care during pregnancy or did not give birth (see also Table 14.5). The HIV rate for the EDHS respondents is identical to that found in the 2005 ANC surveillance round (3.5 percent) and higher than the rate observed among EDHS respondents who were not ANC clients or did not give birth (1.6 percent).

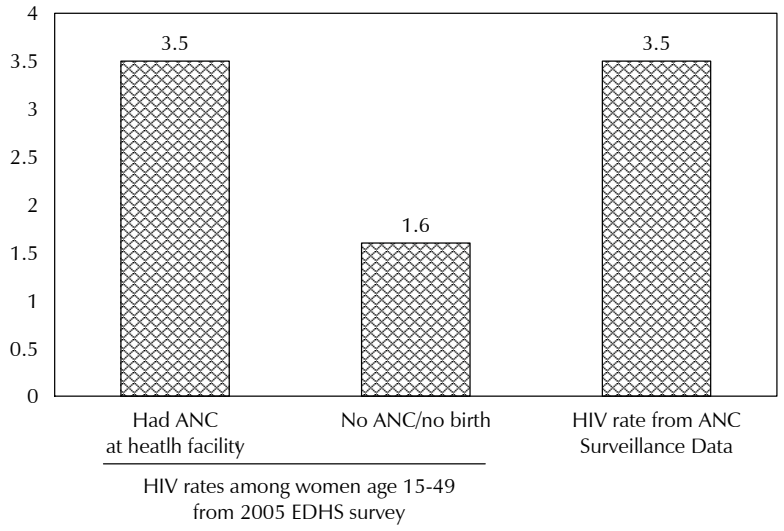
Table 14.10 HIV prevalence results from the EDHS and the National Antenatal Care Surveillance System

Percentage HIV positive among the adult population age 15-49 reported in the 2005 EDHS and estimated in the 2005 round of the national antenatal care

	2005 EDHS			2005 ANC Round		
Region	HIV prevalence	Number of sample points	Unweighted number of adults tested	HIV prevalence	Number of sites	Number of pregnant women tested
Tigray	2.1	50	1,038	4.2	9	3,111
Affar	2.9	35	528	3.1	2	763
Amhara	1.7	80	1,636	4.5	17	6,961
Oromiya	1.4	83	1,924	2.4	20	7,185
Somali	0.7	34	451	1.2	2	607
Benishangul-Gumuz	0.5	30	721	2.8	5	1,615
SNNP	0.2	84	1,819	2.3	12	4,119
Gambela	6.0	29	638	4.0	2	506
Harari	3.5	30	625	5.2	2	569
Addis Ababa	4.7	50	1,192	11.7	3	1,939
Dire Dawa	3.2	30	478	6.8	5	872
Total	1.4	534	11,050	3.5	79	28.247

Note:ANC estimates are from the national HIV/AIDS Prevention and Control Office (HAPCO) HIV/AIDS/STIs Monitoring and Evaluation Unit.

Figure 14.2 HIV Prevalence among EDHS Respondents by Antenatal Care Status and HIV Rate from ANC Surveillance Data



[1] Women giving birth in the three-year period before the survey

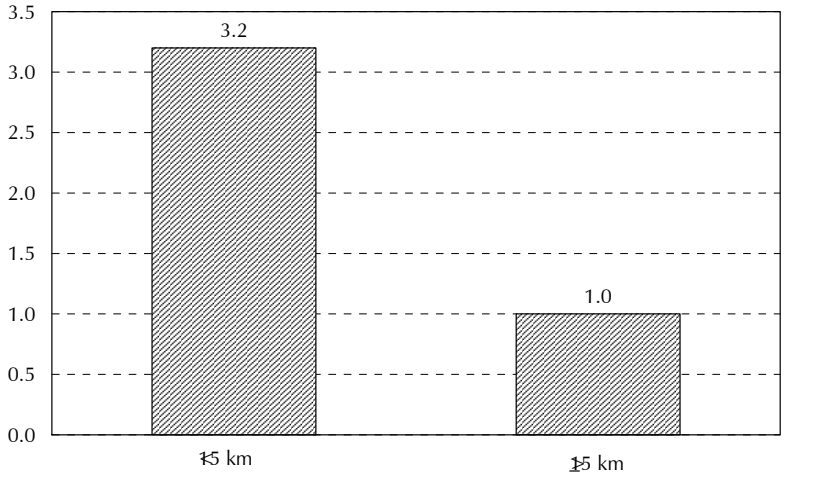
EDHS 2005

Differences in geographic coverage between the 2005 EDHS survey and the ANC surveillance system are another important factor in explaining the differences in HIV estimates derived from the two data sources. Figure 14.3 shows the location of both the health facilities included in the ANC surveillance system and the census enumeration areas from which the 2005 EDHS sample was drawn.[2] The map shows that the facilities included in the ANC surveillance system are mainly clustered in or near urban areas and along the main transport corridors in Ethiopia (well-known routes along which the HIV virus is transmitted) while the EDHS clusters are more geographically dispersed. Confirmation that the geographic concentration of ANC surveillance sites in high transmission areas is responsible for a large part of the difference between the EDHS HIV rate and the HIV rate derived from ANC surveillance results is seen in Figure 14.4. EDHS respondents living within 15 kilometres of the ANC surveillance sites have markedly higher HIV levels than populations living 15 kilometres or more from the sites. The HIV rate for the adult population living within 15 kilometres is also similar to that observed in the ANC results. This confirms that the ANC results are a reasonable proxy for adult prevalence, once they are adjusted for geographic coverage issues, and lends confidence to the use of the ANC results in assessing trends in the course of the AIDS epidemic. Population-based surveys like the EDHS are not conducted at frequent enough intervals to effectively monitor trends.

This initial review indicates that the EDHS seroprevalence results are comparable at the national level with the ANC-based HIV data once differences in the geographic and population coverage between the two surveys are addressed. However, there are a number of questions that the comparisons of the EDHS and ANC data raise that will require additional analysis. In particular, there are questions regarding differences in regional patterns. For example, in Gambela the EDHS found higher prevalence than would be expected in view of the ANC findings. The very low prevalence rate in SNNP also deserves additional consideration.

[2] The map was created using GIS coordinates for the ANC surveillance sites and for the EDHS clusters.

Figure 14.4 **HIV Prevalence by Distance from 2005 ANC Sentinel Sites, EDHS Respondents Age 15-49**



EDHS 2005

14.6 EFFECT OF NONRESPONSE ON THE EDHS HIV PREVALENCE RESULTS

As was seen earlier in this chapter, not all eligible EDHS respondents participated in the HIV testing component. The potential for bias associated with this nonparticipation is a concern since respondents who refused to be tested or were absent at the time of testing may bias the results in ways that are different in their characteristics or behaviour from those who consented to provide a blood sample To address these concerns, it has become standard procedure in DHS surveys with an HIV testing component to conduct an analysis of those who are not tested in order to look for potential biases.

Table 14.11 summarizes the results of the nonresponse analysis that was conducted for the 2005 EDHS. The table shows the observed HIV rates for women, men, and the total sample and the rates for these groups following an adjustment for nonresponse. Overall, the adjustment for nonresponse raises the HIV prevalence by about 0.2 percentage points above the observed level (from 1.4 percent to 1.6 percent). For women, the adjusted prevalence is 2.1 percent compared with the observed level of 1.9 percent. For men, the effect of the adjustment is slightly smaller, adding about 0.1 percentage points to the observed rate of 0.9 percent. The differences between the observed and adjusted rates were not found to be statistically significant. Additional details regarding the non-response analysis are found in Appendix A.

Table 14.11 Observed and adjusted HIV prevalence among women and men

Percentage HIV positive among women and men age 15-49 who were tested for HIV, by observed and adjusted prevalence and 95% confidence intervals, Ethiopia 2005

	Observed HIV prevalence			Adjusted HIV prevalence		
	Prevalence	95% confidence interval		Prevalence	95% confidence interval	
Sex	(%)	(%-2SE)	(%+2SE)	(%)	(%-2SE)	(%+2SE)
Women	1.86	1.52	2.21	2.06	1.77	2.37
Men	0.94	0.66	1.22	1.01	0.79	1.24
Total	1.44	1.214	1.67	1.57	1.38	1.76

Table 14.12 compares observed and adjusted HIV prevalence for women and men according to various respondent and household characteristics. For the most part, the differences between the observed and adjusted figures are relatively small.

Table 14.12 Observed and adjusted HIV prevalence among women and men by background characteristics

Percentage HIV positive among women and mean age 15-49 who were tested for HIV, by observed and adjusted prevalence and background characteristics, Ethiopia 2005

Background characteristic	Women		Men		Total	
	Observed	Adjusted	Observed	Adjusted	Observed	Adjusted
Age						
15-19	0.7	0.7	0.1	0.1	0.4	0.4
20-24	1.7	1.9	0.4	0.4	1.1	1.2
25-29	2.1	2.4	0.7	0.8	1.6	1.7
30-34	1.5	1.6	1.9	2.2	1.7	1.8
35-39	4.4	5.1	1.8	2.2	3.2	3.7
40-44	3.1	3.1	2.8	2.9	3.0	3.0
45-49	0.8	1.1	0.0	0.0	0.5	0.6
Residence						
Urban	7.7	7.9	2.4	2.6	5.5	5.6
Rural	0.7	0.7	0.7	0.7	0.7	0.7
Region						
Tigray	2.6	2.9	1.6	1.6	2.1	2.4
Afar/Somali	1.8	2.0	0.6	0.6	1.3	1.3
Amhara	1.8	2.0	1.6	1.7	1.7	1.8
Oromiya	2.2	2.4	0.4	0.4	1.4	1.5
SNNP	0.1	0.1	0.4	0.4	0.2	0.2
Gambela/ Benishangul-Gumuz	2.1	2.4	1.8	1.9	1.9	2.1
Harari	4.6	4.5	2.2	2.3	3.5	3.6
Addis Ababa	6.1	6.2	3.0	3.6	4.7	5.0
Dire Dawa	4.4	4.5	1.9	1.9	3.2	3.4
Education						
No education	1.0	1.1	0.8	0.7	0.9	1.0
Primary	2.5	2.7	0.5	0.5	1.3	1.4
Secondary and higher	5.5	5.9	2.0	2.3	3.4	3.8
Wealth quintile						
Lowest	0.3	0.3	0.7	0.6	0.5	0.5
Second	1.0	1.0	0.3	0.3	0.7	0.7
Middle	0.4	0.4	0.9	0.8	0.6	0.6
Fourth	0.2	0.2	0.4	0.4	0.3	0.3
Highest	6.1	6.4	2.2	2.3	4.3	4.5
Total	1.9	2.1	0.9	1.0	1.4	1.6

Minimizing nonresponse is a major challenge to all population-based surveys. The main reasons are refusal and absence. The analysis of nonresponse in Ethiopia is consistent with results from other DHS countries with linked HIV data (Kenya, Ghana, Burkina Faso, Tanzania, Cameroon, Malawi, and Lesotho) and indicates that nonresponse does not bias the national HIV estimates from population-based surveys significantly (Mishra et al., 2006a, draft manuscript). The overall effect of nonresponse on the observed national HIV prevalence estimates tends to be small.

It is important to recognize that the adjustments only partially address the nonresponse bias. The estimates can only be adjusted to the extent that the sociodemographic and behavioural characteristics included in the analysis are correlated with the risk of HIV infection in each country. Another limitation is that the adjustments for the "not-interviewed, not-tested" respondents (mostly absentees) are based on somewhat limited information although variables strongly associated with HIV infection such as age, residence, education, and wealth are included.

ADULT AND MATERNAL MORTALITY 15

Since the launch of the Safe Motherhood Initiative in 1987, attention to reproductive health has increased worldwide, as has the need for reliable countrywide estimates of maternal deaths. In response to this increased interest, DHS surveys began collecting maternal mortality data through a series of questions designed to obtain a direct measure of maternal mortality. These questions were included in the 2005 EDHS, the second time such information was collected in Ethiopia, the first time was in the 2000 EDHS. In addition to information on maternal mortality, data gathered from the maternal mortality module also allow for the estimation of adult mortality.

Maternal mortality estimates need a comprehensive and accurate reporting of maternal deaths. Such estimates can be obtained through vital registration, longitudinal studies of pregnant women, and household surveys. However, there is no vital registration system in Ethiopia, nor has there been any national household survey carried out for the sole purpose of estimating maternal mortality. For these reasons questions on maternal mortality were added to the 2000 EDHS and later to the 2005 EDHS. The estimates presented in this chapter will play a vital role in filling the need for a reliable national estimate of maternal mortality. Nevertheless, it is important for users of this information to understand the inherent problems associated with measuring maternal mortality to avoid misinterpretation of the survey results.

Direct estimates of maternal mortality use data on the age of surviving sisters of survey respondents, the age at death of sisters who have died, and the number of years since the death of sisters. Interviewers in the 2005 EDHS were asked to list all the brothers and sisters born to the natural mother of female respondents in chronological order starting with the first. Information was then obtained on the survivorship of each of the siblings, the ages of surviving siblings, the year of death or years since death of deceased siblings, and the age at death of deceased siblings. For each sister who died at age 12 or over, the respondent was asked additional questions to determine whether the death was maternity related; that is, whether the sister was pregnant when she died, and if not, whether the sister died during childbirth, and if not, whether the sister died within two months of the termination of a pregnancy or childbirth. Listing all siblings in chronological order of their birth is believed to result in better reporting of events than would be the case if only information on sisters were sought. Moreover, the information collected also allows direct estimates of adult male and female mortality.

15.1 DATA QUALITY ISSUES

A brief discussion of data quality is warranted here. This discussion refers to tables in Appendix C. One measure of the quality of the data collected is the completeness of information on siblings. Overall, the data on siblings are nearly complete, with only 2 percent of siblings missing information on age at death and years since death, with little difference between brothers and sisters (Table C.7). Rather than exclude siblings with missing information from the analysis, the information on the birth order of siblings in conjunction with other information is used to impute the missing data.[1]

The distribution of year of birth of respondents in relation to their siblings is another crude measure of the quality of data. If there is no bias in reporting, the year of birth of siblings should be

[1] The imputation procedure is based on the assumption that the reported birth order of the siblings in the birth history is correct. The first step is to calculate birth dates. For each living sibling with a reported age and for each dead sibling with complete information on both age at death and year of death, the birth date is calculated. For a sibling missing these data, a birth date is imputed within the range defined by the birth dates of the bracketing siblings. In the case of living siblings, an age is calculated from the imputed birth date. In the case of dead siblings, if either age at death or year of death is reported, that information is combined with the birth date to produce missing information. If both pieces of information are missing, the age at death is imputed. This imputation is based on the distribution of the ages at death for those whose year of death is unreported, but age at death is reported.

roughly equivalent to the year of birth of respondents overall. The distribution of respondents and their siblings by year of birth is close, with the median year of birth of respondents identical to that of siblings (1971 for both), indicating that there is no serious underreporting of siblings (Table C.8).

Yet another crude measure of data quality is the mean number of siblings, or the mean sibship size (Table C.9). Sibship size is expected to decline as fertility declines over time. The absence of a monotonic decline in sibship size, even though fertility has declined in Ethiopia, is an indication that there may be some omission in the reporting of older siblings. However, since adult mortality rates are reported here for the seven years preceding the survey, this omission is unlikely to affect the calculation of mortality rates. Moreover, if the omission occurred mostly among sisters who did not survive to adulthood (which is most likely the case), it may not even bias the estimation of maternal mortality. This is also confirmed by the sex ratios that are larger than the internationally accepted sex ratio of 103-105, indicating that either sisters are underreported or brothers are overreported. Nevertheless, it should be borne in mind that any information that relies on recall of events will suffer from some degree of misreporting, especially if it pertains to deceased persons and occurred a long time before the survey.

15.2 Adult Mortality

It is advisable to begin by estimating overall adult mortality. If the overall mortality estimates display a general, stable, and plausible pattern, it lends credence to the maternal mortality estimates derived thereafter. This is simply because maternal mortality is a subset of adult mortality.

Direct estimates of male and female adult mortality are obtained from information collected in the sibling history. Age-specific death rates are computed by dividing the number of deaths in each age group by the total person-months of exposure in that age group during a specified reference period. In total, female respondents to the Ethiopia DHS survey reported 80,530 siblings, of whom 38,392 were sisters and 42,138 were brothers (Table C.7). Direct estimates of age-specific mortality rates for females and males are shown in Table 15.1. To minimize the impact of possible heaping on years since death ending in zero and five, direct estimates are presented for the period 0-6 years before the survey, which roughly corresponds to 1998-2004. Although the number of sibling deaths is relatively high, because of the large sampling variability, it is preferable to aggregate the data over the age range 15-49. There are more female than male deaths in the seven years preceding the survey (925 compared with 903). The female mortality rate is 6.4 deaths per 1,000 population and is 8 percent higher than the male mortality rate of 5.9 deaths per 1,000 population. The trend in adult mortality can be gauged by comparing similarly collected data from the 2000 EDHS with data from the 2005 EDHS. The data show that adult mortality has declined over the past five years with the decline in male mortality much more significant than the decline in female mortality. Male mortality declined by 26 percent while female mortality declined by just 4 percent over the past five years.

Table 15.1 Adult mortality rates

Direct estimates of female and male mortality for the period 0-6 years prior to the survey, Ethiopia 2005

Age	Deaths	Exposure years	Mortality rates[1]
FEMALE			
15-19	125	32,168	3.89
20-24	172	32,171	5.33
25-29	183	28,305	6.46
30-34	184	22,881	8.03
35-39	132	16,170	8.15
40-44	73	9,742	7.54
45-49	57	5,997	9.52
15-49	925	147,433	6.39[a]
MALE			
15-19	135	33,999	3.96
20-24	164	35,574	4.61
25-29	170	30,503	5.58
30-34	167	23,459	7.10
35-39	116	16,852	6.90
40-44	84	10,527	8.01
45-49	67	6,699	10.07
15-49	903	157,613	5.94[a]

[1] Expressed per 1,000 population
[a] Age-adjusted rate

15.3 Maternal Mortality

Information on maternal mortality for the period 0-6 years before the survey is shown in Table 15.2. As previously mentioned, this period was chosen to reduce any possible heaping of reported

years since death on five-year intervals. Age-specific mortality rates are calculated by dividing the number of maternal deaths by years of exposure. To remove the effect of truncation bias (the upper boundary for eligibility in the Ethiopia DHS survey is 49 years), the overall rate for women age 15-49 is standardized by the age distribution of the survey respondents. Maternal deaths are defined as any death that occurred during pregnancy, childbirth, or within two months after the birth or termination of a pregnancy.[2] Maternal mortality in Ethiopia is high relative to developed countries. However, for each age group, maternal deaths are a relatively rare occurrence. As such, the age-specific pattern should be interpreted with caution. There were 197 maternal deaths in the seven years preceding the survey. The maternal mortality rate, which is the annual number of maternal deaths per 1,000 women age 15-49, for the period 1994-2000 is 1.34. Maternal deaths accounted for 21 percent of all deaths to women age 15-49; in other words, more than one in five Ethiopian women who died in the seven years preceding the survey died from pregnancy or pregnancy-related causes.

The maternal mortality ratio, which is obtained by dividing the age-standardized maternal mortality rate by the age-standardized general fertility rate, is often considered a more useful measure of maternal mortality since it measures the obstetric risk associated with each live birth. Table 15.2 shows that the maternal mortality ratio for Ethiopia for the period 1998-2004 is 673 deaths per 100,000 live births (or alternatively 7 deaths per 1,000 live births). Similarly collected data from the 2000 EDHS show the maternal mortality ratio for Ethiopia for the period 1994-2000 to be 871 deaths per 100,000 live births or 9 deaths per 1,000 live births. Although it appears that maternal mortality may be declining in Ethiopia, the rates are both subject to a high degree of sampling error. Because 95 percent confidence intervals around the two estimates overlap, it is not possible to conclude that there has been a decline.[3]

Table 15.2 Direct estimates of maternal mortality

Direct estimates of maternal mortality for the period 0-6 years prior to the survey, Ethiopia 2000

Age	Maternal deaths	Exposure years	Mortality rates[1]	Proportion of maternal deaths to female deaths
15-19	15	32,168	0.470	12.1
20-24	44	32,171	1.353	25.4
25-29	53	28,305	1.870	29.0
30-34	45	22,881	1.960	24.4
35-39	35	16,170	2.170	26.6
40-44	4	9,742	0.433	5.7
45-49	1	5,997	0.202	2.1
Total	197	147,433	1.336[a]	21.3
General fertility rate (GFR)			0.193[a]	
Maternal mortality ratio (MMR)[2]			673	

[1] Expressed per 1,000 woman-years of exposure
[2] Expressed per 100,000 live births; calculated as the maternal mortality rate divided by the general fertility rate
[a] Age-adjusted rate

[2] This time-specific definition includes all deaths that occurred during the specified period even if the death is due to nonpregnancy-related causes. However, this definition is unlikely to result in overreporting of maternal deaths because most deaths to women in the specified period are due to maternal causes, and maternal deaths in general are more likely to be underreported than overreported.

[3] The maternal mortality ratio obtained from the 2000 EDHS is 871 deaths per 100,000 live births. The true ratio of the 95 percent confidence intervals ranges between 703 and 1,039. The true MMR for 2005 ranges from 548 and 799.

WOMEN'S EMPOWERMENT AND DEMOGRAPHIC AND HEALTH OUTCOME 16

Earlier discussions in this report have shown that Ethiopian women are less educated than men and have a lower level of literacy and exposure to mass media than their male counterparts. In addition, the EDHS data have shown that women are predominantly engaged in agricultural occupations, have little manual skills, and are less likely than men to be engaged in the professional, technical and managerial fields. Educational attainment, literacy, exposure to mass media, and employment are critical contributors to women's empowerment and exert considerable influence on the development of their personality and on solidifying their position in the household and in society in general.

In this chapter we explore women's empowerment in terms of type of earnings, women's control over cash earnings, and the magnitude of their earnings relative to their partner's. In addition, specific questions were posed to determine women's role in household decisionmaking, on acceptance of wife beating, and on opinions about when a wife should be able to refuse sex with her husband. These questions are used to define three different indicators of women's empowerment, namely women's participation in decisionmaking, the degree of acceptance of wife beating, and the degree of acceptance of a wife's right to refuse sex with her husband. The extent to which women's empowerment influences maternal and child health and contraceptive decisionmaking is also examined. Finally, this chapter discusses the proportion of women who have ever been widowed and dispossessed of property belonging to their late husband.

Additional insight into women's empowerment in Ethiopia comes from information collected with a series of questions on harmful traditional practices, namely female genital cutting, the practice of uvulectomy or tonsillectomy, and marriage by abduction. The survey also collected information on the prevalence of obstetric fistula, a condition that may develop following childbirth, and which causes women to be socially ostracized.

16.1 EMPLOYMENT AND FORM OF EARNINGS

Table 16.1 shows the percent distribution of currently married women who were employed in the 12 months preceding the survey by type of earnings they received (cash, in-kind, or both). Employment is assumed to go hand in hand with payment for work. Not all women receive earnings for the work they do, and among women those who do receive earnings not all receive earnings in cash.

Table 16.1 Employment and cash earnings of currently married women

Percentage of currently married women who were employed at any time in the last 12 months and the percent distribution of currently married women employed in the past 12 months by type of earnings, according to age, Ethiopia 2005

	Currently married women		Percent distribution of currently married women employed in past 12 months by type of earnings						
Age	Percentage employed	Number of women	Cash only	Cash and in-kind	In-kind only	Not paid	Missing/ don't know	Total	Number of women
15-19	24.0	711	12.9	5.0	16.6	65.5	0.0	100.0	171
20-24	29.8	1,574	24.6	4.0	9.6	61.3	0.6	100.0	468
25-29	31.9	2,066	30.5	2.6	7.4	59.4	0.1	100.0	659
30-34	31.8	1,551	32.2	2.4	8.9	56.1	0.4	100.0	493
35-39	31.9	1,343	25.2	3.0	11.9	59.8	0.0	100.0	428
40-44	36.3	960	25.3	3.6	12.6	57.8	0.7	100.0	348
45-49	33.2	862	22.4	4.7	11.6	61.2	0.0	100.0	286
Total	31.5	9,066	26.5	3.4	10.3	59.5	0.3	100.0	2,854

Thirty-two percent of currently married women reported being employed. Slightly more than one-fourth (27 percent) of employed women receive payment in cash only and 3 percent receive both cash and payment in-kind. Ten percent receive payment in-kind alone. Three in five employed women do not receive any form of payment for their work. The percentage of currently married women who were employed increases with age up to age 44 and then declines slightly for the oldest age group.

16.2 Control Over and Relative Magnitude of Women's Earnings

As a means of assessing women's autonomy, currently married women who earned cash for their work in the 12 months preceding the survey were asked who the main decisionmaker is with regard to the use of their earnings. This information allows the assessment of women's control over their own earnings. It is expected that employment and earnings are more likely to empower women if women themselves control their own earnings and perceive them as significant relative to those of their husband or partner. Women who earned cash for their work were asked the relative magnitude of their earnings compared with those of their husband or partner.

Table 16.2 shows the degree of control women have over the use of their earnings, and their perception of the magnitude of their earnings relative to those of their husband or partner by background characteristics. Almost two-fifths of currently married women who receive cash earnings report that they alone decide how their earnings are used, while more than half of currently married women say that they decide jointly with their husband or partner. Only 5 percent of women report that their husband or partner alone decides how their earnings will be used. The proportion of currently married women who say that they decide by themselves how their earnings are used declined from 62 percent in 2000 to 39 percent in 2005. On the other hand, the percentage of currently married women who say that they jointly decide with their husband or partner, increased from 32 percent to 51 percent over the same period.

Younger women age 15-19 and older women age 45-49 are somewhat more likely to make independent decisions on their earnings than women in the middle age groups. Women with five or more children are more likely to decide on their own how to use their earnings than women with fewer children or no children at all. Sixty percent of currently married women with one or two children make joint decisions with their husbands or partners.

Rural women are more independent in making their own decisions than urban women (41 and 35 percent, respectively). On the other hand, urban women are more likely than rural women to report that they make decisions about how the money they earn will be used jointly with their husband or partner.

There are regional variations in the way decisions are made on how women's earnings are used. The percentage of women who make independent decisions on their earnings ranges from 64 percent in the Somali Region to about 19 percent in Affar and Benishangul-Gumuz. Among the regions, women in Amhara (69 percent) are most likely to decide jointly with their husband or partner on how to spend the money they earn.

More than two-thirds of women with a secondary or higher education say that they decide jointly with their husband or partner. Surprisingly, women with no education are more likely than those who have at least secondary education to decide on their own how to use the money they earn.

Table 16.2 Control over women's earnings and relative magnitude of women's earnings

Percent distribution of currently married women who received cash earnings for employment in the 12 months preceding the survey by person who decides how earnings are to be used and by whether she earned more or less than her husband/partner, according to background characteristics, Ethiopia 2005

	Person who decides how woman's earnings are used						Woman's earnings compared with husband/partner's earnings						
Background characteristic	Respondent only	Respondent and husband/partner jointly	Husband/partner only	Other	Missing	Total	More	Less	Same	Husband/partner has no earnings	Don't know/missing	Total	Number of women
Age													
15-19	46.9	32.5	11.9	0.2	8.5	100.0	9.5	58.4	19.5	1.4	11.2	100.0	31
20-24	40.3	51.3	5.4	0.0	3.1	100.0	7.8	69.5	14.7	4.3	3.7	100.0	134
25-29	27.7	60.3	6.2	0.0	5.8	100.0	14.5	68.0	9.8	0.9	6.8	100.0	218
30-34	37.7	52.3	4.2	0.0	5.9	100.0	11.4	69.3	10.7	2.4	6.2	100.0	171
35-39	37.2	53.0	4.7	0.0	5.1	100.0	15.2	51.4	20.2	7.3	5.8	100.0	121
40-44	50.8	41.4	2.4	0.0	5.5	100.0	17.4	57.4	13.1	6.0	6.1	100.0	101
45-49	55.7	39.4	4.9	0.0	0.0	100.0	12.9	63.5	16.0	7.1	0.5	100.0	78
Number of living children													
0	43.1	46.1	7.0	0.0	3.8	100.0	6.2	66.3	20.7	0.4	6.4	100.0	88
1-2	30.7	60.2	3.7	0.0	5.4	100.0	12.6	62.6	15.3	3.3	6.1	100.0	282
3-4	35.7	50.7	7.3	0.0	6.3	100.0	12.8	68.2	8.0	4.3	6.7	100.0	265
5+	52.0	41.9	3.4	0.0	2.7	100.0	16.3	60.4	15.0	5.3	3.1	100.0	217
Residence													
Urban	35.1	57.8	1.6	0.0	5.4	100.0	15.8	64.4	8.8	4.8	6.2	100.0	326
Rural	41.3	47.0	7.2	0.0	4.4	100.0	11.2	64.0	16.5	3.2	5.1	100.0	528
Region													
Tigray	26.5	47.6	5.0	0.0	20.9	100.0	2.4	38.8	33.9	1.8	23.0	100.0	94
Affar	(19.2)	(31.8)	(42.0)	(0.0)	(7.0)	100.0	(8.6)	(50.9)	(33.5)	(0.0)	(7.0)	100.0	5
Amhara	23.6	68.5	2.8	0.0	5.0	100.0	11.4	61.3	19.0	1.9	6.4	100.0	141
Oromiya	43.6	50.8	3.9	0.0	1.7	100.0	13.7	69.0	7.9	7.8	1.7	100.0	237
Somali	63.5	30.7	3.0	0.0	2.9	100.0	19.4	62.7	6.3	8.7	2.9	100.0	24
Benishangul-Gumuz	19.5	47.0	27.1	0.0	6.4	100.0	3.9	75.5	19.1	1.6	0.0	100.0	9
SNNP	47.9	42.2	6.8	0.0	3.2	100.0	14.3	70.0	9.0	2.6	4.1	100.0	229
Gambela	31.2	47.3	19.1	0.0	2.3	100.0	10.3	61.7	22.3	2.5	3.2	100.0	5
Harari	54.1	39.3	5.3	0.7	0.5	100.0	27.6	62.2	5.4	1.7	3.1	100.0	8
Addis Ababa	35.7	60.6	2.5	0.0	1.2	100.0	17.9	68.4	10.5	1.6	1.6	100.0	90
Dire Dawa	47.9	40.4	9.8	0.0	1.9	100.0	23.4	59.0	15.0	0.8	1.9	100.0	10
Education													
No education	45.9	44.3	5.0	0.0	4.9	100.0	11.2	63.3	15.3	4.5	5.7	100.0	461
Primary	37.0	46.5	11.4	0.0	5.1	100.0	18.0	64.9	8.6	2.5	6.1	100.0	165
Secondary and higher	26.5	68.3	0.7	0.0	4.5	100.0	12.8	65.4	13.5	3.5	4.8	100.0	228
Wealth quintile													
Lowest	46.5	37.9	8.4	0.0	7.2	100.0	11.0	62.0	14.0	3.7	9.4	100.0	96
Second	35.3	51.7	10.1	0.0	2.9	100.0	10.6	68.1	15.8	2.5	2.9	100.0	124
Middle	52.0	38.7	6.6	0.0	2.7	100.0	13.1	60.7	14.2	7.5	4.4	100.0	118
Fourth	39.4	47.5	4.8	0.0	8.3	100.0	5.5	67.9	16.9	1.8	7.8	100.0	122
Highest	34.3	59.0	2.3	0.0	4.4	100.0	16.4	63.3	11.4	3.8	5.1	100.0	393
Total	39.0	51.1	5.1	0.0	4.8	100.0	12.9	64.1	13.5	3.8	5.6	100.0	853

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

Regarding relative magnitude of their earnings compared with those of their husband or partner, 64 percent of women believe that they earn less than their husband or partner, 14 percent believe that they earn as much as their husband or partner and 13 percent believe that they earn more. Women age 40-44, women with primary education, women with five or more children, women in the highest wealth quintile, urban women, and women who live in Harari are more likely than their counterparts to believe that they earn more than their husband or partner. Three-fourths of women in Benishangul-Gumuz believe that they earn less than their husband or partner. Table 16.2 shows that 4 percent of women reported that their husband or partner did not bring in any money, and almost 6 percent of women did not know if their husband or partner earned more or less than they did.

A cross tabulation by the person in the household who decides how women's cash earnings are used and how their husband or partner's cash earnings are used, by the women's earnings relative to her husband or partner, may provide some insight into women's empowerment in the family and the extent of their control over decisionmaking in the household.

Table 16.3 shows that currently married women who believe they earn more than their husband are much more likely to decide how their husband or partner's earnings are used (21 percent). Women who believe that they earn the same amount as their husband are most likely to make joint decisions with their husband or partner on how their earnings and their partner's earnings are used (about 84 percent). Husbands or partners are much more likely to make sole decisions on the use of their earnings in the case of women who believe that they earn less than their partner (26 percent), women who have no cash earnings of their own (27 percent), and women who did not work in the past 12 months (41 percent).

Table 16.3 Women's control over her own earnings and over those of her husband/partner

Percent distribution of currently married women by person who decides how a woman's cash earnings are used and the percent distribution by who decides how a woman's husband/partner's earnings are used, according to the relation between women's and husband's earnings in last 12 months, if any Ethiopia 2005

	Person who decides how women's earnings are used						Person who decides how husband/partner's earnings are used						
Women's earnings relative to husband/ partner's earnings	Respond-dent only	Respond-ent and husband/ partner jointly	Husband/ partner only	Other	Missing	Total	Respond-ent only	Respond-ent and husband/ partner jointly	Husband/ partner only	Other	Missing	Total	Number of women
More than husband/partner	48.1	46.0	5.8	0.0	0.0	100.0	20.5	61.1	13.1	0.1	5.2	100.0	110
Less than husband/partner	43.3	50.8	5.8	0.0	0.1	100.0	9.6	64.4	25.8	0.0	0.2	100.0	547
Same as husband/partner	11.1	84.6	4.3	0.0	0.0	100.0	6.8	84.0	9.1	0.0	0.0	100.0	115
Husband/partner has no cash earnings/did not work	(76.4)	(23.5)	(0.0)	(0.1)	(0.0)	100.0	na	na	na	na	na	na	33
Woman has no cash earnings	na	na	na	na	na	na	5.7	66.7	26.5	0.4	0.6	100.0	1,993
Woman did not work in past 12 months	na	na	na	na	na	na	6.9	51.1	41.2	0.3	0.5	100.0	6,212

Note: Figures in parentheses are based on 25-49 unweighted cases. Excludes cases where women or her husband/partner have no earnings and includes cases where women do not know whether they earned more or less than their husband/partner.
na = Not applicable

16.3 WOMAN'S PARTICIPATION IN DECISIONMAKING

Decisionmaking can be a complex process and the ability of women to make decisions that affect the circumstances of their own lives is essential for their empowerment.

In order to assess women's decisionmaking autonomy, the 2005 EDHS sought information on women's participation in four types of household decisions: respondent's own health care, making large household purchases; making household purchases for daily needs; and visits to family or relatives. Table 16.4 shows the percent distribution of currently married women according to the person in the household who usually makes decisions concerning these matters. Women are considered to participate in decisionmaking if they make decisions alone or jointly with their husband or someone else.

The strength of the role of women in decisionmaking varies with the type of decision. Almost 53 percent of currently married women reported that they alone made the final decision about daily household purchases. Although 15 percent of currently married woman make sole decisions on their own health care, one-third say that their husband makes such decisions without consulting them. Decisions on large household purchases are most likely to be made by the husband or partner alone (42 percent) or jointly with the wife or partner (45 percent). More than two-thirds of women say that decisions to visit family or relatives are made jointly with their husband or partner.

Table 16.4 Women's participation in decisionmaking

Percent distribution of currently married women by person who usually makes decisions on four specific issues in the household, Ethiopia 2005

Decision	Respondent only	Respondent and husband/ partner jointly	Husband/ partner only	Someone else	Other	Missing	Total
Own health care	14.6	51.2	33.3	0.6	0.1	0.2	100.0
Large household purchases	12.4	44.7	41.9	0.6	0.2	0.2	100.0
Daily household purchases	52.8	30.1	16.0	0.7	0.2	0.2	100.0
Visits to family or relatives	10.4	68.0	20.8	0.4	0.2	0.2	100.0

Table 16.5 shows the percentage of women who report that they alone or jointly have the final say in specific household decisions, according to background characteristics. The results indicate that 44 percent of currently married women participate in all of the four specified decisions. Only 8 percent of women report that they do not participate in any of the decisions. The majority of currently married women participate in making decisions on daily purchases (83 percent) and visits to family or relatives (78 percent), but less so in making decisions about large purchases (57 percent) and on their own health (66 percent).

Older women are more likely than younger women to have a say in all the specified decisions as are women who have at least a secondary education compared with women with lower levels of education. Participation in decisionmaking is also higher among women who are in the highest wealth quintile, urban women, and women who reside in Addis Ababa, compared with their counterparts. Participation in decisionmaking is lower among women who reside in the Somali and Gambela regions. Employed women, especially those employed for cash, are much more likely to have a say in all the specified decisions than women who are not employed.

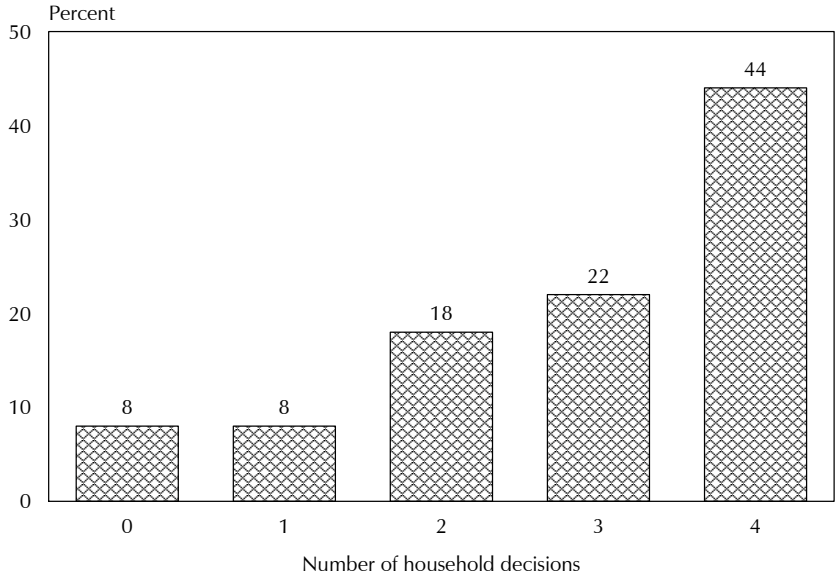
Women may have a say in some but not other decisions. To assess a woman's overall decisionmaking autonomy, the decisions in which she participates—that is, in which she alone has the final say or does so jointly with her husband or partner—are added together. The total number of decisions in which a woman participates is one simple measure of her empowerment. The number of decisions in which a woman jointly with her husband or partner has the final say is positively related to women's empowerment and reflects the degree of decisionmaking control women are able to exercise in areas that affect their lives and environments. Figure 16.1 shows the distribution of currently married women according to the number of decisions in which they participate. Forty-four percent of currently married women participate in all four household decisions, 22 percent participate in three decisions and 18 percent participate in two decisions. Less than 10 percent of women participate in one decision or no decision at all.

Table 16.5 Women's participation in decisionmaking by background characteristics

Percentage of currently married women who usually make decisions on four specific issues in the household either by themselves or jointly with their husband/partner, by background characteristics, Ethiopia 2005

Background characteristic	Own health care	Making large purchases	Making daily purchases	Visits to family or relatives	All specified decisions	None of the specified decisions	Number of women
Age							
15-19	63.6	52.7	78.1	72.8	40.3	12.5	711
20-24	62.5	54.1	80.7	75.8	40.0	9.4	1,574
25-29	65.0	57.0	83.5	77.8	42.7	8.0	2,066
30-34	64.1	55.6	83.0	78.7	42.4	8.4	1,551
35-39	67.9	57.0	82.3	79.0	43.9	8.6	1,343
40-44	67.0	62.8	85.3	80.5	47.6	6.3	960
45-49	74.1	63.2	88.0	85.3	51.6	4.8	862
Number of living children							
0	66.0	56.4	76.2	70.0	40.5	12.9	801
1-2	66.3	57.0	83.0	79.0	44.2	7.9	2,628
3-4	65.7	57.0	83.5	79.0	44.4	8.7	2,631
5+	65.4	57.5	84.1	79.6	43.0	7.0	3,007
Residence							
Urban	83.5	74.0	91.6	91.6	64.8	3.5	959
Rural	63.7	55.1	81.9	76.8	41.0	8.8	8,107
Region							
Tigray	65.4	65.1	80.7	89.4	53.8	7.6	570
Affar	67.2	57.0	67.3	74.9	41.0	13.7	109
Amhara	77.4	65.9	84.9	85.4	55.8	7.7	2,330
Oromiya	62.3	56.5	82.8	77.5	41.7	8.4	3,300
Somali	54.0	41.7	72.6	52.5	25.1	20.2	363
Benishangul-Gumuz	57.1	49.9	67.6	68.2	37.8	19.1	92
SNNP	57.9	45.0	83.4	72.1	28.6	6.7	1,988
Gambela	56.1	42.1	71.2	71.8	27.5	11.6	31
Harari	75.0	71.1	95.3	82.9	56.8	1.9	22
Addis Ababa	90.5	86.8	95.4	94.9	81.3	2.2	224
Dire Dawa	72.1	79.0	93.3	79.5	59.1	5.0	37
Education							
No education	63.9	54.9	82.0	77.5	41.1	8.7	7,094
Primary	65.8	58.4	83.5	77.0	43.7	8.3	1,402
Secondary and higher	89.3	82.1	92.8	93.0	73.7	2.8	570
Employment							
Not employed	62.6	54.0	80.4	75.9	39.4	9.7	6,821
Employed for cash	83.9	71.3	92.0	88.6	60.9	2.7	680
Employed not for cash	71.8	64.3	89.9	84.9	53.8	4.5	1,562
Missing	96.3	100.0	100.0	96.3	96.3	0.0	3
Wealth quintile							
Lowest	59.6	47.5	76.9	72.8	35.2	13.1	1,759
Second	61.3	53.9	82.2	76.1	38.9	8.6	1,892
Middle	62.5	56.9	82.5	77.8	41.1	8.4	1,903
Fourth	68.5	60.5	85.6	79.7	45.6	6.0	1,823
Highest	78.2	67.3	87.6	86.1	58.0	5.2	1,689
Total	65.8	57.1	82.9	78.4	43.5	8.3	9,066

Figure 16.1 **Number of Household Decisions in Which Currently Married Women Participate**



EDHS 2005

16.4 ATTITUDE TOWARDS REFUSING SEX WITH HUSBAND

The extent of control women have over when and with whom they have sex has important implications for demographic and health outcomes such as transmission of HIV and other sexually transmitted infections. It is also an indicator of women's empowerment because it measures women's level of acceptance of norms in certain societies that socialize them to believe that women do not have the right to refuse sexual intercourse with their husband for any reason. The number of reasons a wife can refuse to have sexual intercourse with her husband reflects perceptions of sexual roles and women's rights over their bodies, and relates positively to women's sense of self-empowerment.

To measure beliefs about sexual empowerment of women, the 2005 EDHS included questions 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 disease (STD); 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. Tables 16.6.1 and 16.6.2 show the responses of all women and all men, respectively.

Overall, the majority of women agree with each specified reason for refusing to have sex. Slightly more than three-fifths (62 percent) of women and 72 percent of men agree that all of the above reasons are justification for a woman to refuse to have sexual relations with her husband. Only one in ten women and men agree with none of the reasons. The most accepted reasons for refusing to have sex, among women and men, are if the wife knows her husband has a sexually transmitted disease and if the wife knows her husband has sex with other women. For both women and men, the least acceptable reason for a wife to refuse sex is being tired or not in the mood.

Women in the middle age groups, those with no education, unemployed women, women who have married, those who have five children or more, and poorer women are the least likely to agree with all of the reasons for refusing sex. Among men, those age 15-19, those who have primary education, those who are employed but not for cash, those who have never married, and those who have no children are the least likely to agree with all of the reasons for refusing sex.

Table 16.6.1 Attitude toward refusing sexual intercourse with husband: women

Percentage of women 15-49 who believe that a wife is justified in refusing to have sexual intercourse with her husband in specific circumstances, by background characteristics, Ethiopia 2005

Background characteristic	Wife is justified in refusing sexual intercourse with husband if she: Knows husband has a sexually transmitted disease	Knows husband has sex with other women	Is tired or not in the mood	Agrees with all of the specified reasons	Agrees with none of the specified reasons	Number of women
Age						
15-19	80.3	82.8	71.1	64.5	11.8	3,266
20-24	84.4	84.9	72.6	66.0	8.5	2,547
25-29	82.3	82.3	68.6	61.1	10.0	2,517
30-34	78.6	80.3	67.1	59.0	11.6	1,808
35-39	80.4	81.0	68.5	60.1	10.7	1,602
40-44	80.1	81.0	67.1	59.8	10.9	1,187
45-49	81.7	79.4	67.8	59.2	9.6	1,143
Marital status						
Never married	82.0	83.6	72.5	66.9	11.3	3,516
Married or living together	80.5	81.3	68.3	60.2	10.4	9,066
Divorced/separated/ widowed	84.2	83.9	69.8	62.8	8.5	1,488
Number of living children						
0	82.4	84.0	72.8	66.8	10.6	4,554
1-2	81.6	82.5	68.6	60.6	9.7	3,226
3-4	80.8	80.7	67.4	60.2	11.5	2,981
5+	79.8	80.5	67.7	58.9	10.1	3,309
Residence						
Urban	90.4	92.4	80.4	75.9	4.3	2,499
Rural	79.3	79.9	67.2	59.2	11.8	11,571
Region						
Tigray	81.9	81.3	71.0	63.4	9.7	919
Affar	60.1	58.0	48.3	37.2	29.1	146
Amhara	86.7	87.9	68.2	62.2	6.9	3,482
Oromiya	82.6	84.1	74.8	67.0	8.9	5,010
Somali	59.4	48.3	48.8	33.9	27.5	486
Benishangul-Gumuz	67.1	65.9	51.1	43.4	22.9	124
SNNP	74.6	76.4	63.6	55.8	15.1	2,995
Gambela	54.7	48.6	35.3	27.5	34.3	44
Harari	85.1	89.9	81.5	76.0	6.8	39
Addis Ababa	94.3	96.4	83.1	79.8	1.9	756
Dire Dawa	85.5	86.9	76.9	73.1	10.0	69
Education						
No education	77.9	78.2	65.2	56.9	12.8	9,271
Primary	84.6	86.6	75.9	69.3	8.2	3,123
Secondary and higher	94.0	95.4	81.6	77.9	1.9	1,675
Employment						
Not employed	79.8	80.7	67.8	60.2	11.6	10,085
Employed for cash	87.0	87.9	74.5	68.6	6.4	1,632
Employed not for cash	83.5	84.3	73.6	66.1	8.5	2,339
Missing	88.9	75.7	50.7	50.7	10.7	14
Wealth quintile						
Lowest	74.2	72.6	60.5	51.8	15.5	2,428
Second	79.3	79.0	65.0	57.9	12.4	2,643
Middle	79.3	81.1	68.9	60.1	11.1	2,732
Fourth	82.4	83.3	69.6	62.0	9.7	2,647
Highest	88.1	90.7	79.3	73.8	5.7	3,621
Total	81.3	82.1	69.5	62.1	10.5	14,070

Table 16.6.2 Attitude toward refusing sexual intercourse with husband: men

Percentage of men age 15-59 believe that a wife is justified in refusing to have sexual intercourse with her husband in specific circumstances by background characteristics, Ethiopia 2005

Background characteristic	Wife is justified in refusing sexual intercourse with husband if she: Knows husband has a sexually transmitted disease	Knows husband has sex with other women	Is tired or not in the mood	Agrees with all of the specified reasons	Agrees with none of the specified reasons	Number of men
Age						
15-19	81.3	79.5	72.3	67.3	14.6	1,335
20-24	86.4	83.7	77.8	73.3	10.1	1,064
25-29	87.1	81.7	78.3	72.3	10.4	741
30-34	86.7	85.0	80.0	72.9	8.3	754
35-39	85.9	81.9	77.9	71.4	10.5	651
40-44	87.1	87.0	78.1	74.2	7.2	497
45-49	84.8	85.1	83.1	77.2	10.4	422
50-54	85.3	83.3	79.4	73.3	9.7	335
55-59	89.7	85.8	81.3	75.8	7.1	235
Marital status						
Never married	82.5	80.3	74.0	68.7	13.2	2,419
Married or living together	87.2	84.8	79.5	74.1	9.0	3,424
Divorced/separated/ widowed	87.5	83.3	86.8	76.5	6.3	190
Number of living children						
0	83.4	81.3	74.6	69.5	12.5	2,766
1-2	88.5	84.5	81.2	75.0	8.6	993
3-4	86.8	82.7	77.4	72.7	10.4	967
5+	86.0	85.3	81.1	74.7	8.2	1,307
Residence						
Urban	92.4	91.2	90.8	85.2	4.0	918
Rural	84.1	81.5	75.2	69.7	11.8	5,115
Region						
Tigray	94.5	90.3	85.5	81.7	4.1	366
Affar	78.9	77.4	76.0	69.1	15.2	65
Amhara	93.7	92.6	83.8	81.3	4.3	1,521
Oromiya	79.3	75.5	70.7	63.5	15.8	2,222
Somali	85.3	82.5	88.9	77.3	6.9	202
Benishangul-Gumuz	78.8	79.0	76.7	63.8	10.6	54
SNNP	81.8	80.0	74.4	68.7	13.0	1,244
Gambela	64.0	63.2	64.6	52.3	26.4	21
Harari	94.4	96.1	94.2	91.4	2.7	16
Addis Ababa	94.4	93.5	92.9	88.7	2.9	292
Dire Dawa	94.5	92.4	81.7	77.1	2.0	30
Education						
No education	83.8	81.2	75.1	70.1	11.7	2,589
Primary	83.8	81.9	74.9	69.2	12.0	2,252
Secondary and higher	91.4	88.6	87.9	81.7	5.4	1,192
Employment						
Not employed	89.2	85.1	81.9	75.5	7.8	867
Employed for cash	82.1	81.5	78.9	73.4	13.0	1,440
Employed not for cash	85.7	83.0	76.0	70.7	10.3	3,723
Missing	98.3	98.3	98.3	98.3	1.7	3
Wealth quintile						
Lowest	79.3	76.8	71.8	66.0	16.1	1,100
Second	83.6	81.1	73.9	68.4	12.1	1,184
Middle	85.7	82.2	76.0	69.4	9.8	1,081
Fourth	85.5	83.7	77.0	72.2	10.4	1,200
Highest	90.9	88.9	86.5	81.3	6.0	1,469
Total	85.3	82.9	77.5	72.0	10.6	6,033

Differences are also notable by urban-rural residence. More than three-fourths of women and men in urban areas agree with all of the specified reasons for refusing sex and 4 percent agree with none of the specified reasons. There are substantial variations by region. Women and men residing in Gambela are the least likely to agree with all of the reasons for refusing sex (28 percent and 52 percent, respectively). Men in Harari and woman in Addis Ababa are the most likely to believe that a wife is justified in refusing to have sex with her husband for any of the specified reasons.

16.5 Attitudes Towards Wife Beating

The critical problems that women face are many and diverse. One of these, and essentially the most serious, is the issue of violence against women. It can be described as the most serious because it concerns the personal security of women, and right of personal security is fundamental to all other rights. Domestic violence is a common phenomenon in Ethiopia, in both urban and rural families. If violence against women is tolerated and accepted in a society, its eradication is made more difficult.

Women who believe that a husband is justified in hitting or beating his wife for any of the five 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 towards contraceptive use, and impact their general well being.

To assess women's and men attitudes towards wife beating, women and men were asked whether a husband is justified in hitting or beating his wife in each of the following five situations: if she burns the food; if she argues with him; if she goes out without telling him; if she neglects the children; and if she refuses to have sexual relations with him. A lower score on the "number of reasons wife beating is justified" indicates a woman's greater sense of entitlement, self-esteem and status, and therefore, has a negative association with women's empowerment. The results are summarized on Tables 16.7.1 and 16.7.2.

A sizeable majority of women (81 percent) believe that a husband is justified in beating his wife for at least one of the specified reasons. This is not unexpected because many traditional customs in Ethiopia as in many other countries teach and expect women to accept, tolerate and even rationalize wife beating. This impedes women's empowerment and has serious health consequences.

A high proportion of respondents agree that wife beating is acceptable, which indicates that respondents generally accept violence as part of the male-family relationship. The most widely accepted reasons for wife-beating are going out without telling the partner and neglecting the children (about 64 percent). Three-fifths of women believe that a husband is justified in beating his wife if she burns the food or argues with him. Forty-four percent of women feel that denying sex is a justifiable reason for a man to beat his wife. Compared with women, men are less likely to report that they find violence against women justifiable (Table 16.7.2) Overall, slightly more than half of Ethiopian men agree with at least one of the reasons for why a man is justified in beating his wife. Men are most likely to justify beating a wife if she goes out without telling him (36 percent) or neglects the children (31 percent). Like women, men are least likely to say that burning food (24 percent) or arguing with him (31 percent) are grounds for wife beating. Only about one-quarter of men feel that denying sex is a justifiable reason for wife beating.

The tables also show attitudes towards wife beating by background characteristics. The percentage of women who agree with at least one of the reasons justifying wife beating is higher among older women, married women, and those with five or more children. Women who are employed for cash are less likely to agree with at least one of the reasons for wife beating than those who are either not employed or are employed but not for cash. Differences are also notable by level of education; slightly more than half of women with secondary or higher education agree with at least one specified reason for wife beating, compared with 87 percent of women with no education.

Table 16.7.1 Attitude 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, by background characteristics, Ethiopia 2005

Background characteristic	Husband is justified in hitting or beating his wife if she: Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sex with him	Agrees with at least one specified reason	Number of women
Age							
15-19	57.4	55.6	59.9	59.9	36.3	77.3	3,266
20-24	59.3	56.4	61.9	63.5	42.0	78.4	2,547
25-29	61.2	58.8	66.3	66.5	45.4	81.8	2,517
30-34	64.4	61.7	66.0	66.8	49.2	83.9	1,808
35-39	62.7	62.3	68.1	67.3	49.1	83.5	1,602
40-44	62.9	59.8	66.4	66.9	47.0	83.5	1,187
45-49	65.3	61.5	66.0	66.2	52.7	84.9	1,143
Marital status							
Never married	49.7	48.2	52.0	54.0	31.4	70.0	3,516
Married or living together	65.6	63.0	68.6	68.2	49.4	84.9	9,066
Divorced/separated/ widowed	59.7	57.3	65.7	67.5	43.3	83.4	1,488
Number of living children							
0	53.5	51.9	56.6	58.1	34.2	74.0	4,554
1-2	61.9	58.9	65.3	65.8	46.1	82.3	3,226
3-4	65.3	62.6	67.9	68.7	49.2	84.0	2,981
5+	66.6	64.3	70.2	68.5	51.9	86.6	3,309
Residence							
Urban	30.8	34.6	41.5	44.2	19.8	59.0	2,499
Rural	67.5	63.9	69.1	69.0	49.6	85.8	11,571
Region							
Tigray	52.0	52.6	61.0	60.0	28.2	73.7	919
Affar	37.0	53.5	62.2	61.7	42.2	80.4	146
Amhara	68.1	66.5	74.9	75.8	45.1	91.3	3,482
Oromiya	65.1	60.6	65.0	63.0	48.2	80.9	5,010
Somali	53.0	55.9	70.5	70.0	54.8	87.7	486
Benishangul-Gumuz	57.3	56.1	61.4	60.8	47.9	83.9	124
SNNP	64.8	60.2	61.5	64.5	49.8	81.1	2,995
Gambela	53.8	51.6	52.3	55.8	45.3	78.4	44
Harari	31.5	37.9	48.2	57.0	24.0	67.0	39
Addis Ababa	13.4	19.2	24.3	30.4	8.4	41.7	756
Dire Dawa	23.5	32.1	36.1	37.1	22.4	47.5	69
Education							
No education	67.9	64.3	70.4	69.5	51.0	86.7	9,271
Primary	60.5	59.0	62.2	64.0	40.4	80.1	3,123
Secondary and higher	24.0	27.1	33.5	38.2	14.5	51.0	1,675
Employment							
Not employed	62.3	59.8	66.0	65.9	46.2	82.7	10,085
Employed for cash	45.1	45.9	52.2	53.4	32.7	68.3	1,632
Employed not for cash	66.7	63.1	64.6	66.4	44.2	82.8	2,339
Missing	52.0	46.0	43.6	57.9	41.4	58.4	14
Wealth quintile							
Lowest	64.4	60.3	71.0	68.9	51.3	87.0	2,428
Second	70.1	66.2	71.5	69.6	53.0	87.1	2,643
Middle	69.5	67.1	69.0	70.0	50.5	86.1	2,732
Fourth	69.6	64.5	69.5	69.1	46.9	85.2	2,647
Highest	39.5	41.6	46.7	50.5	26.7	65.6	3,621
Total	61.0	58.7	64.2	64.6	44.3	81.0	14,070

Eighty-six percent of rural women agree with at least one of the reasons justifying wife beating, compared with 59 percent among urban woman. There is large variation by region. Nine in ten women in Amhara agree with at least one specified reason for wife beating compared with slightly more than two-fifths of women in Addis Ababa (42 percent).

Men who are married, those who have no education, and those who are employed but do not earn cash are more likely to agree with at least one specified reason for wife beating. Acceptance of wife beating declines as the level of education increases. For all reasons, poorer women and men are more likely than their wealthier counterparts to believe that wife beating is justified.

Acceptance of wife beating for at least one of the specified reasons is generally lower among urban men than rural men (28 percent and 56 percent, respectively). Similar to women, men's beliefs vary greatly by region. Men in Benishangul-Gumuz and Affar are the most likely to agree that wife beating is justified for at least one specified reason.

Table 16.7.2 Attitude toward wife beating: men

Percentage of men age 15-59 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Ethiopia 2005

Background characteristic	Husband is justified in hitting or beating his wife if she: Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sex with him	Agrees with at least one specified reason	Number of men
Age							
15-19	27.5	32.4	36.6	32.6	26.6	53.3	1,335
20-24	24.3	29.9	36.5	29.9	23.2	50.6	1,064
25-29	23.0	29.3	36.3	29.4	21.6	50.0	741
30-34	22.6	31.2	35.2	30.8	20.9	50.9	754
35-39	21.2	26.4	32.7	26.6	21.5	48.9	651
40-44	24.6	32.0	37.9	35.6	26.3	53.2	497
45-49	22.6	27.8	36.2	27.4	20.7	50.2	422
50-54	21.7	32.0	37.1	36.0	19.7	53.0	335
55-59	24.7	34.9	39.7	34.4	27.5	55.6	235
Marital status							
Never married	24.0	28.9	34.4	28.2	23.7	49.5	2,419
Married or living together	24.1	31.4	37.4	32.5	23.2	53.1	3,424
Divorced/separated/ widowed	25.2	33.2	37.6	39.6	20.9	48.7	190
Number of living children							
0	24.1	30.0	35.5	29.5	24.3	50.7	2,766
1-2	23.3	29.5	32.5	30.4	20.2	47.5	993
3-4	24.6	30.7	37.6	33.1	23.3	52.2	967
5+	24.2	32.2	39.5	33.1	23.9	55.5	1,307
Residence							
Urban	7.8	11.8	17.5	13.0	8.8	27.8	918
Rural	27.0	33.8	39.5	34.2	26.0	55.7	5,115
Region							
Tigray	15.1	23.9	20.9	23.0	14.2	35.4	366
Affar	36.1	45.4	51.5	47.0	44.9	61.4	65
Amhara	22.9	27.8	36.4	32.4	19.0	52.9	1,521
Oromiya	27.9	36.3	42.0	29.0	27.1	56.0	2,222
Somali	7.9	18.0	22.0	36.1	18.0	38.0	202
Benishangul-Gumuz	32.1	37.9	40.5	43.3	22.6	62.0	54
SNNP	28.5	32.7	38.1	38.6	29.1	56.5	1,244
Gambela	22.0	27.1	37.1	26.0	23.2	54.4	21
Harari	11.3	24.5	25.3	16.0	24.0	38.8	16
Addis Ababa	2.5	4.7	8.6	8.9	3.7	15.2	292
Dire Dawa	9.8	19.1	28.3	28.1	14.9	41.0	30
Education							
No education	28.3	36.2	41.3	37.4	27.5	58.3	2,589
Primary	26.8	32.9	39.9	32.5	25.9	55.0	2,252
Secondary and higher	9.6	13.5	18.1	14.3	9.6	29.9	1,192
Employment							
Not employed	19.1	23.0	29.4	22.5	19.0	41.4	867
Employed for cash	19.4	24.0	30.3	27.6	17.4	43.6	1,440
Employed not for cash	26.9	34.7	40.1	34.3	26.7	56.8	3,723
Missing	93.8	89.9	55.0	91.9	4.8	95.8	3
Wealth quintile							
Lowest	27.1	37.4	39.9	38.6	27.7	56.0	1,100
Second	31.9	37.6	44.3	39.6	31.8	61.4	1,184
Middle	27.6	33.3	38.7	33.5	25.2	56.0	1,081
Fourth	23.7	31.1	39.7	29.6	22.9	53.4	1,200
Highest	13.2	16.9	22.2	17.8	12.2	35.3	1,469
Total	24.1	30.5	36.2	31.0	23.3	51.5	6,033

16.6 CURRENT USE OF CONTRACEPTION BY WOMEN'S STATUS

A woman's desire and ability to control her fertility and her choice of contraceptive method are in part affected by her status in the household and her own sense of empowerment. A woman who feels that she is unable to control her life may be less likely to feel she can make and carry out decisions about her fertility. She may also feel the need to choose methods that are less obvious or which do not depend on her husband's cooperation. Table16.8 shows the distribution of currently married women by contraceptive method use, according to the three empowerment indicators.

The data indicate that there is a positive relationship between women's status and use of contraception. Contraceptive use is highest among women who participate in most (3-4) household decisions, who agree that a woman can refuse sexual intercourse with her partner for all three specified reasons, and who believe that wife beating is not justified for all of the five specified reasons. This pattern is consistent for both any method and modern methods. For example, current use of modern contraceptive methods rises from 7 percent among women who believe there is no justifiable reason for a woman to refuse sexual intercourse with a husband to 16 percent among women with three reasons for refusing to have sexual intercourse with a husband.

Table 16.8 Current use of contraception by women's status

Percent distribution of currently married women by contraceptive method currently used, according to women's status indicators, Ethiopia 2005

			Modern method					
Women's status indicators	Any method	Any modern method	Injectables	Temporary methods,[1] female sterilization and male condom	Any traditional method	Not currently using	Total	Number of women
Number of decisions in which woman participates								
0	8.0	7.5	4.8	2.7	0.5	92.0	100.0	736
1-2	10.0	9.5	6.8	2.6	0.6	90.0	100.0	2,376
3-4	17.4	16.5	11.8	4.7	0.9	82.6	100.0	5,954
Number of reasons given for refusing to have sexual intercourse with husband/partner								
0	7.4	7.1	5.2	2.0	0.2	92.6	100.0	946
1-2	13.4	12.6	9.2	3.4	0.8	86.6	100.0	2,663
3	16.6	15.7	11.1	4.7	0.9	83.4	100.0	5,457
Number of reasons given that justify wife beating								
0	24.1	22.0	14.9	7.1	2.2	75.9	100.0	1,371
1-2	16.3	15.2	10.2	5.0	1.2	83.7	100.0	1,585
3-4	13.2	12.7	9.3	3.4	0.4	86.8	100.0	3,130
5	11.1	10.8	8.1	2.7	0.4	88.9	100.0	2,980
Total	14.7	13.9	9.9	4.0	0.8	85.3	100.0	9,066

Note: If more than one method is used, only the most effective method is considered in this tabulation.
[1] Pill, IUD, injectables, implants, female condom, diaphragm, foam/jelly and lactational amenorrhoea method.

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

The ability of women to effectively make decisions has important implications for their fertility preferences and the practice of family planning. An increase in women's status and empowerment is recognized as important for efforts to reduce fertility through at least two main pathways: its negative association with desired family size and its positive association with women's ability to meet their own family-size goals through the effective use of contraception.

Table 16.9 shows how women's ideal family size and their unmet need for family planning vary by women's status indicators. The data indicate that mean ideal family size decreases with increasing number of decisions in which a woman has a final say and number of reasons to refuse sex with her husband or partner, and increases with the number of reasons women believe wife beating is justified. Thus, the data suggests that the more empowered the woman, the fewer children she desires.

Although there is no clear relationship between women's decisionmaking power and belief that refusing sexual intercourse is acceptable for any reason, unmet need increases with the number of reasons women belief that wife beating is justified, indicating that less empowered women as measured by this indicator are also less able to meet their contraceptive needs.

Table 16.9 Ideal number of children and unmet need for family planning by women's status

Mean ideal number of children and the percentage of women with an unmet need for family planning, by women's status indicators, Ethiopia 2005

Women's status indicator	Mean ideal number of children[1]	Number of women	Unmet need for family planning[2] For spacing	For limiting	Total	Number of women
Number of decisions in which woman participates[3]						
0	5.3	632	23.3	10.9	34.2	736
1-2	5.2	2,045	23.7	13.9	37.6	2,376
3-4	5.0	5,251	18.2	14.1	32.3	5,954
Number of reasons given for refusing to have sexual intercourse with husband/partner						
0	5.0	1,263	12.1	7.2	19.2	1,471
1-2	5.0	3,496	14.9	9.0	24.0	3,856
3	4.2	7,843	12.3	9.1	21.4	8,743
Number of reasons given that justify wife beating						
0	3.9	2,449	9.3	6.0	15.3	2,673
1-2	4.4	2,368	11.4	8.3	19.7	2,638
3-4	4.7	4,188	13.6	9.4	23.0	4,667
5	4.8	3,597	15.7	10.6	26.3	4,092
Total	4.5	12,602	13.0	8.9	21.9	14,070

[1] Excludes respondents who gave non-numeric responses.
[2] See Table 7.3 for definition of unmet need for family planning
[3] Currently married women

16.8 Reproductive Health Care by Women's Status

Table 16.10 shows women's use of antenatal, delivery and postnatal care services by the three indicators of women's 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.

The data indicate that there is a correlation between women's status and utilization of health services. The more empowered a woman, the more likely she is to receive antenatal care, postnatal care, and delivery assistance from a health professional. For example, nearly one-third of women who participate in making three or four decisions received antenatal care from health professionals, compared with 18 percent of women who are not involved in any decisionmaking. Almost one in ten women who participate in three or four decisions utilized postnatal and delivery care, compared with 2 percent of women who had no say in any decisionmaking.

Table 16.10 Reproductive health care by women's status

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 women's status indicators, Ethiopia 2005

Women's status indicator	Received antenatal care from a health professional	Received delivery assistance from a health professional	Received postnatal care from a health professional within two days of delivery[1]	Number of births
Number of decisions in which woman participates[2]				
0	18.1	2.2	2.1	552
1-2	22.4	3.6	4.1	1,878
3-4	30.7	8.5	8.9	4,342
Number of reasons given for refusing to have sexual intercourse with husband/partner				
0	17.2	3.7	4.1	752
1-2	25.2	4.6	5.8	2,156
3	30.6	8.6	8.8	4,399
Number of reasons given that justify wife beating				
0	38.1	17.2	17.9	1,069
1-2	28.8	9.4	9.3	1,263
3-4	25.4	4.3	4.6	2,498
5	24.9	4.0	4.8	2,477
Total	27.6	7.0	7.4	7,307

[1] Includes mothers who delivered in a health facility
[2] Currently married women

The number of reasons for which women feel that a wife is justified in refusing to have sexual intercourse with her husband has a stronger positive relationship with all three variables. For example, the proportion of women who receive antenatal care increases from 17 percent among women who think a wife is not justified in refusing to have sex with her husband for any of the specified reasons to 31 percent among those who said that all three reasons cited were justifiable. A similar relationship is observed between the number of reasons given for refusing sexual intercourse with husband/partner and receiving postnatal and delivery care.

The data also show a steady increase in utilization of health services as the number of reasons wife beating is believed to be justified decreases. For example, 17 percent of women who say wife beating is not justified in any of the situations described were attended by medical professionals compared with only 4 percent of women who say that wife beating is justified in all five of the specified circumstances.

16.9 Early Childhood Mortality Rates by Women's Status

An outcome of empowerment is women's ability to access information, make decisions, and act effectively in their own interest or in the interest of those who depend on them. It follows that if women, who are the primary caretakers of children, are empowered, the health and survival of their children will be enhanced.

Table 16.11 shows information on the impact of women's empowerment on infant and child mortality. Surprisingly, the data show that women who have no final say in any decision in the household have lower childhood mortality rates than those who have a say in three or four decisions.

For example, the infant mortality rate for children whose mothers have no final say in any decision is 69 deaths per 1,000 live births, compared with about 79 deaths per 1,000 live births for children of mothers who participate in three or four decisions in the household.

With the exception of infant mortality, there is no clear association between a woman's belief that it is acceptable to refuse sexual intercourse with her husband and childhood mortality. The infant mortality rate of children whose mothers think a wife is justified in refusing to have sexual intercourse with her husband for any of the specified reasons is 75 deaths per 1,000 live births, compared with 84 deaths per 1,000 live births for children of those who say that a woman is justified for all three reasons cited.

Table 16.11 Early childhood mortality rates by women's status

Infant, child, and under-five mortality rates for the 10-year period preceding the survey, by women's status indicators, Ethiopia 2005

Women's status indicators	Neonatal mortality (NN)	Postneonatal mortality (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Number of decisions in which woman participates[1]					
0	34	35	69	61	126
1-2	39	43	82	53	131
3-4	41	38	79	54	128
Number of reasons given for refusing to have sexual intercourse with husband/partner					
0	36	40	75	61	132
1-2	35	39	74	59	129
3	44	40	84	54	133
Number of reasons given that justify wife beating					
0	38	37	75	45	116
1-2	41	43	85	58	137
3-4	37	43	80	63	138
5	45	36	81	53	130

[1] Currently married women

Attitudes towards wife beating are reflections of women's status. Women who do not approve of any form of wife beating are assumed to enjoy a higher status in the household and in society. In turn, this translates into a more favourable mortality profile for their children. The rates of childhood mortality are generally lower among children whose mothers believe that wife beating is not justified for any reason. For example, the infant mortality rate for children of mothers who consider wife beating unjustified for any reason is 75 deaths per 1,000 live births compared with 81 deaths per 1,000 live births for children whose mothers agree with all of the specified reasons for wife beating. A similar relationship is observed between women's status and levels of child mortality and under-five mortality.

16.10 Property Dispossession

Property dispossession can make widowed women and their children especially vulnerable. In many countries, widows are often denied an inheritance either because of common law or religious laws. Also, in many cases, even where such laws provide for the transfer of property to widows and their children, enforcement of inheritance laws may be weak, leaving them at the mercy of relatives.

Table 16.12 shows that 6 percent of women age 15-49 interviewed in the EDHS have been widowed at some time and of these, one in five has been dispossessed of property belonging to their late husband.

Dispossession of property is most common among younger women (less than 30 years) who have been widowed than older women. Previously widowed women who are currently married are somewhat more likely to be dispossessed of property as are the small numbers of women who have no children. Women with children under 18 years of age are also somewhat more likely to have property taken away from them than women with children 18 years and older.

Table 16.12 Widows dispossessed of property

Percentage of de facto women age 15-49 who have been widowed, and the percentage of widowed women who have been dispossessed of property, by selected background characteristics, Ethiopia 2005

Background characteristics	Percentage of ever-widowed women	Number of women	Ever-widowed women: Percentage who were dispossessed of property	Ever-widowed women: Number of women
Age				
15-19	0.3	3,266	*	10
20-29	2.6	5,064	34.6	132
30-39	8.8	3,410	20.4	301
40-49	19.5	2,330	14.3	454
Marital status				
Married	3.4	8,914	34.4	302
Living together	12.0	152	*	18
Divorced/separated	2.2	932	(28.5)	21
Widowed	100.0	556	12.0	556
Age of youngest child				
No children	0.6	4,357	(42.7)	24
<18 years	8.6	9,535	19.5	820
18 + years	30.0	178	14.2	53
Residence				
Urban	6.8	2,499	22.6	171
Rural	6.3	11,571	19.1	726
Region				
Tigray	7.5	919	24.9	69
Affar	6.2	146	(16.2)	9
Amhara	6.6	3,482	13.8	231
Oromiya	6.7	5,010	21.0	336
Somali	5.2	486	(9.0)	25
Benishangul-Gumuz	6.7	124	7.1	8
SNNP	5.5	2,995	25.9	164
Gambela	12.6	44	44.3	6
Harari	4.7	39	(22.4)	2
Addis Ababa	5.3	756	17.3	40
Dire Dawa	8.6	69	15.3	6
Education				
No education	8.0	9,271	19.0	741
Primary	3.0	3,123	27.7	92
Secondary and higher	3.7	1,481	18.6	54
Wealth quintile				
Lowest	8.7	2,428	15.7	210
Second	7.5	2,643	19.8	199
Middle	5.0	2,732	17.3	137
Fourth	5.8	2,647	27.2	155
Highest	5.4	3,621	20.1	196
Total	6.4	14,070	19.8	897

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.

Urban women are slightly more likely to be dispossessed of property than rural women. Women living in Gambela are most likely to be dispossessed compared with women living in the other regions. Surprisingly, women with primary education are more vulnerable to having property dispossessed than women with no education or women with at least some secondary education. Also, women in the lowest wealth quintile are least likely to be denied their late husband's property compared with women in the other wealth quintiles.

16.11 Harmful Traditional Practices

The 2005 EDHS included a series of questions in the Women's Questionnaire to gather information on women's knowledge and attitude about three specific harmful traditional practices and their experience with each of them. All women were first asked if they had ever heard of female circumcision or uvulectomy/tonsillectomy. In addition, ever-married women were asked about the practice of marriage by abduction. If women had heard of any of these practices, they were further asked if they themselves had been subject to any of them. Circumcised women were also asked for the type of circumcision they had had. Women who had children were asked if any of their daughters had been circumcised or married by abduction, and if any of their children had had a uvulectomy. Finally, women were also asked for their opinion about whether the specific harmful traditional practice that they had knowledge of should be continued.

16.11.1 Female Circumcision

Female circumcision, also known as female genital cutting (FGC) or female genital mutilation, is a common practice in many societies in sub-Saharan Africa. In Ethiopia, the age at which FGC is performed varies among the different ethnic groups. In Northern Amhara and Tigray, for example, FGC is performed at infancy and usually on the eighth day after birth (NCTPE, 1998).

Data collected in the 2005 EDHS show that most women age 15-49 have heard of female circumcision (Table 16.13). With the exception of differences by region, differences by other background characteristics in the percentage of women who have heard of female circumcision are small. Less than one in two women in Gambela have heard of female circumcision (45 percent), compared with nearly all women in Harari, Dire Dawa, Addis Ababa, Affar, Somali and Oromiya and at least 80 percent of women in Amhara, SNNP, Tigray and Benishangul-Gumuz.

Table 16.13 shows that three in four Ethiopian women have been circumcised. Six percent of circumcised women reported that their vagina was sewn closed (infibulation) during circumcision, which is the most severe form of FGC. Infibulation is most common among women age 25-39, women with no education, and women in the lowest wealth quintile. Rural women are also more likely than urban women to have experienced infibulation. More than four in five circumcised women residing in the Somali Region and three in five in Affar have experienced the most severe form of FGC.

Less than one in three women who have heard of FGC believes that the practice should continue (Table 16.13). Support for female circumcision varies with background characteristics and is similar to that discussed under knowledge of female circumcision.

Table 16.13 Knowledge, prevalence, and support of female circumcision

Percentage of women who have heard of female circumcision and who are circumcised, and among circumcised women the percentage who have their vagina sewn closed and among women who have heard of female circumcision the percentage who support the practice, by selected background characteristics, Ethiopia 2005

Background characteristic	Percentage of women who have heard of female circumcision	Percentage of women circumcised	Number of women	Among circumcised women		Among women who have heard of female circumcision	
				Percentage with vagina sewn closed	Number of women	Percentage who believe practice should be continued	Number of women
Age							
15-19	90.0	62.1	3,266	4.7	2,029	22.9	2,939
20-24	92.5	73.0	2,547	5.8	1,860	27.2	2,356
25-29	91.9	77.6	2,517	6.8	1,954	34.5	2,314
30-34	91.1	78.0	1,808	7.7	1,410	36.5	1,647
35-39	93.1	81.2	1,602	7.1	1,302	37.7	1,491
40-44	94.3	81.6	1,187	6.1	969	33.7	1,120
45-49	92.1	80.8	1,143	4.7	924	38.0	1,052
Residence							
Urban	97.8	68.5	2,499	5.1	1,713	10.4	2,445
Rural	90.5	75.5	11,571	6.3	8,735	36.3	10,475
Region							
Tigray	82.9	29.3	919	1.1	269	21.5	762
Affar	98.4	91.6	146	63.2	134	65.6	144
Amhara	88.9	68.5	3,482	0.6	2,386	39.0	3,095
Oromiya	97.1	87.2	5,010	2.5	4,369	29.8	4,866
Somali	98.1	97.3	486	83.8	473	74.3	477
Benishangul-Gumuz	79.5	67.6	124	3.2	84	40.1	99
SNNP	86.7	71.0	2,995	0.6	2,127	26.0	2,597
Gambela	44.6	27.1	44	1.0	12	21.0	20
Harari	99.8	85.1	39	12.5	33	21.6	39
Addis Ababa	99.5	65.7	756	0.8	497	5.6	753
Dire Dawa	99.8	92.3	69	13.2	64	13.8	69
Education							
No education	89.8	77.3	9,271	7.9	7,165	40.6	8,328
Primary	93.8	70.8	3,123	1.9	2,211	20.2	2,928
Secondary and higher	99.3	64.0	1,675	3.0	1,072	4.7	1,663
Wealth quintile							
Lowest	87.9	73.0	2,428	21.1	1,773	48.3	2,135
Second	89.7	75.9	2,643	4.1	2,006	39.2	2,370
Middle	90.4	75.4	2,732	3.1	2,059	34.3	2,469
Fourth	92.2	77.6	2,647	1.8	2,055	30.7	2,441
Highest	96.8	70.6	3,621	3.2	2,556	14.1	3,505
Total	91.8	74.3	14,070	6.1	10,448	31.4	12,920

Women who had at least one daughter were asked if any of their daughters had been circumcised. Thirty-eight percent of women with a daughter reported having at least one of their daughters circumcised (Table 16.14). The probability that a respondent's daughter is circumcised varies directly with her age, rising from 15 percent among women age 15-19 to 67 percent among women age 45-49, indicating that there may have been a decline in the practice of circumcision in recent years. Rural women are more likely than urban women to have a daughter circumcised. Circumcision of daughters is highest in Affar, where 85 percent of women have a circumcised daughter, and lowest in Gambela where 11 percent of women have a daughter circumcised. Women with no education are more than twice as likely as women with secondary education or higher to have a daughter circumcised. There is no uniform relationship between wealth and having a daughter circumcised. Nevertheless, women in the highest wealth quintile are least likely to have a daughter circumcised.

Table 16.14 shows that 4 percent of circumcised daughters have experienced the most severe form of FGC. Infibulation is most prevalent among daughters of women age 30-34, rural women, women residing in Affar and Somali, women with no education, and women in the poorest wealth quintile.

Table 16.14 Daughter's circumcision experience and type of circumcision

Among women with at least one living daughter, percentage with at least one circumcised daughter, and percent distribution by type of circumcision among most recently circumcised daughters, according to selected background characteristics, Ethiopia 2005

Mother's background characteristic	Percentage of women with at least one daughter circumcised	Number of women with at least one daughter	Daughters with vagina sewn closed	Number of most recently circumcised daughters
Age				
15-19	14.6	222	(3.5)	32
20-24	14.3	918	4.0	131
25-29	21.2	1,735	3.3	367
30-34	32.0	1,516	6.1	484
35-39	45.4	1,422	4.6	645
40-44	58.9	1,069	4.7	630
45-49	66.6	1,039	2.2	692
Residence				
Urban	30.0	914	2.9	274
Rural	38.7	7,007	4.2	2,708
Region				
Tigray	30.2	524	0.5	158
Affar	85.1	82	74.1	69
Amhara	56.8	2,014	0.0	1,144
Oromiya	34.9	2,873	0.9	1,003
Somali	28.1	323	62.3	91
Benishangul-Gumuz	49.3	74	1.1	37
SNNP	23.5	1,733	0.7	406
Gambela	11.0	25	0.0	3
Harari	27.1	17	7.8	5
Addis Ababa	25.1	223	0.0	56
Dire Dawa	34.3	32	6.2	11
Education				
No education	41.3	6,343	4.5	2,620
Primary	24.7	1,131	0.5	279
Secondary and higher	18.7	446	3.2	83
Wealth quintile				
Lowest	38.2	1,613	14.7	617
Second	37.2	1,607	2.6	598
Middle	37.7	1,578	0.8	594
Fourth	41.2	1,603	0.7	661
Highest	33.7	1,518	1.4	512
Total	37.7	7,920	4.1	2,982

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

Female circumcision has declined over the past five years from 80 percent in 2000 to 74 percent in 2005. Support for the practice has also declined from 60 percent to 31 percent over the same period. In addition, circumcising daughters has declined. Fifty-two percent of mothers with at least one daughter had a daughter circumcised in 2000 compared with 38 percent in 2005.

16.11.2 Uvulectomy or Tonsillectomy

Uvulectomy is commonly practiced in Ethiopia and involves the removal of the uvula with horse tail hair or thread looped through a bamboo stick. Often, a special knife-like, sharpened iron is used to cut the uvula before it is taken out. Tonsillectomy refers to the removal of the tonsils, often using just the index finger, to treat sore throats and swallowing difficulties (Jeppsson et al., 2003). These harmful traditional practices may pose a health hazard particularly if carried out with

unsterilised instruments or in an unhygienic setting. Questions in the EDHS did not distinguish between the two practices and hence the data discussed in this section refers to knowledge of uvulectomy and/or tonsillectomy, the prevalence of both, and attitude towards the continuation of both practices.

Table 16.15 shows that a large majority of women (84 percent) have heard of uvulectomy or tonsillectomy. Knowledge of the practice is much higher among women in urban than in rural areas and ranges from a low of 52 percent among women in Gambela to universal knowledge among women in Tigray. Highly educated women and women from the highest wealth quintile are much more likely to have heard of the practice than less educated women and women in the other wealth quintiles. Differences by age are small.

Table 16.15 Knowledge, prevalence, and support of uvulectomy or tonsillectomy

Percentage of women who have heard of uvulectomy/tonsillectomy, percentage of women who have ever had an uvulectomy/tonsillectomy, and among those who have heard of uvulectomy/tonsillectomy, the percentage who support the practice, by selected background characteristics, Ethiopia 2005

				Among women who have heard of uvulectomy/ tonsillectomy	
Background characteristic	Percentage of women who heard of uvulectomy/ tonsillectomy	Percentage of women who ever had an uvulectomy/ tonsillectomy	Number of women	Percentage who believe practice should be continued	Number of women
Age					
15-19	83.5	37.3	3,266	23.0	2,727
20-24	84.5	37.9	2,547	27.1	2,153
25-29	82.4	42.2	2,517	30.6	2,074
30-34	84.2	46.0	1,808	33.6	1,523
35-39	85.4	44.1	1,602	32.2	1,369
40-44	83.6	45.5	1,187	30.9	993
45-49	85.9	48.5	1,143	33.6	981
Residence					
Urban	95.4	46.2	2,499	13.0	2,385
Rural	81.5	40.8	11,571	33.1	9,434
Region					
Tigray	99.5	89.2	919	68.3	915
Afar	93.3	76.9	146	69.5	136
Amhara	77.4	42.5	3,482	44.1	2,694
Oromiya	81.6	28.9	5,010	19.8	4,089
Somali	60.9	36.4	486	47.8	296
Benishangul-Gumuz	68.1	29.1	124	34.5	85
SNNP	91.2	46.8	2,995	17.3	2,732
Gambela	51.9	25.2	44	32.7	23
Harari	97.7	58.4	39	19.9	38
Addis Ababa	98.1	42.7	756	7.0	742
Dire Dawa	98.9	69.0	69	13.1	68
Education					
No education	81.4	43.5	9,271	37.6	7,548
Primary	84.7	36.8	3,123	18.0	2,647
Secondary and higher	96.9	41.4	1,675	7.4	1,624
Wealth quintile					
Lowest	80.6	47.3	2,428	45.9	1,958
Second	82.2	40.3	2,643	37.2	2,174
Middle	82.1	41.7	2,732	30.4	2,243
Fourth	80.5	37.4	2,647	26.6	2,130
Highest	91.5	42.5	3,621	14.4	3,314
Total	84.0	41.8	14,070	29.1	11,819

More than two in five Ethiopian women have had an uvulectomy or tonsillectomy. The prevalence of uvulectomy or tonsillectomy increases with woman's age rising from 37 percent among women age 15-19 to 49 percent among women age 45-49, indicating a declining trend in the practice. The practice is most prevalent among urban women, women residing in Tigray, women with no education, and women in the lowest wealth quintile.

Table 16.15 shows that 29 percent of women support the continuation of this harmful traditional practice. There is no uniform pattern of support for the practice by age. One in three rural women supports the practice compared with just over one in ten urban women. More than two-thirds of women residing in Affar and Tigray support the continuation of this practice compared with less than one in ten women residing in Addis Ababa. Support for uvulectomy or tonsillectomy is highest among women with no education and women in the lowest wealth quintile.

Forty-two percent of women with at least one daughter have a daughter who has had an uvulectomy or tonsillectomy (Table 16.16). The percentage of daughters who have had a uvulectomy or tonsillectomy increases monotonically with age. The percentage of daughters exposed to this harmful traditional practice varies widely by region, ranging from a low of 23 percent in Somali to a high of 93 percent in Tigray. Women with no education are much more likely to have a daughter exposed to this practice than women with some education. Differences by urban-rural residence and wealth quintile are relatively small.

Table 16.16 Daughter's uvulectomy/tonsillectomy

Among women with at least one living daughter, percentage with at least one daughter who ever had an uvulectomy/tonsillectomy, according to selected background characteristics, Ethiopia 2005

Mother's background characteristic	Percentage of women with at least one daughter who had an uvulectomy/ tonsillectomy	Number of women with at least one daughter
Age		
15-19	30.6	222
20-24	32.1	918
25-29	38.5	1,735
30-34	45.0	1,516
35-39	45.0	1,422
40-44	43.4	1,069
45-49	49.6	1,039
Residence		
Urban	44.5	914
Rural	41.8	7,007
Region		
Tigray	93.2	524
Affar	79.7	82
Amhara	43.3	2,014
Oromiya	29.3	2,873
Somali	22.7	323
Benishangul-Gumuz	32.2	74
SNNP	49.1	1,733
Gambela	26.2	25
Harari	53.6	17
Addis Ababa	38.9	223
Dire Dawa	46.8	32
Education		
No education	43.4	6,343
Primary	37.9	1,131
Secondary and higher	34.4	446
Wealth quintile		
Lowest	45.3	1,613
Second	41.2	1,607
Middle	42.6	1,578
Fourth	38.9	1,603
Highest	42.4	1,518
Total	42.1	7,920

16.11.3 Marriage by Abduction

Marriage by abduction is another harmful traditional practice that is known to exist in Ethiopia. In general, the would-be abductor forms a group of intimate friends and relatives to carry out the abduction (NCTPE, 1998). An unmarried young girl is forcefully dragged or carried over the shoulder of the abductor who may beat her to subdue her. The girl is then taken to a hideaway. This tactic is often used as a short cut to marriage. Abduction may be followed by rape.

Eighty-three percent of women have heard of marriage by abduction (Table 16.17). Urban women are much more likely than rural women to have heard of the practice. Regional variations in knowledge of the practice is marked, with all or nearly all women in Dire Dawa, Addis Ababa, Harari, Oromiya and SNNP having heard of the practice, compared with about half of women residing in Somali, Gambela and Amhara. Educated women are much more likely to be aware of this practice than women with no education, as are women in the highest wealth quintile compared with women in the lowest.

Table 16.17 Knowledge, prevalence, and support of marriage by abduction

Percentage of women who have heard of marriage by abduction percentage of women who ever had a marriage by abduction and among those who have heard of marriage by abduction, the percentage who support the practice, by selected background characteristics, Ethiopia 2005

Background characteristic	Percentage of women who have heard of marriage by abduction	Percentage of women married by abduction	Number of women	Among women who have heard of marriage by abduction: Percentage who believe practice should be continued	Among women who have heard of marriage by abduction: Number of women
Age					
15-19	83.2	2.5	3,266	2.0	2,717
20-24	84.7	7.3	2,547	2.8	2,158
25-29	83.1	9.5	2,517	3.7	2,092
30-34	82.6	11.4	1,808	3.5	1,493
35-39	81.8	9.6	1,602	3.0	1,310
40-44	83.9	9.9	1,187	2.2	997
45-49	82.1	10.4	1,143	3.3	938
Residence					
Urban	93.7	4.7	2,499	1.1	2,342
Rural	80.9	8.5	11,571	3.3	9,363
Region					
Tigray	80.6	1.4	919	1.1	741
Affar	79.1	6.1	146	17.9	116
Amhara	53.8	2.4	3,482	3.2	1,872
Oromiya	98.0	10.8	5,010	2.8	4,909
Somali	48.0	4.6	486	17.4	233
Benishangul-Gumuz	58.9	3.5	124	5.1	73
SNNP	96.2	12.9	2,995	2.0	2,882
Gambela	53.6	9.2	44	4.2	24
Harari	99.0	6.9	39	1.8	38
Addis Ababa	99.0	4.3	756	0.6	749
Dire Dawa	99.8	6.6	69	0.7	69
Education					
No education	78.0	9.0	9,271	3.7	7,227
Primary	91.2	7.1	3,123	2.1	2,847
Secondary and higher	97.4	2.5	1,675	0.5	1,631
Wealth quintile					
Lowest	75.3	7.7	2,428	6.0	1,827
Second	80.1	10.1	2,643	3.2	2,118
Middle	81.6	8.6	2,732	3.1	2,229
Fourth	82.1	7.7	2,647	2.5	2,172
Highest	92.8	5.7	3,621	1.1	3,359
Total	83.2	7.8	14,070	2.9	11,705

Eight percent of women reported that they had been married by abduction. This is most commonly reported by women age 30-34, rural women, women residing in SNNP and Oromiya and women with no education. This practice is least common among the wealthiest group of women.

As seen in Table 16.17, there is very little support among Ethiopian women for the continuation of this harmful traditional practice. Women age 25-29, women residing in rural areas, women from Affar and Somali, women with no education and women in the lowest wealth quintile are more likely than their counterparts to support the continuation of this practice.

About 1 percent of daughters of women with at least one daughter was reported to have been married by abduction, with the practice more common among daughters of older women age 45-49 and daughters of women with no education (Table 16.18). Differences by other background characteristics are small.

Table 16.18 Daughter's marriage by abduction

Among women with at least one living daughter, percentage with at least one daughter who ever had a marriage by abduction, according to selected background characteristics, Ethiopia 2005

Mother's background characteristic	Percentage of women with at least one daughter who was married by abduction	Number of women with at least one daughter
Age		
15-19	0.0	222
20-24	0.0	918
25-29	0.0	1,735
30-34	0.6	1,516
35-39	0.8	1,422
40-44	4.0	1,069
45-49	4.9	1,039
Residence		
Urban	1.5	914
Rural	1.4	7,007
Region		
Tigray	0.2	524
Affar	1.8	82
Amhara	0.3	2,014
Oromiya	2.0	2,873
Somali	0.5	323
Benishangul-Gumuz	0.7	74
SNNP	2.3	1,733
Gambela	1.5	25
Harari	2.2	17
Addis Ababa	1.9	223
Dire Dawa	1.2	32
Wealth quintile		
Lowest	1.2	1,613
Second	2.3	1,607
Middle	0.9	1,578
Fourth	1.1	1,603
Highest	1.7	1,518
Education		
No education	1.7	6,343
Primary	0.2	1,131
Secondary and higher	0.5	446
Total	1.4	7,920

16.11.4 Obstetric Fistula

The 2005 EDHS included a series of questions on obstetric fistula, a condition that develops when the blood supply to the tissues of the vagina, bladder, and/or rectum is cut off during prolonged obstructed labour, resulting in the formation of an opening through which urine and/or faeces pass uncontrollably. Women who develop fistulas are often socially rejected.

All women were asked if they had heard of obstetric fistula, and if they had, whether they themselves had experienced the condition. Those who reported suffering from obstetric fistula were asked if they had ever been treated for it. These women were also asked if there were any other women in the household who suffered from it and if so how many.

One in four women interviewed in the survey had heard of obstetric fistula. Knowledge of obstetric fistula is higher among urban women, women residing in Addis Ababa, highly educated women, and women in the highest wealth quintile (Table 16.19). There is no uniform pattern of knowledge by age.

Table 16.19 shows that 1 percent of women who have ever had a birth reported experiencing obstetric fistula. Older women (age 40 and above) and very young women (age 15-19) are slightly more likely to report the condition, as are women residing in urban areas. Women in the Tigray and SNNP regions are relatively more likely to have experienced obstetric fistula.

A very small number of women (less than 1 percent) reported ever being treated for obstetric fistula.

According to information gathered from women who had heard of the condition, 4 percent of other women resident in the households also suffered from obstetric fistula.

Table 16.19 Prevalence of obstetric fistula

Percentage of women who have heard of obstetric fistula, among women who have ever given birth the percentage who experienced obstetric fistula and percentage who have been treated for obstetric fistula, and among women who have heard of obstetric fistula the percentage who live in a household where someone else experienced obstetric fistula, according to selected background characteristics, Ethiopia 2005

			Among women who have ever given birth			Among women who have heard of obstetric fistula	
Background characteristic	Percentage of women who have heard of obstetric fistula	Number	Percentage who have experienced obstetric fistula	Percentage ever treated for obstetric fistula	Number	Percentage of other women in household with obstetric fistula	Number
Age							
15-19	19.7	3,266	2.0	0.6	443	4.1	642
20-24	24.5	2,547	0.9	0.2	1,535	3.2	625
25-29	24.0	2,517	0.6	0.1	2,194	3.5	604
30-34	21.8	1,808	0.6	0.1	1,701	4.2	395
35-39	24.8	1,602	1.1	0.3	1,559	4.2	398
40-44	26.1	1,187	1.6	0.9	1,155	4.0	310
45-49	25.8	1,143	1.9	0.8	1,125	4.0	295
Education							
No education	16.3	9,271	1.0	0.3	7,644	4.5	1,508
Primary	24.3	3,123	1.3	0.4	1,454	4.4	758
Secondary and higher	59.8	1,675	1.0	0.3	615	2.3	1,003
Residence							
Urban	50.1	2,499	1.4	0.7	1,232	2.2	1,251
Rural	17.4	11,571	1.0	0.3	8,480	4.8	2,018
Region							
Tigray	37.8	919	1.6	0.4	635	13.4	347
Afar	11.7	146	1.0	0.6	106	3.8	17
Amhara	16.0	3,482	0.5	0.5	2,566	1.6	557
Oromiya	23.0	5,010	1.2	0.2	3,467	2.1	1,153
Somali	7.2	486	0.0	0.0	382	5.9	35
Benishangul-Gumuz	14.3	124	0.6	0.0	94	2.3	18
SNNP	19.9	2,995	1.5	0.4	2,056	5.0	597
Gambela	10.9	44	1.1	1.0	34	3.9	5
Harari	46.4	39	0.1	0.0	23	2.1	18
Addis Ababa	66.1	756	1.0	0.5	308	2.3	500
Dire Dawa	31.8	69	1.0	0.2	42	1.5	22
Wealth quintile							
Lowest	15.1	2,428	1.3	0.3	1,920	5.0	367
Second	16.9	2,643	0.9	0.2	1,997	3.1	446
Middle	16.2	2,732	0.6	0.1	1,946	6.8	442
Fourth	19.5	2,647	1.6	0.4	1,902	5.6	515
Highest	41.4	3,621	1.0	0.6	1,948	2.3	1,498
Total	23.2	14,070	1.0	0.3	9,713	3.8	3,269

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SAMPLE IMPLEMENTATION

Appendix A

Table A.1 Sample implementation: women

Percent distribution of households and eligible women by results of the household and individual interviews, and household, eligible women and overall response rates, according to urban-rural residence and region, Ethiopia 2005

	Residence		Region											
Result	Urban	Rural	Tigray	Affar	Amhara	Oromiya	Somali	Beni-shangul-Gumuz	SNNP	Gambela	Harari	Addis Ababa	Dire Dawa	Total
Selected households														
Completed (C)	91.9	94.4	95.0	86.2	95.7	96.2	88.3	91.1	96.1	88.6	94.2	95.2	93.5	93.7
Household present but no competent respondent at home (HP)	1.4	0.6	1.0	0.7	0.8	0.2	1.6	1.4	0.4	1.0	2.0	0.6	1.4	0.9
Postponed (P)	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
Refused (R)	0.5	0.2	0.2	1.2	0.1	0.1	0.3	0.2	0.3	0.2	0.4	0.4	0.4	0.3
Dwelling not found (DNF)	0.4	0.2	0.0	0.4	0.1	0.0	0.9	0.1	0.1	0.2	0.1	0.1	1.1	0.2
Household absent (HA)	1.5	1.5	1.0	1.6	1.2	1.0	4.1	1.5	1.2	3.6	0.8	0.9	1.1	1.5
Dwelling vacant/address not a dwelling (DV)	3.2	1.4	1.9	4.3	1.0	1.6	1.1	2.8	1.2	5.0	1.6	1.1	2.0	1.9
Dwelling destroy (DD)	0.5	1.3	0.3	4.2	0.7	0.8	2.0	2.9	0.3	1.2	0.4	0.8	0.1	1.1
Other (O)	0.5	0.4	0.4	1.4	0.3	0.1	1.7	0.0	0.2	0.2	0.4	0.7	0.5	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	3,989	10,656	1,349	935	2,158	2,241	901	954	2,012	925	960	1,400	810	14,645
Household response rate (HRR)	97.4	98.9	98.7	97.3	98.9	99.6	97.0	98.2	99.1	98.4	97.3	98.7	97.1	98.5
Eligible women														
Completed (EWC)	94.4	96.2	97.6	91.9	97.3	96.5	91.4	97.5	97.8	92.4	92.5	94.5	95.2	95.6
Not at home (EWNH)	3.2	1.9	1.2	4.7	1.5	1.8	4.5	0.5	1.4	3.5	3.5	3.3	2.8	2.3
Postponed (EWP)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Refused (EWR)	1.4	0.8	0.1	2.2	0.3	0.6	2.3	0.9	0.2	2.7	2.2	1.2	1.3	1.0
Partly completed (EWPC)	0.2	0.3	0.2	0.3	0.1	0.2	1.1	0.5	0.2	0.6	0.2	0.2	0.1	0.3
Incapacitated (EWI)	0.5	0.7	0.9	0.7	0.7	0.7	0.3	0.7	0.4	0.4	0.9	0.6	0.2	0.6
Other (EWO)	0.3	0.2	0.1	0.1	0.2	0.2	0.4	0.0	0.0	0.4	0.7	0.2	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	4,686	10,031	1,288	859	1,996	2,312	732	868	2,135	789	912	1,978	848	14,717
Eligible women response rate (EWRR)	94.4	96.2	97.6	91.9	97.3	96.5	91.4	97.5	97.8	92.4	92.5	94.5	95.2	95.6
Overall response rate (ORR)	92.0	95.1	96.3	89.4	96.3	96.1	88.6	95.7	96.8	91.0	90.1	93.3	92.4	94.2

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

[2] Using the number of eligible women falling into specific response categories, the eligible woman response rate (EWRR) is calculated as:

$$\frac{100 * EWC}{EWC + EWNH + EWP + EWR + EWPC + EWI + EWO}$$

[3] The overall response rate (ORR) is calculated as:

$$ORR = HRR * EWRR/100$$

Table A.2 Sample implementation: men

Percent distribution of households and eligible men by results of the household and individual interviews, and household, eligible men and overall response rates, according to urban-rural residence and region, Ethiopia 2005

	Residence		Region											
Result	Urban	Rural	Tigray	Affar	Amhara	Oromiya	Somali	Beni-shangul-Gumuz	SNNP	Gambela	Harari	Addis Ababa	Dire Dawa	Total
Selected households														
Completed (C)	91.7	94.1	94.9	87.6	95.0	95.4	89.0	90.3	95.4	89.2	93.5	94.8	94.1	93.4
Household present but no competent respondent at home (HP)	1.2	0.6	1.4	0.9	0.7	0.2	1.1	1.3	0.3	1.3	1.5	0.4	1.3	0.8
Postponed (P)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Refused (R)	0.6	0.3	0.3	1.5	0.2	0.2	0.2	0.4	0.2	0.2	0.4	0.6	0.0	0.3
Dwelling not found (DNF)	0.4	0.1	0.0	0.2	0.2	0.0	0.9	0.0	0.2	0.2	0.0	0.3	0.8	0.2
Household absent (HA)	2.1	1.6	0.9	1.7	1.3	1.1	5.3	1.7	1.7	4.1	1.0	0.9	1.8	1.7
Dwelling vacant/address not a dwelling (DV)	3.1	1.5	1.8	2.8	1.3	2.0	0.7	2.9	1.5	4.3	2.5	1.5	1.3	1.9
Dwelling destroy (DD)	0.5	1.3	0.3	3.7	0.9	1.0	1.6	3.4	0.4	0.6	0.4	0.9	0.3	1.1
Other (O)	0.5	0.4	0.3	1.5	0.5	0.0	1.1	0.0	0.3	0.0	0.6	0.6	0.5	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	1,947	5,213	651	458	1,040	1,081	436	476	1,010	462	480	675	391	7,160
Household response rate (HRR)	97.6	98.9	98.3	97.1	98.9	99.5	97.5	98.2	99.3	98.1	98.0	98.6	97.9	98.6
Eligible men														
Completed (EMC)	83.6	91.2	90.9	81.1	93.5	92.5	83.6	94.8	92.1	85.2	84.9	83.7	84.0	89.0
Not at home (EMNH)	11.2	6.4	6.6	16.3	4.8	5.4	10.7	2.7	6.0	9.8	10.9	9.7	13.2	7.8
Postponed (EMP)	0.2	0.1	0.0	0.0	0.0	0.2	0.3	0.0	0.1	0.8	0.2	0.1	0.0	0.1
Refused (EMR)	2.6	1.2	0.9	1.6	0.8	0.5	3.6	1.2	0.8	3.0	2.1	3.8	1.5	1.6
Partly completed (EMPC)	0.4	0.1	0.0	0.8	0.0	0.1	0.3	0.2	0.1	0.5	0.2	0.1	0.3	0.2
Incapacitated (EMI)	1.3	0.7	0.7	0.3	0.7	0.9	1.2	1.0	0.6	0.3	1.2	1.7	1.0	0.9
Other (EMO)	0.8	0.2	0.9	0.0	0.1	0.4	0.3	0.0	0.3	0.5	0.5	0.8	0.0	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	1,948	4,830	563	387	959	1,126	336	403	956	398	423	834	393	6,778
Eligible men response rate (EMRR)	83.6	91.2	90.9	81.1	93.5	92.5	83.6	94.8	92.1	85.2	84.9	83.7	84.0	89.0
Overall response rate (ORR)	81.6	90.2	89.4	78.8	92.5	92.0	81.5	93.1	91.4	83.6	83.2	82.5	82.2	87.7

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

[2] Using the number of eligible men falling into specific response categories, the eligible man response rate (EWRR) is calculated as:

$$\frac{100 * EMC}{EMC + EMNH + EMP + EMR + EMPC + EMI + EMO}$$

[3] The overall response rate (ORR) is calculated as:

$$ORR = HRR * EMRR/100$$

Table A.3 Coverage of HIV testing among eligible respondents by social and demographic characteristics: women

Percent distribution of women age 15-49 by HIV testing status, according to social and demographic characteristics (unweighted), Ethiopia 2005

Characteristic	Tested	Refused	Absent/ other/ missing	Total	Number
Marital status					
Never married	84.9	13.8	1.3	100.0	1,834
Ever had sexual intercourse	85.3	13.3	1.4	100.0	1,651
Never had sexual intercourse	81.4	18.0	0.5	100.0	183
Married / living together	88.7	10.4	0.9	100.0	4,189
Divorced or separated	85.1	13.5	1.4	100.0	289
Widowed	84.6	14.8	0.6	100.0	500
Type of union					
In polygynous union	91.5	7.3	1.1	100.0	531
Not in polygynous union	88.4	10.8	0.8	100.0	3,606
Not currently in union	84.9	14.0	1.2	100.0	2,623
Ever had sexual intercourse					
Yes	87.8	11.3	0.9	100.0	5,150
No	85.3	13.3	1.4	100.0	1,662
Currently pregnant					
Yes	90.5	9.2	0.4	100.0	524
Not pregnant/not sure	87.0	12.0	1.0	100.0	6.288
Total	87.2	11.8	1.0	100.0	6,812

Note: Totals include a small number of cases missing data on a particular characteristic. Table is based only on respondents who were interviewed, since these characteristics are obtained from the individual interview.

Table A.4 Coverage of HIV testing among eligible respondents by social and demographic characteristics: men

Percent distribution of men age 15-59 by testing status, according to social and demographic characteristics (unweighted), Ethiopia 2005

Characteristic	Tested	Refused	Absent/ other/ missing	Total	Number
Marital status					
Never married	82.7	16.0	1.3	100.0	2,460
Ever had sexual intercourse	84.6	14.1	1.3	100.0	1,838
Never had sexual intercourse	77.0	21.4	1.6	100.0	622
Married/living together	86.4	12.6	1.0	100.0	3,332
Divorced or separated	74.6	25.4	0.0	100.0	59
Widowed	83.5	15.4	1.1	100.0	182
Type of union					
In polygynous union	86.9	12.6	0.5	100.0	222
Not in polygynous union	86.3	12.6	1.1	100.0	3,110
Not currently in union	82.6	16.1	1.3	100.0	2,701
Ever had sexual intercourse					
Yes	84.7	14.2	1.1	100.0	4,189
No	84.6	14.2	1.2	100.0	1,844
Circumcision status					
Circumcised	84.2	14.7	1.1	100.0	5,575
Not circumcised	90.8	8.3	0.9	100.0	445
Times slept away from home in past 12 months					
0	84.8	14.1	1.1	100.0	4,107
1-2	86.2	12.5	1.3	100.0	1,029
3-5	81.2	18.0	0.8	100.0	490
6+	84.1	14.4	1.5	100.0	396
Time away in past 12 months					
More than 1 month	81.4	17.2	1.4	100.0	431
Less than 1 month	85.7	13.2	1.2	100.0	1,459
Never away	84.8	14.1	1.1	100.0	4,107
Total	75.5	17.1	7.3	100.0	6,778

Note: Totals include a small number of cases missing data on a particular characteristic. Table is based only on respondents who were interviewed, since these characteristics are obtained from the individual interview.

Table A.5 Coverage of HIV testing by sexual behaviour characteristics: women

Percent distribution of women who ever had sexual intercourse by HIV test status, according to sexual behaviour characteristics (unweighted), Ethiopia 2005

Sexual behaviour characteristic	Tested	Refused	Absent/ other/ missing	Total	Number
Age at first sexual intercourse					
15 or less	88.5	10.4	1.0	100.0	2,480
16-17	89.7	9.7	0.6	100.0	1,057
18-19	86.9	12.3	0.9	100.0	800
20+	84.3	14.9	0.7	100.0	804
Non numeric	88.9	11.1	0.0	100.0	9
Higher-risk intercourse in past 12 months					
Had higher risk sex	84.8	14.5	0.6	100.0	165
Had sex, not higher risk	89.2	10.0	0.7	100.0	4,034
No sex in past 12 months	82.5	16.0	1.5	100.0	951
Number of actual partners in past 12 months					
0	83.3	15.9	0.9	100.0	933
1	89.1	10.1	0.7	100.0	4,184
2+	80.0	20.0	0.0	100.0	15
Number of higher-risk partners in past 12 months					
0	88.1	11.1	0.8	100.0	4,926
1	86.4	13.1	0.5	100.0	199
2+	85.7	14.3	0.0	100.0	7
Condom use					
Ever used condom	78.9	21.1	0.0	100.0	152
Never used condom	88.1	11.0	0.9	100.0	4,998
Condom used at first sexual intercourse[1]					
Used at first sex	84.2	15.8	0.0	100.0	57
Did not use at first sex	87.7	11.4	1.0	100.0	1,239
Missing	81.6	15.8	2.6	100.0	76
Condom use at last sexual intercourse in past 12 months[2]					
Used condom last sex	80.8	19.2	0.0	100.0	73
No condom at last sex	89.2	10.1	0.8	100.0	4,124
No sex past 12 months	82.6	15.9	1.5	100.0	953
Condom use at last higher-risk intercourse in past 12 months[2]					
Used condom	80.4	19.6	0.0	100.0	46
Did not use condom	86.6	12.6	0.8	100.0	119
Number of lifetime partners					
1	87.6	11.6	0.7	100.0	3,752
2	88.9	10.2	0.9	100.0	1,011
3-4	90.1	8.8	1.0	100.0	294
5-9	91.5	8.5	0.0	100.0	47
10+	77.8	22.2	0.0	100.0	9
HIV testing status[3]					
Previously tested	81.4	17.8	0.8	100.0	258
Previously tested, received result of last test	81.8	17.4	0.8	100.0	253
Previously tested, did not receive result of last test	60.0	40.0	0.0	100.0	5
Not tested previously	89.3	10.1	0.6	100.0	4,084
Total	87.8	11.3	0.9	100.0	5,150

Note: Totals include a small number of cases missing data on a particular characteristic. Table is based only on respondents who were interviewed, since these characteristics are obtained from the individual interview.

[1] Based on those age 15-24 only

[2] Based on respondents who had sexual intercourse in the past 12 months

[3] Excludes women who have not heard of AIDS

Table A.6 Coverage of HIV testing by sexual behaviour characteristics: men

Percent distribution of men who ever had sexual intercourse by HIV test status, according to sexual behaviour characteristics (unweighted), Ethiopia 2005

Sexual behaviour characteristic	Tested	Refused	Absent/ other/ missing	Total	Number
Age at first sexual intercourse					
15 or less	88.2	11.0	0.8	100.0	382
16-17	81.4	17.6	1.0	100.0	598
18-19	82.2	16.6	1.1	100.0	963
20+	86.1	12.7	1.2	100.0	2,173
Non numeric	83.6	15.1	1.4	100.0	73
Higher-risk intercourse in past 12 months					
Had higher risk sex	76.0	22.6	1.3	100.0	446
Had sex, not higher risk	86.7	12.2	1.1	100.0	3,237
No sex in past 12 months	79.6	19.4	1.0	100.0	506
Number of partners in past 12 months					
0	78.6	20.1	1.2	100.0	1,236
1	87.3	11.7	1.1	100.0	2,941
2+	90.0	10.0	0.0	100.0	10
Number of higher-risk partners in past 12 months					
0	85.8	13.2	1.1	100.0	3,723
1	76.3	22.2	1.5	100.0	401
2+	75.9	24.1	0.0	100.0	58
Condom used at first sexual intercourse[2]					
Used at first sex	76.7	21.8	1.5	100.0	133
Did not use at first sex	86.9	12.5	0.6	100.0	489
Condom use at last sexual intercourse in past 12 months[1]					
Used condom last sex	70.2	28.7	1.1	100.0	282
No condom at last sex	86.7	12.2	1.1	100.0	3,402
No sex past 12 months	79.6	19.4	1.0	100.0	505
Condom use at last higher-risk intercourse in past 12 months[1]					
Used condom	69.8	28.9	1.2	100.0	242
Did not use condom	83.3	15.2	1.5	100.0	204
Paid for sexual intercourse in past 12 months					
Used condom	82.6	17.4	0.0	100.0	46
Did not use condom	90.3	6.5	3.2	100.0	31
No paid sex	84.7	14.2	1.1	100.0	4,111
Number of lifetime partners					
1	85.0	13.9	1.1	100.0	1,728
2	85.6	13.7	0.7	100.0	890
3-4	84.6	14.2	1.2	100.0	830
5-9	84.0	14.0	2.0	100.0	406
10+	82.9	16.0	1.1	100.0	263
HIV testing status					
Previously tested	79.2	19.5	1.4	100.0	370
Previously tested, received result of last test	77.9	20.6	1.4	100.0	349
Previously tested, did not receive result of last test	100.0	0.0	0.0	100.0	21
Not tested previously	85.5	13.5	1.0	100.0	3,677
Total	84.7	14.2	1.1	100.0	4,189

Note: Totals include a small number of cases missing data on a particular characteristic. Table is based only on respondents who were interviewed, since these characteristics are obtained from the individual interview.

[1] Based on respondents who had sexual intercourse in the past 12 months

[2] Based on those age 15-24 only

ESTIMATES OF SAMPLING ERRORS

Appendix B

The estimates from a sample survey are affected by two types of errors: (1) nonsampling errors, and (2) sampling errors. Nonsampling 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 Ethiopia Demographic and Health Survey (EDHS) to minimize this type of error, nonsampling 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 EDHS 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 EDHS sample is the result of a multi-stage stratified design, and, consequently, it was necessary to use more complex formulae. The computer software used to calculate sampling errors for the 2005 EDHS is the ISSA Sampling Error Module. This module used the Taylor linearization method of variance estimation for survey estimates that are means or proportions. The Jackknife repeated replication method is used for variance estimation of more complex statistics such as fertility and mortality rates.

The Taylor linearization method treats any percentage or average as a ratio estimate, $r = y/x$, where y represents the total sample value for variable y, and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula given below, with the standard error being the square root of the variance:

$$SE^2(r) = var(r) = \frac{1-f}{x^2}\sum_{h=1}^{H}\left[\frac{m_h}{m_h-1}\left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h}\right)\right]$$

in which

$$z_{hi} = y_{hi} - rx_{hi}\text{, and } z_h = y_h - rx_h$$

where h represents the stratum which varies from 1 to H,
m_h is the total number of clusters selected in the hth stratum,

y_{hi} is the sum of the weighted values of variable y in the ith cluster in the hth stratum,
x_{hi} is the sum of the weighted number of cases in the ith cluster in the hth stratum, and
f is the overall sampling fraction, which is so small that it is ignored.

The Jackknife repeated replication method derives estimates of complex rates from each of several replications of the parent sample, and calculates standard errors for these estimates using simple formulae. Each replication considers *all but one* clusters in the calculation of the estimates. Pseudo-independent replications are thus created. In the 2005 EDHS, there were 535 non-empty clusters. Hence, 535 replications were created. The variance of a rate r is calculated as follows:

$$SE^2(r) = var(r) = \frac{1}{k(k-1)} \sum_{i=1}^{k} (r_i - r)^2$$

in which

$$r_i = kr - (k-1)r_{(i)}$$

where r is the estimate computed from the full sample of 535 clusters,
$r_{(i)}$ is the estimate computed from the reduced sample of 534 clusters (i^{th} cluster excluded), and
k is the total number of clusters.

In addition to the standard error, ISSA computes the design effect (DEFT) for each estimate, which is defined as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient design. ISSA also computes the relative error and confidence limits for the estimates.

Sampling errors for the 2005 EDHS are calculated for selected variables considered to be of primary interest for the woman's survey and the man's surveys, respectively. The results are presented in this appendix for the country as a whole, for urban and rural areas, and for each of the 9 regions (Tigray, Affar, Amhara, Oromiya, Somali, Benishangul-Gumuz, SNNP, Gambela and Harari) and the two city administration areas (Addis Ababa and Dire Dawa). For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table B.1. Tables B.2 to B.14 present the value of the statistic (R), its standard error (SE), the number of unweighted (N) and weighted (WN) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits (R±2SE), for each variable. The DEFT is considered undefined when the standard error considering simple random sample is zero (when the estimate is close to 0 or 1). In the case of the total fertility rate, the number of unweighted cases is not relevant, as there is no known unweighted value for woman-years of exposure to childbearing.

The confidence interval (e.g., as calculated for *children ever born to women aged 40-49*) can be interpreted as follows: the overall average from the national sample is 6.931 and its standard error is 0.071. Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate, i.e., 6.931±2×0.071. 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 6.788 and 7.074.

Sampling errors are analyzed for the national woman sample and for two separate groups of estimates: (1) means and proportions, and (2) complex demographic rates. The relative standard errors (SE/R) for the means and proportions range between 0.6 percent and 36.9 percent with an average of 6.3 percent; the highest relative standard errors are for estimates of very low values (e.g., *currently using*

female sterilization). If estimates of very low values (less than 10 percent) were removed, then the average drops to 3.6 percent. So in general, the relative standard error for most estimates for the country as a whole is small, except for estimates of very small proportions. The relative standard error for the total fertility rate is small, 2.6 percent. However, for the mortality rates, the average relative standard error is much higher, 6.0 percent.

There are differentials in the relative standard error for the estimates of sub-populations. For example, for the variable *want no more children*, the relative standard errors as a percent of the estimated mean for the whole country, and for the urban areas are 1.9 percent and 5.3 percent, respectively.

For the total sample, the value of the design effect (DEFT), averaged over all variables, is 1.67 which means that, due to multi-stage clustering of the sample, the average standard error is increased by a factor of 1.67 over that in an equivalent simple random sample.

Table B.1 List of selected variables for sampling errors, Ethiopia 2005

Variable	Estimate	Base population
	WOMEN	
Urban residence	Proportion	All women 15-49
Literate	Proportion	All women 15-49
No education	Proportion	All women 15-49
Secondary education or higher	Proportion	All women 15-49
Net attendance ratio for primary school	Ratio	Children 7-12 years
Never married	Proportion	All women 15-49
Currently married/in union	Proportion	All women 15-49
Married before age 20	Proportion	Women age 20-49
Currently pregnant	Proportion	All women 15-49
Children ever born	Mean	All women 15-49
Children surviving	Mean	All women 15-49
Children ever born to women age 40-49	Mean	Women age 40-49
Knows any contraceptive method	Proportion	All women 15-49
Ever using contraceptive method	Proportion	Currently married women 15-49
Currently using any contraceptive method	Proportion	Currently married women 15-49
Currently using pill	Proportion	Currently married women 15-49
Currently using IUD	Proportion	Currently married women 15-49
Currently using female sterilization	Proportion	Currently married women 15-49
Currently using rythm method	Proportion	Currently married women 15-49
Obtained method from public sector source	Proportion	Currently married women 15-49
Want no more children	Proportion	Currently married women 15-49
Want to delay birth at least 2 years	Proportion	Currently married women 15-49
Ideal family size	Mean	All women 15-49
Perinatal mortality (0-6 years)	Rate	Births in last 5 years
Mothers received tetanus injection for last birth	Proportion	Women with at least 1 live birth in past 5 years
Mothers received medical assistance at delivery	Proportion	Births in last 5 years
Had diarrhoea in two weeks before survey	Proportion	Children under 5 years
Treated with oral rehydration salts (ORS)	Proportion	Children under 5 years with diarrhoea in past two weeks
Taken to a health provider	Proportion	Children with diarrhoea in past two weeks
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 under 5 years who were measured
Weight-for-height (below -2SD)	Proportion	Children under 5 years who were measured
Weight-for-age (below -2SD)	Proportion	Children under 5 years who were measured
Anaemic (children)	Proportion	Children under 5 years
Anaemic (women)	Proportion	All women 15-49
BMI <18.5	Proportion	All women 15-49
Has heard of HIV/AIDS	Proportion	All women 15-49
Knows about condoms	Proportion	All women 15-49
Knows about limiting partners	Proportion	All women 15-49
Had 2+ sex partners in past 12 months	Proportion	All women 15-49
High-risk sex	Proportion	All women 15-49 with sexual intercourse in past 12 months
Condom use at high-risk sex	Proportion	All women 15-49 with high-risk intercourse in past 12 months
Abstinence among youth	Proportion	Women 15-24
Sexually active in past 12 months among youth	Proportion	Women 15-24
Had an injection in past 12 months	Proportion	Women 15-24
Had HIV test and received results in past 12 months	Proportion	All women 15-49
Accepting attitudes towards people with HIV	Proportion	All women 15-49 who have heard of HIV/AIDS
HIV prevalence among tested for HIV 15-49	Proportion	All women 15-49 with blood sample tested at lab
Total Fetility Rate (3 years)	Rate	All women 15-49
Neonatal NN rate (0-4 years)	Rate	Children exposed to the risk of mortality
Postneonatal PNN rate (0-4 years)	Rate	Children exposed to the risk of mortality
Infant ${}_1q_0$ rate (0-4 years)	Rate	Children exposed to the risk of mortality
Infant ${}_1q_0$rate (5-9 years_	Rate	Children exposed to the risk of mortality
Infant ${}_1q_0$ rate (10-14 years)	Rate	Children exposed to the risk of mortality
Child ${}_4q_1$ rate (0-4 years)	Rate	Children exposed to the risk of mortality
Under five ${}_5q_0$ (0-4 years)	Rate	Children exposed to the risk of mortality
Maternal mortality rate (0-6 years)	Rate	All women 15-49
	MEN	
Urban residence	Proportion	All men 15-59
Literate	Proportion	All men 15-59
No education	Proportion	All men 15-59
Secondary education or higher	Proportion	All men 15-59
Never married	Proportion	All men 15-59
Currently married (in union)	Proportion	All men 15-59
Married before age 20	Proportion	All men 20-54
Want no more children	Proportion	Currently married men 15-59
Want to delay birth at least 2 years	Proportion	Currently married men 15-59
Ideal family size	Mean	All men 15-59
Has heard of HIV/AIDS (15-49)	Proportion	All men 15-49
Knows about condoms (15-49)	Proportion	All men 15-49
Knows about limiting partners (15-49)	Proportion	All men 15-49
Had two+ sex partners in past 12 months (15-49)	Proportion	All men 15-49
High-risk sex (15-49)	Proportion	All men 15-49 with sexual intercourse in past 12 months
High-risk sex (15-59)	Proportion	All men 15-59 with sexual intercourse in past 12 months
Condom use at high-risk sex (age 15-49)	Proportion	All men 15-49 with sexual intercourse in past 12 months
Condom use at high-risk sex (age 15-59)	Proportion	All men 15-59 with sexual intercourse in past 12 months
Abstinence among youth	Proportion	All men 15-24
Sexually active in past 12 months among youth	Proportion	All men 15-24
Paid for sexual intercourse in past 12 months	Proportion	All men 15-49
Had an injection in past 12 months (age15-49)	Proportion	All men 15-49
Had an injection in past 12 months (age 15-59)	Proportion	All men 15-59
HIV test and received results past 12 months (15-49)	Proportion	All men 15-49
Accepting attitudes towards people with HIV (15-49)	Proportion	All men 15-49 who have heard of HIV/AIDS
HIV prevalence among tested for HIV 15-49	Proportion	All men 15-49 with blood sample tested at lab
HIV prevalence among tested for HIV 15-59	Proportion	All men 15-59 with blood sample tested at lab

Table B.2 Sampling errors for national sample, Ethiopia 2005

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban residence	0.178	0.007	14070	14070	2.317	0.042	0.163	0.193
Literate	0.292	0.009	14070	14070	2.278	0.030	0.274	0.309
No education	0.659	0.010	14070	14070	2.465	0.015	0.639	0.679
Secondary education or higher	0.119	0.006	14070	14070	2.143	0.049	0.107	0.131
Net attendance ratio for primary school	0.423	0.010	12462	13485	2.128	0.024	0.403	0.443
Never married	0.250	0.006	14070	14070	1.759	0.026	0.237	0.263
Currently married/in union	0.644	0.007	14070	14070	1.692	0.011	0.631	0.658
Married before age 20	0.748	0.007	10818	10804	1.668	0.009	0.734	0.762
Currently pregnant	0.084	0.003	14070	14070	1.420	0.039	0.077	0.091
Children ever born	3.141	0.038	14070	14070	1.437	0.012	3.065	3.216
Children surviving	2.586	0.032	14070	14070	1.494	0.013	2.522	2.651
Children ever born to women age 40-49	6.931	0.071	2261	2330	1.180	0.010	6.788	7.074
Knows any contraceptive method	0.875	0.006	8644	9066	1.810	0.007	0.862	0.888
Ever using contraceptive method	0.241	0.009	8644	9066	1.881	0.036	0.224	0.258
Currently using any contraceptive method	0.147	0.007	8644	9066	1.716	0.044	0.134	0.160
Currently using pill	0.031	0.003	8644	9066	1.659	0.100	0.025	0.037
Currently using IUD	0.002	0.000	8644	9066	0.954	0.220	0.001	0.003
Currently using female sterilization	0.002	0.000	8644	9066	0.999	0.266	0.001	0.003
Currently using rhythm method	0.006	0.001	8644	9066	1.093	0.158	0.004	0.007
Obtained method from public sector source	0.795	0.020	1496	1324	1.960	0.026	0.754	0.836
Want no more children	0.421	0.008	8644	9066	1.539	0.019	0.404	0.437
Want to delay birth at least 2 years	0.354	0.008	8644	9066	1.588	0.023	0.337	0.370
Ideal family size	4.498	0.055	12728	12602	1.949	0.012	4.389	4.607
Perinatal mortality (0-6 years)	37.241	2.698	9955	11280	1.400	0.072	31.845	42.636
Mothers received tetanus injection for last birth	0.322	0.011	6589	7307	1.963	0.033	0.301	0.344
Mothers received medical assistance at delivery	0.057	0.004	9861	11163	1.608	0.070	0.049	0.065
Had diarrhoea in two weeks before survey	0.180	0.006	9002	10109	1.579	0.035	0.167	0.193
Treated with oral rehydration salts (ORS)	0.199	0.016	1545	1819	1.586	0.078	0.168	0.230
Taken to a health provider	0.222	0.016	1545	1819	1.509	0.070	0.191	0.254
Vaccination card seen	0.369	0.017	1697	1877	1.478	0.045	0.336	0.402
Received BCG	0.604	0.020	1697	1877	1.787	0.034	0.564	0.645
Received DPT (3 doses)	0.319	0.019	1697	1877	1.718	0.058	0.281	0.356
Received polio (3 doses)	0.447	0.020	1697	1877	1.734	0.045	0.407	0.487
Received measles	0.349	0.018	1697	1877	1.617	0.051	0.313	0.384
Fully immunized	0.204	0.015	1697	1877	1.615	0.074	0.173	0.234
Height-for-age (below -2SD)	0.465	0.011	4130	4586	1.433	0.024	0.443	0.487
Weight-for-height (below -2SD)	0.105	0.006	4130	4586	1.375	0.061	0.092	0.118
Weight-for-age (below -2SD)	0.384	0.011	4130	4586	1.476	0.029	0.362	0.406
Anaemic (children)	0.535	0.011	3580	4138	1.371	0.020	0.514	0.557
Anaemic (women)	0.266	0.009	5963	6141	1.576	0.033	0.248	0.283
BMI <18.5	0.265	0.009	5988	5901	1.512	0.033	0.247	0.282
Has heard of HIV/AIDS	0.899	0.006	14070	14070	2.249	0.006	0.887	0.910
Knows about condoms	0.402	0.009	14070	14070	2.235	0.023	0.383	0.420
Knows about limiting partners	0.625	0.009	14070	14070	2.308	0.015	0.606	0.643
Had 2+ sex partners in past 12 months	0.002	0.001	4203	4354	1.179	0.369	0.001	0.004
High-risk sex	0.027	0.004	4203	4354	1.424	0.131	0.020	0.034
Condom use at high-risk sex	0.236	0.052	165	119	1.577	0.222	0.131	0.340
Abstinence among youth	0.957	0.007	3283	3165	1.944	0.007	0.943	0.971
Sexually active in past 12 months among youth	0.015	0.003	3283	3165	1.494	0.210	0.009	0.022
Had an injection in past 12 months	0.256	0.008	14070	14070	2.247	0.032	0.240	0.273
Had HIV test and received results in past 12 months	0.019	0.002	6812	6751	1.055	0.093	0.015	0.022
Accepting attitudes towards people with HIV	0.107	0.006	12414	12643	2.059	0.053	0.096	0.119
HIV prevalence among tested for HIV 15-49	0.019	0.002	5942	5736	1.230	0.116	0.014	0.023
Total fertility rate (3 years)	5.409	0.141	na	38974	2.300	0.026	5.127	5.692
Neonatal mortality (0-4 years)	39.328	2.851	9900	11217	1.439	0.072	33.626	45.029
Postneonatal mortality (0-4 years)	37.681	2.726	9920	11242	1.430	0.072	32.228	43.133
Infant mortality (0-4 years)	77.008	3.852	9925	11248	1.431	0.050	69.304	84.712
Infant mortality (5-9 years)	83.389	4.042	10359	11557	1.366	0.048	75.304	91.473
Infant mortality (10-14 years)	94.619	5.085	8346	9105	1.475	0.054	84.449	104.789
Child mortality (0-4 years)	50.318	3.149	10115	11446	1.408	0.063	44.020	56.616
Under-five mortallity (0-4 years)	123.451	5.141	10145	11482	1.525	0.042	113.170	133.732
Maternal mortality (0-6 years)	673.386	62.900	na	na	na	0.093	547.586	799.187
MEN								
Urban residence	0.152	0.006	6033	6033	1.306	0.040	0.140	0.164
Literate	0.589	0.010	6033	6033	1.586	0.017	0.569	0.609
No education	0.429	0.010	6033	6033	1.567	0.023	0.409	0.449
Secondary education or higher	0.198	0.007	6033	6033	1.365	0.035	0.184	0.212
Want no more children	0.341	0.013	3332	3424	1.552	0.037	0.316	0.367
Want to delay birth at least 2 years	0.415	0.012	3332	3424	1.464	0.030	0.390	0.440
Ideal family size	5.243	0.080	5632	5615	1.421	0.015	5.084	5.402
Has heard of HIV/AIDS (15-49)	0.965	0.004	5472	5464	1.730	0.004	0.957	0.974
Knows about condoms (15-49)	0.643	0.011	5472	5464	1.701	0.017	0.620	0.665
Knows about limiting partners (15-49)	0.790	0.010	5472	5464	1.830	0.013	0.770	0.811
Had 2+ sex partners in past 12 months (15-49)	0.041	0.005	3199	3121	1.356	0.115	0.032	0.051
High-risk sex (15-49)	0.085	0.006	3199	3121	1.256	0.073	0.072	0.097
High-risk sex (15-59)	0.073	0.005	3686	3630	1.274	0.075	0.062	0.084
Condom use at high-risk sex (age 15-49)	0.519	0.038	440	264	1.593	0.073	0.443	0.595
Condom use at high-risk sex (age 15-59)	0.517	0.038	446	266	1.591	0.073	0.442	0.593
Abstinence among youth	0.876	0.009	2014	2081	1.233	0.010	0.858	0.894
Sexually active in past 12 months among youth	0.075	0.007	2014	2081	1.143	0.090	0.061	0.088
Paid for sexual intercourse in past 12 months	0.008	0.001	6033	6033	1.301	0.188	0.005	0.011
Had an injection in past 12 months (age 15-49)	0.189	0.008	5472	5464	1.461	0.041	0.174	0.205
Had an injection in past 12 months (age 15-59)	0.191	0.007	6033	6033	1.473	0.039	0.177	0.206
HIV test and received results past 12 months (15-49)	0.023	0.003	5472	5464	1.421	0.126	0.017	0.028
Accepting attitudes towards people with HIV (15-49)	0.167	0.009	5245	5273	1.812	0.056	0.148	0.185
HIV prevalence among tested for HIV 15-49	0.009	0.002	4631	4804	1.240	0.187	0.006	0.013
HIV prevalence among tested for HIV 15-59	0.009	0.002	5108	5306	1.259	0.183	0.006	0.013

na = Not applicable

Table B.3 Sampling errors for urban sample, Ethiopia 2005

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban residence	1.000	0.000	4423	2499	na	0.000	1.000	1.000
Literate	0.736	0.015	4423	2499	2.325	0.021	0.705	0.767
No education	0.247	0.016	4423	2499	2.470	0.065	0.215	0.279
Secondary education or higher	0.509	0.021	4423	2499	2.795	0.041	0.467	0.551
Net attendance ratio for primary school	0.788	0.017	2043	1186	1.773	0.022	0.754	0.822
Currently pregnant	0.025	0.004	4423	2499	1.640	0.155	0.017	0.032
Children ever born to women age 40-49	5.113	0.143	612	351	1.232	0.028	4.827	5.399
Currently using any contraceptive method	0.467	0.017	1708	959	1.418	0.037	0.432	0.501
Currently using pill	0.107	0.015	1708	959	1.945	0.136	0.078	0.136
Currently using IUD	0.018	0.004	1708	959	1.225	0.216	0.011	0.026
Currently using female sterilization	0.013	0.004	1708	959	1.298	0.272	0.006	0.020
Currently using rhythm method	0.037	0.005	1708	959	1.205	0.149	0.026	0.048
Want no more children	0.478	0.025	1708	959	2.100	0.053	0.427	0.528
Ideal family size	3.442	0.072	4188	2387	1.964	0.021	3.299	3.585
Perinatal mortality (0-6 years)	44.897	12.143	1368	822	2.158	0.270	20.611	69.182
Mothers received tetanus injection for last birth	0.605	0.023	1054	634	1.578	0.038	0.559	0.651
Mothers received medical assistance at delivery	0.446	0.042	1358	815	2.778	0.095	0.362	0.531
Had diarrhoea in two weeks before survey	0.121	0.015	1275	752	1.653	0.123	0.091	0.151
Treated with oral rehydration salts (ORS)	0.457	0.073	155	91	1.820	0.160	0.311	0.604
Taken to a health provider	0.350	0.044	155	91	1.156	0.126	0.262	0.438
Vaccination card seen	0.620	0.044	249	147	1.470	0.071	0.532	0.709
Received BCG	0.840	0.057	249	147	2.532	0.068	0.726	0.955
Received DPT (3 doses)	0.657	0.048	249	147	1.649	0.074	0.560	0.754
Received polio (3 doses)	0.693	0.048	249	147	1.689	0.070	0.597	0.790
Received measles	0.654	0.078	249	147	2.634	0.119	0.499	0.809
Fully immunized	0.493	0.062	249	147	1.997	0.125	0.369	0.616
Height-for-age (below -2SD)	0.298	0.037	605	362	1.984	0.125	0.224	0.372
Weight-for-height (below -2SD)	0.063	0.025	605	362	2.733	0.401	0.012	0.113
Weight-for-age (below -2SD)	0.229	0.031	605	362	1.770	0.134	0.168	0.291
Anaemic (children)	0.468	0.038	426	270	1.651	0.080	0.393	0.543
Anaemic (women)	0.178	0.018	1636	948	1.950	0.102	0.141	0.214
BMI <18.5	0.188	0.019	1955	1112	2.153	0.101	0.150	0.226
Has heard of HIV/AIDS	0.986	0.004	4423	2499	2.303	0.004	0.977	0.994
Knows about condoms	0.722	0.012	4423	2499	1.853	0.017	0.697	0.747
Knows about limiting partners	0.818	0.013	4423	2499	2.155	0.015	0.793	0.843
Had 2+ sex partners in past 12 months	0.004	0.002	875	492	0.944	0.481	0.000	0.009
High-risk sex	0.135	0.020	875	492	1.772	0.152	0.094	0.176
Condom use at high-risk sex	0.399	0.089	109	66	1.884	0.223	0.221	0.577
Abstinence among youth	0.905	0.021	1602	938	2.836	0.023	0.864	0.947
Sexually active in past 12 months among youth	0.033	0.009	1602	938	1.990	0.270	0.015	0.051
Had an injection in past 12 months	0.304	0.021	4423	2499	2.967	0.068	0.262	0.345
Had HIV test and received results in past 12 months	0.078	0.008	2079	1173	1.323	0.100	0.062	0.093
Accepting attitudes towards people with HIV	0.373	0.020	4341	2463	2.779	0.055	0.332	0.414
HIV prevalence among tested for HIV 15-49	0.077	0.011	1628	980	1.591	0.136	0.056	0.098
Total fertility rate (3 years)	2.375	0.205	na	6868	2.289	0.086	1.966	2.785
Neonatal mortality (0-9 years)	34.668	7.129	2818	1702	1.938	0.206	20.410	48.925
Postneonatal mortality (0-9 years)	31.703	5.645	2820	1702	1.619	0.178	20.412	42.993
Infant mortality (0-9 years)	66.370	8.006	2820	1702	1.655	0.121	50.357	82.383
Child mortality (0-9 years)	33.898	5.687	2846	1716	1.490	0.168	22.523	45.272
Under-five mortality (0-9 years)	98.018	9.184	2848	1716	1.513	0.094	79.651	116.385
MEN								
Urban residence	1.000	0.000	1628	916	na	0.000	1.000	1.000
Literate	0.937	0.008	1628	916	1.364	0.009	0.920	0.953
No education	0.079	0.010	1628	916	1.488	0.126	0.059	0.099
Secondary education or higher	0.718	0.019	1628	916	1.682	0.026	0.680	0.755
Want no more children	0.456	0.044	614	344	2.201	0.097	0.367	0.545
Want to delay birth at least 2 years	0.288	0.042	614	344	2.278	0.145	0.205	0.371
Ideal family size	3.579	0.124	1573	895	1.560	0.035	3.330	3.828
Has heard of HIV/AIDS (15-49)	0.997	0.001	1511	854	0.970	0.001	0.994	1.000
Knows about condoms (15-49)	0.825	0.018	1511	854	1.797	0.021	0.789	0.860
Knows about limiting partners (15-49)	0.890	0.016	1511	854	2.014	0.018	0.857	0.922
Had 2+ sex partners in past 12 months (15-49)	0.032	0.007	751	393	1.086	0.218	0.018	0.046
High-risk sex (15-49)	0.299	0.021	751	393	1.239	0.069	0.258	0.341
Condom use at high-risk sex (age 15-49)	0.799	0.029	267	118	1.168	0.036	0.741	0.856
Abstinence among youth	0.765	0.018	654	410	1.070	0.023	0.730	0.801
Sexually active in past 12 months among youth	0.152	0.015	654	410	1.098	0.101	0.121	0.183
Paid for sexual intercourse in past 12 months	0.010	0.003	1628	916	1.187	0.287	0.004	0.016
Had an injection in past 12 months (age 15-49)	0.203	0.017	1511	854	1.690	0.086	0.168	0.238
HIV test and received results past 12 months (15-49)	0.078	0.013	1511	854	1.825	0.161	0.053	0.103
Accepting attitudes towards people with HIV (15-49)	0.453	0.035	1502	851	2.744	0.078	0.382	0.523
HIV prevalence among tested for HIV 15-49	0.024	0.007	1080	684	1.442	0.279	0.011	0.038

na = Not applicable

Table B.4 Sampling errors for rural sample, Ethiopia 2005

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban residence	0.000	0.000	9647	11571	na	na	0.000	0.000
Literate	0.196	0.009	9647	11571	2.199	0.045	0.178	0.213
No education	0.748	0.011	9647	11571	2.406	0.014	0.727	0.769
Secondary education or higher	0.035	0.004	9647	11571	1.881	0.101	0.028	0.042
Net attendance ratio for primary school	0.388	0.011	10419	12299	2.010	0.027	0.367	0.409
Currently pregnant	0.097	0.004	9647	11571	1.294	0.040	0.089	0.105
Children ever born to women age 40-49	7.253	0.078	1649	1980	1.155	0.011	7.097	7.409
Currently using any contraceptive method	0.109	0.007	6936	8107	1.843	0.063	0.096	0.123
Currently using pill	0.022	0.003	6936	8107	1.747	0.140	0.016	0.028
Currently using IUD	0.000	0.000	6936	8107	1.281	0.999	0.000	0.001
Currently using female sterilization	0.000	0.000	6936	8107	1.201	0.873	0.000	0.001
Currently using rhythm method	0.002	0.001	6936	8107	1.292	0.362	0.001	0.003
Want no more children	0.414	0.009	6936	8107	1.452	0.021	0.397	0.431
Ideal family size	4.745	0.063	8540	10215	1.775	0.013	4.619	4.870
Perinatal mortality (0-6 years)	36.639	2.752	8587	10458	1.260	0.075	31.136	42.143
Mothers received tetanus injection for last birth	0.295	0.011	5535	6674	1.856	0.038	0.272	0.318
Mothers received medical assistance at delivery	0.026	0.003	8503	10348	1.603	0.116	0.020	0.032
Had diarrhoea in two weeks before survey	0.185	0.007	7727	9357	1.455	0.037	0.171	0.198
Treated with oral rehydration salts (ORS)	0.186	0.016	1390	1727	1.482	0.086	0.154	0.217
Taken to a health provider	0.216	0.016	1390	1727	1.399	0.075	0.183	0.248
Vaccination card seen	0.347	0.018	1448	1729	1.385	0.050	0.312	0.382
Received BCG	0.584	0.021	1448	1729	1.626	0.036	0.542	0.626
Received DPT (3 doses)	0.290	0.020	1448	1729	1.620	0.067	0.251	0.329
Received polio (3 doses)	0.426	0.021	1448	1729	1.622	0.050	0.383	0.468
Received measles	0.322	0.018	1448	1729	1.432	0.055	0.287	0.358
Fully immunized	0.179	0.015	1448	1729	1.507	0.085	0.148	0.209
Height-for-age (below -2SD)	0.479	0.012	3525	4224	1.329	0.024	0.456	0.503
Weight-for-height (below -2SD)	0.109	0.007	3525	4224	1.234	0.060	0.095	0.122
Weight-for-age (below -2SD)	0.397	0.012	3525	4224	1.370	0.029	0.374	0.420
Anaemic (children)	0.540	0.011	3154	3868	1.276	0.021	0.518	0.563
Anaemic (women)	0.282	0.010	4327	5193	1.463	0.036	0.262	0.302
BMI <18.5	0.283	0.010	4033	4789	1.384	0.035	0.263	0.302
Has heard of HIV/AIDS	0.880	0.007	9647	11571	2.065	0.008	0.866	0.893
Knows about condoms	0.333	0.011	9647	11571	2.193	0.032	0.312	0.354
Knows about limiting partners	0.583	0.011	9647	11571	2.160	0.019	0.561	0.605
Had 2+ sex partners in past 12 months	0.002	0.001	3328	3862	1.204	0.447	0.000	0.004
High-risk sex	0.014	0.003	3328	3862	1.313	0.194	0.008	0.019
Condom use at high-risk sex	0.030	0.026	56	53	1.132	0.872	0.000	0.082
Abstinence among youth	0.979	0.004	1681	2228	1.183	0.004	0.971	0.987
Sexually active in past 12 months among youth	0.008	0.002	1681	2228	1.153	0.318	0.003	0.013
Had an injection in past 12 months	0.246	0.009	9647	11571	2.044	0.036	0.228	0.264
Had HIV test and received results in past 12 months	0.006	0.001	4733	5579	1.203	0.222	0.003	0.009
Accepting attitudes towards people with HIV	0.043	0.004	8073	10180	1.682	0.088	0.035	0.050
HIV prevalence among tested for HIV 15-49	0.006	0.002	4314	4756	1.278	0.241	0.003	0.010
Total fertility rate (3 years)	6.024	0.140	na	32106	1.901	0.023	5.743	6.304
Neonatal mortality (0-9 years)	41.038	2.194	17417	21045	1.264	0.053	36.651	45.425
Postneonatal mortality (0-9 years)	40.383	2.362	17434	21067	1.495	0.058	35.659	45.108
Infant mortality (0-9 years)	81.421	3.060	17439	21072	1.309	0.038	75.302	87.540
Child mortality (0-9 years)	58.084	3.018	17618	21294	1.445	0.052	52.049	64.120
Under-five mortality (0-9 years)	134.776	4.300	17645	21327	1.435	0.032	126.177	143.376
MEN								
Urban residence	0.000	0.000	4405	5117	na	na	0.000	0.000
Literate	0.527	0.011	4405	5117	1.521	0.022	0.504	0.550
No education	0.492	0.011	4405	5117	1.495	0.023	0.469	0.514
Secondary education or higher	0.104	0.006	4405	5117	1.292	0.057	0.092	0.116
Want no more children	0.329	0.013	2718	3080	1.474	0.040	0.302	0.355
Want to delay birth at least 2 years	0.429	0.013	2718	3080	1.371	0.030	0.403	0.455
Ideal family size	5.558	0.090	4059	4720	1.330	0.016	5.379	5.738
Has heard of HIV/AIDS (15-49)	0.959	0.005	3961	4610	1.609	0.005	0.949	0.969
Knows about condoms (15-49)	0.609	0.012	3961	4610	1.608	0.020	0.584	0.634
Knows about limiting partners (15-49)	0.772	0.011	3961	4610	1.715	0.015	0.749	0.795
Had 2+ sex partners in past 12 months (15-49)	0.043	0.005	2448	2728	1.313	0.126	0.032	0.053
High-risk sex (15-49)	0.054	0.006	2448	2728	1.416	0.120	0.041	0.067
Condom use at high-risk sex (age 15-49)	0.294	0.055	173	146	1.581	0.187	0.185	0.404
Abstinence among youth	0.904	0.010	1360	1672	1.309	0.012	0.883	0.925
Sexually active in past 12 months among youth	0.056	0.007	1360	1672	1.199	0.134	0.041	0.071
Paid for sexual intercourse in past 12 months	0.007	0.002	4405	5117	1.284	0.223	0.004	0.011
Had an injection in past 12 months (age 15-49)	0.187	0.009	3961	4610	1.384	0.046	0.169	0.204
HIV test and received results past 12 months (15-49)	0.012	0.002	3961	4610	1.388	0.197	0.008	0.017
Accepting attitudes towards people with HIV (15-49)	0.112	0.008	3743	4422	1.504	0.069	0.096	0.127
HIV prevalence among tested for HIV 15-49	0.007	0.002	3551	4120	1.232	0.247	0.004	0.010

na = Not applicable

Table B.5 Sampling errors for Tigray Region, Ethiopia 2005

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban residence	0.207	0.023	1257	919	1.973	0.109	0.162	0.253
Literate	0.337	0.023	1257	919	1.696	0.067	0.292	0.382
No education	0.635	0.023	1257	919	1.712	0.037	0.588	0.681
Secondary education or higher	0.165	0.021	1257	919	2.030	0.129	0.122	0.207
Net attendance ratio for primary school	0.506	0.029	1167	833	1.760	0.057	0.448	0.564
Currently pregnant	0.086	0.007	1257	919	0.915	0.084	0.072	0.101
Children ever born to women age 40-49	6.768	0.191	225	156	1.142	0.028	6.385	7.150
Currently using any contraceptive method	0.165	0.015	798	570	1.176	0.094	0.134	0.196
Currently using pill	0.029	0.005	798	570	0.801	0.165	0.019	0.038
Currently using IUD	0.000	0.000	798	570	na	na	0.000	0.000
Currently using female sterilization	0.000	0.000	798	570	na	na	0.000	0.000
Currently using rhythm method	0.003	0.000	798	570	0.072	0.050	0.002	0.003
Want no more children	0.285	0.014	798	570	0.906	0.051	0.256	0.314
Ideal family size	4.700	0.107	1208	886	1.411	0.023	4.486	4.913
Perinatal mortality (0-6 years)	19.981	4.507	985	702	1.009	0.226	10.967	28.994
Mothers received tetanus injection for last birth	0.398	0.027	671	480	1.438	0.069	0.343	0.453
Mothers received medical assistance at delivery	0.060	0.012	980	698	1.491	0.200	0.036	0.084
Had diarrhoea in two weeks before survey	0.128	0.012	915	653	1.089	0.096	0.104	0.153
Treated with oral rehydration salts (ORS)	0.211	0.046	122	84	1.175	0.216	0.120	0.303
Taken to a health provider	0.188	0.043	122	84	1.156	0.230	0.101	0.274
Vaccination card seen	0.584	0.040	193	135	1.098	0.068	0.505	0.664
Received BCG	0.774	0.033	193	135	1.069	0.043	0.709	0.840
Received DPT (3 doses)	0.516	0.039	193	135	1.061	0.076	0.438	0.594
Received polio (3 doses)	0.566	0.039	193	135	1.071	0.069	0.488	0.644
Received measles	0.633	0.032	193	135	0.896	0.050	0.570	0.697
Fully immunized	0.329	0.041	193	135	1.181	0.124	0.248	0.411
Height-for-age (below -2SD)	0.410	0.030	442	316	1.220	0.072	0.351	0.469
Weight-for-height (below -2SD)	0.116	0.017	442	316	1.045	0.149	0.081	0.151
Weight-for-age (below -2SD)	0.419	0.034	442	316	1.351	0.081	0.351	0.486
Anaemic (children)	0.565	0.027	407	288	1.088	0.048	0.510	0.620
Anaemic (women)	0.293	0.021	566	411	1.073	0.070	0.252	0.334
BMI <18.5	0.375	0.021	524	390	0.987	0.055	0.334	0.417
Has heard of HIV/AIDS	0.970	0.008	1257	919	1.611	0.008	0.955	0.986
Knows about condoms	0.523	0.020	1257	919	1.442	0.039	0.482	0.564
Knows about limiting partners	0.721	0.028	1257	919	2.221	0.039	0.665	0.777
Had 2+ sex partners in past 12 months	0.000	0.000	405	290	na	na	0.000	0.000
High-risk sex	0.052	0.013	405	290	1.163	0.248	0.026	0.077
Condom use at high-risk sex	0.000	0.000	21	15	na	na	0.000	0.000
Abstinence among youth	0.955	0.015	261	200	1.186	0.016	0.925	0.986
Sexually active in past 12 months among youth	0.013	0.008	261	200	1.134	0.606	0.000	0.029
Had an injection in past 12 months	0.165	0.012	1257	919	1.155	0.073	0.141	0.190
Had HIV test and received results in past 12 months	0.019	0.004	610	448	0.655	0.192	0.011	0.026
Accepting attitudes towards people with HIV	0.142	0.022	1219	892	2.182	0.153	0.099	0.186
HIV prevalence among tested for HIV 15-49	0.026	0.013	564	387	2.005	0.522	0.000	0.052
Total fertility rate (3 years)	5.125	0.303	na	2514	1.353	0.059	4.519	5.731
Neonatal mortality (0-9 years)	40.362	4.716	1953	1384	0.959	0.117	30.930	49.794
Postneonatal mortality (0-9 years)	26.211	3.981	1955	1386	0.982	0.152	18.250	34.172
Infant mortality (0-9 years)	66.573	6.219	1955	1386	1.007	0.093	54.136	79.010
Child mortality (0-9 years)	42.492	5.661	1970	1396	1.121	0.133	31.169	53.815
Under-five mortality (0-9 years)	106.236	7.890	1972	1397	1.071	0.074	90.456	122.017
MEN								
Urban residence	0.189	0.024	512	366	1.387	0.127	0.141	0.237
Literate	0.675	0.029	512	366	1.404	0.043	0.617	0.733
No education	0.469	0.036	512	366	1.611	0.076	0.398	0.540
Secondary education or higher	0.231	0.024	512	366	1.282	0.104	0.183	0.279
Want no more children	0.280	0.029	297	206	1.115	0.104	0.222	0.338
Want to delay birth at least 2 years	0.490	0.023	297	206	0.787	0.047	0.445	0.536
Ideal family size	4.771	0.135	482	346	1.181	0.028	4.501	5.040
Has heard of HIV/AIDS (15-49)	0.997	0.002	439	315	0.932	0.002	0.992	1.002
Knows about condoms (15-49)	0.779	0.027	439	315	1.356	0.035	0.725	0.833
Knows about limiting partners (15-49)	0.923	0.015	439	315	1.194	0.017	0.892	0.953
Had 2+ sex partners in past 12 months (15-49)	0.045	0.014	262	187	1.084	0.310	0.017	0.072
High-risk sex (15-49)	0.159	0.028	262	187	1.224	0.174	0.104	0.215
Condom use at high-risk sex (age 15-49)	0.537	0.077	36	30	0.915	0.144	0.382	0.691
Abstinence among youth	0.843	0.035	178	132	1.283	0.042	0.773	0.913
Sexually active in past 12 months among youth	0.118	0.027	178	132	1.103	0.227	0.064	0.171
Paid for sexual intercourse in past 12 months	0.017	0.008	512	366	1.312	0.440	0.002	0.032
Had an injection in past 12 months (age 15-49)	0.162	0.015	439	315	0.872	0.095	0.132	0.193
HIV test and received results i past 12 months (15-49)	0.025	0.007	439	315	0.911	0.270	0.012	0.039
Accepting attitudes towards people with HIV (15-49)	0.275	0.025	437	314	1.153	0.090	0.225	0.324
HIV prevalence among tested for HIV 15-49	0.016	0.007	407	274	1.156	0.455	0.001	0.030

na = Not applicable

Table B.6 Sampling errors for Affar Region, Ethiopia 2005

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban residence	0.200	0.030	789	146	2.119	0.151	0.140	0.260
Literate	0.156	0.036	789	146	2.795	0.232	0.084	0.228
No education	0.848	0.037	789	146	2.898	0.044	0.774	0.922
Secondary education or higher	0.068	0.027	789	146	2.958	0.389	0.015	0.122
Net attendance ratio for primary school	0.153	0.023	958	159	1.619	0.149	0.108	0.199
Currently pregnant	0.089	0.016	789	146	1.545	0.176	0.058	0.120
Children ever born to women age 40-49	5.783	0.232	149	27	0.970	0.040	5.319	6.247
Currently using any contraceptive method	0.066	0.017	616	109	1.694	0.257	0.032	0.100
Currently using pill	0.013	0.006	616	109	1.188	0.411	0.002	0.024
Currently using IUD	0.000	0.000	616	109	na	na	0.000	0.000
Currently using female sterilization	0.000	0.000	616	109	na	na	0.000	0.000
Currently using rhythm method	0.006	0.004	616	109	1.368	0.725	0.000	0.014
Want no more children	0.198	0.030	616	109	1.867	0.152	0.138	0.258
Ideal family size	7.828	0.416	729	137	2.339	0.053	6.996	8.660
Perinatal mortality (0-6 years)	16.007	5.968	577	108	1.155	0.373	4.072	27.943
Mothers received tetanus injection for last birth	0.109	0.027	377	68	1.637	0.244	0.056	0.162
Mothers received medical assistance at delivery	0.045	0.017	574	107	1.687	0.369	0.012	0.078
Had diarrhoea in two weeks before survey	0.137	0.023	521	96	1.357	0.168	0.091	0.183
Treated with oral rehydration salts (ORS)	0.088	0.061	65	13	1.805	0.697	0.000	0.211
Taken to a health provider	0.092	0.043	65	13	1.222	0.460	0.007	0.177
Vaccination card seen	0.040	0.020	107	18	1.024	0.508	0.000	0.081
Received BCG	0.276	0.048	107	18	1.056	0.174	0.180	0.372
Received DPT (3 doses)	0.028	0.013	107	18	0.767	0.456	0.002	0.054
Received polio (3 doses)	0.199	0.043	107	18	1.053	0.214	0.114	0.284
Received measles	0.081	0.031	107	18	1.130	0.386	0.018	0.144
Fully immunized	0.006	0.006	107	18	0.788	1.015	0.000	0.019
Height-for-age (below -2SD)	0.408	0.046	251	46	1.518	0.112	0.317	0.499
Weight-for-height (below -2SD)	0.099	0.025	251	46	1.282	0.254	0.049	0.149
Weight-for-age (below -2SD)	0.341	0.061	251	46	1.994	0.180	0.218	0.463
Anaemic (children)	0.585	0.035	176	32	1.045	0.061	0.514	0.656
Anaemic (women)	0.404	0.038	283	55	1.324	0.093	0.329	0.480
BMI <18.5	0.330	0.036	329	61	1.407	0.110	0.257	0.402
Has heard of HIV/AIDS	0.854	0.022	789	146	1.730	0.025	0.810	0.898
Knows about condoms	0.272	0.032	789	146	2.031	0.118	0.208	0.337
Knows about limiting partners	0.369	0.037	789	146	2.160	0.101	0.295	0.444
Had 2+ sex partners in past 12 months	0.007	0.007	304	55	1.407	0.981	0.000	0.020
High-risk sex	0.020	0.009	304	55	1.138	0.458	0.002	0.038
Condom use at high-risk sex	0.584	0.214	6	1	0.971	0.366	0.156	1.012
Abstinence among youth	0.944	0.020	97	21	0.841	0.021	0.904	0.983
Sexually active in past 12 months among youth	0.026	0.012	97	21	0.721	0.451	0.003	0.049
Had an injection in past 12 months	0.153	0.021	789	146	1.644	0.138	0.111	0.195
Had HIV test and received results in past 12 months	0.018	0.011	384	72	1.598	0.609	0.000	0.039
Accepting attitudes towards people with HIV	0.051	0.015	661	125	1.768	0.298	0.021	0.081
HIV prevalence among tested for HIV 15-49	0.033	0.012	295	61	1.144	0.364	0.009	0.056
Total fertility rate (3 years)	4.934	0.383	na	407	1.495	0.078	4.167	5.700
Neonatal mortality (0-9 years)	33.117	5.913	1343	243	1.017	0.179	21.291	44.943
Postneonatal mortality (0-9 years)	28.016	6.016	1343	243	1.376	0.215	15.984	40.048
Infant mortality (0-9 years)	61.134	8.521	1343	243	1.151	0.139	44.091	78.176
Child mortality (0-9 years)	65.843	13.403	1348	243	1.446	0.204	39.037	92.649
Under-five mortality (0-9 years)	122.951	17.443	1348	243	1.485	0.142	88.066	157.837
MEN								
Urban residence	0.197	0.042	314	65	1.855	0.212	0.113	0.280
Literate	0.270	0.054	314	65	2.160	0.200	0.162	0.379
No education	0.714	0.054	314	65	2.104	0.075	0.607	0.822
Secondary education or higher	0.115	0.036	314	65	1.971	0.309	0.044	0.186
Want no more children	0.151	0.029	205	42	1.145	0.190	0.094	0.209
Want to delay birth at least 2 years	0.257	0.021	205	42	0.701	0.084	0.214	0.300
Ideal family size	11.282	0.894	296	62	1.973	0.079	9.494	13.070
Has heard of HIV/AIDS (15-49)	0.964	0.014	281	59	1.286	0.015	0.935	0.992
Knows about condoms (15-49)	0.606	0.036	281	59	1.243	0.060	0.534	0.679
Knows about limiting partners (15-49)	0.735	0.060	281	59	2.259	0.081	0.616	0.854
Had 2+ sex partners in past 12 months (15-49)	0.071	0.018	216	45	1.008	0.248	0.036	0.107
High-risk sex (15-49)	0.159	0.027	216	45	1.074	0.168	0.106	0.213
Condom use at high-risk sex (age 15-49)	0.387	0.097	31	7	1.095	0.251	0.193	0.582
Abstinence among youth	0.653	0.083	67	15	1.409	0.127	0.487	0.818
Sexually active in past 12 months among youth	0.301	0.083	67	15	1.461	0.274	0.136	0.466
Paid for sexual intercourse in past 12 months	0.021	0.011	314	65	1.376	0.528	0.000	0.044
Had an injection in past 12 months (age 15-49)	0.147	0.032	281	59	1.491	0.215	0.084	0.210
HIV test and received results past 12 months (15-49)	0.012	0.008	281	59	1.151	0.623	0.000	0.027
Accepting attitudes towards people with HIV (15-49)	0.150	0.032	268	57	1.452	0.211	0.087	0.214
HIV prevalence among tested for HIV 15-49	0.024	0.005	212	46	0.503	0.221	0.013	0.035

na = Not applicable

Table B.7 Sampling errors for Amhara Region, Ethiopia 2005

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban residence	0.112	0.009	1943	3482	1.260	0.080	0.094	0.130
Literate	0.251	0.015	1943	3482	1.570	0.062	0.220	0.282
No education	0.756	0.016	1943	3482	1.643	0.021	0.724	0.788
Secondary education or higher	0.085	0.013	1943	3482	2.032	0.151	0.059	0.111
Net attendance ratio for primary school	0.504	0.018	1817	3283	1.535	0.037	0.467	0.541
Currently pregnant	0.072	0.006	1943	3482	1.051	0.085	0.060	0.085
Children ever born to women age 40-49	6.971	0.141	363	657	1.033	0.020	6.688	7.253
Currently using any contraceptive method	0.161	0.013	1295	2330	1.268	0.081	0.135	0.186
Currently using pill	0.036	0.007	1295	2330	1.361	0.196	0.022	0.050
Currently using IUD	0.002	0.001	1295	2330	1.085	0.705	0.000	0.004
Currently using female sterilization	0.001	0.001	1295	2330	1.134	0.996	0.000	0.003
Currently using rhythm method	0.003	0.001	1295	2330	1.059	0.583	0.000	0.005
Want no more children	0.475	0.014	1295	2330	1.014	0.030	0.447	0.503
Ideal family size	4.123	0.088	1790	3206	1.389	0.021	3.946	4.299
Perinatal mortality (0-6 years)	55.744	6.458	1493	2685	1.005	0.116	42.829	68.660
Mothers received tetanus injection for last birth	0.298	0.023	1032	1856	1.625	0.078	0.252	0.344
Mothers received medical assistance at delivery	0.037	0.007	1458	2621	1.285	0.188	0.023	0.052
Had diarrhoea in two weeks before survey	0.146	0.008	1289	2312	0.787	0.053	0.130	0.161
Treated with oral rehydration salts (ORS)	0.199	0.031	191	337	1.070	0.156	0.137	0.261
Taken to a health provider	0.271	0.044	191	337	1.352	0.162	0.184	0.359
Vaccination card seen	0.333	0.030	267	482	1.045	0.091	0.272	0.393
Received BCG	0.623	0.041	267	482	1.369	0.065	0.541	0.704
Received DPT (3 doses)	0.315	0.036	267	482	1.269	0.115	0.243	0.388
Received polio (3 doses)	0.456	0.038	267	482	1.257	0.084	0.379	0.533
Received measles	0.348	0.032	267	482	1.096	0.092	0.283	0.412
Fully immunized	0.171	0.025	267	482	1.094	0.147	0.120	0.221
Height-for-age (below -2SD)	0.566	0.024	538	973	1.103	0.042	0.519	0.614
Weight-for-height (below -2SD)	0.142	0.017	538	973	1.124	0.123	0.107	0.177
Weight-for-age (below -2SD)	0.489	0.023	538	973	1.032	0.047	0.442	0.535
Anaemic (children)	0.520	0.025	472	858	1.076	0.048	0.471	0.570
Anaemic (women)	0.310	0.023	827	1486	1.412	0.073	0.265	0.355
BMI <18.5	0.270	0.018	821	1471	1.164	0.067	0.234	0.307
Has heard of HIV/AIDS	0.879	0.013	1943	3482	1.774	0.015	0.853	0.905
Knows about condoms	0.359	0.017	1943	3482	1.552	0.047	0.326	0.393
Knows about limiting partners	0.568	0.017	1943	3482	1.550	0.031	0.534	0.603
Had 2+ sex partners in past 12 months	0.001	0.001	635	1140	0.944	0.999	0.000	0.004
High-risk sex	0.029	0.008	635	1140	1.239	0.286	0.012	0.045
Condom use at high-risk sex	0.128	0.089	19	33	1.136	0.699	0.000	0.307
Abstinence among youth	0.959	0.010	295	523	0.881	0.011	0.938	0.979
Sexually active in past 12 months among youth	0.009	0.006	295	523	1.045	0.623	0.000	0.021
Had an injection in past 12 months	0.234	0.015	1943	3482	1.570	0.064	0.204	0.264
Had HIV test and received results in past 12 months	0.010	0.002	917	1640	0.716	0.232	0.005	0.015
Accepting attitudes towards people with HIV	0.086	0.011	1711	3061	1.609	0.126	0.065	0.108
HIV prevalence among tested for HIV 15-49	0.018	0.005	822	1411	0.978	0.250	0.009	0.027
Total fertility rate (3 years)	5.085	0.202	na	9828	1.242	0.040	4.680	5.490
Neonatal mortality (0-9 years)	50.103	4.308	2979	5376	0.948	0.086	41.487	58.720
Postneonatal mortality (0-9 years)	44.311	4.648	2981	5379	1.203	0.105	35.014	53.607
Infant mortality (0-9 years)	94.414	6.195	2982	5381	1.035	0.066	82.024	106.805
Child mortality (0-9 years)	66.162	5.726	3021	5454	1.052	0.087	54.711	77.613
Under-five mortality (0-9 years)	154.330	8.877	3025	5461	1.173	0.058	136.576	172.084
MEN								
Urban residence	0.085	0.007	897	1521	0.757	0.083	0.071	0.099
Literate	0.540	0.019	897	1521	1.154	0.036	0.502	0.579
No education	0.605	0.022	897	1521	1.359	0.037	0.560	0.649
Secondary education or higher	0.126	0.016	897	1521	1.425	0.125	0.095	0.158
Want no more children	0.356	0.028	534	913	1.346	0.078	0.301	0.412
Want to delay birth at least 2 years	0.397	0.025	534	913	1.176	0.063	0.347	0.447
Ideal family size	4.898	0.121	868	1470	0.970	0.025	4.657	5.139
Has heard of HIV/AIDS (15-49)	0.962	0.007	795	1347	1.100	0.008	0.947	0.977
Knows about condoms (15-49)	0.749	0.025	795	1347	1.625	0.033	0.699	0.799
Knows about limiting partners (15-49)	0.797	0.020	795	1347	1.368	0.024	0.758	0.836
Had 2+ sex partners in past 12 months (15-49)	0.020	0.007	456	775	1.105	0.363	0.005	0.034
High-risk sex (15-49)	0.035	0.007	456	775	0.870	0.214	0.020	0.050
Condom use at high-risk sex (age 15-49)	0.563	0.123	17	27	0.992	0.218	0.317	0.809
Abstinence among youth	0.932	0.012	296	497	0.821	0.013	0.908	0.956
Sexually active in past 12 months among youth	0.034	0.009	296	497	0.822	0.254	0.017	0.052
Paid for sexual intercourse in past 12 months	0.006	0.003	897	1521	1.038	0.456	0.001	0.011
Had an injection in past 12 months (age 15-49)	0.155	0.015	795	1347	1.177	0.098	0.125	0.185
HIV test and received results past 12 months (15-49)	0.025	0.008	795	1347	1.395	0.312	0.009	0.040
Accepting attitudes towards people with HIV (15-49)	0.197	0.023	765	1295	1.601	0.117	0.151	0.243
HIV prevalence among tested for HIV 15-49	0.016	0.005	720	1212	1.113	0.324	0.006	0.027

na = Not applicable

Table B.8 Sampling errors for Oromiya Region, Ethiopia 2005

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban residence	0.151	0.017	2230	5010	2.183	0.110	0.118	0.184
Literate	0.295	0.019	2230	5010	1.952	0.064	0.257	0.332
No education	0.644	0.022	2230	5010	2.130	0.034	0.601	0.687
Secondary education or higher	0.100	0.012	2230	5010	1.853	0.118	0.076	0.124
Net attendance ratio for primary school	0.427	0.020	2196	4940	1.691	0.046	0.388	0.466
Currently pregnant	0.090	0.007	2230	5010	1.087	0.073	0.077	0.103
Children ever born to women age 40-49	7.053	0.123	367	816	0.762	0.017	6.808	7.299
Currently using any contraceptive method	0.136	0.012	1468	3300	1.311	0.086	0.113	0.160
Currently using pill	0.034	0.006	1468	3300	1.289	0.179	0.022	0.046
Currently using IUD	0.002	0.001	1468	3300	0.527	0.318	0.001	0.003
Currently using female sterilization	0.002	0.001	1468	3300	0.650	0.343	0.001	0.004
Currently using rhythm method	0.004	0.002	1468	3300	1.062	0.462	0.000	0.007
Want no more children	0.471	0.016	1468	3300	1.227	0.034	0.439	0.503
Ideal family size	4.210	0.100	1932	4338	1.460	0.024	4.010	4.410
Perinatal mortality (0-6 years)	34.162	5.092	1948	4433	1.118	0.149	23.978	44.346
Mothers received tetanus injection for last birth	0.311	0.019	1211	2723	1.441	0.062	0.273	0.350
Mothers received medical assistance at delivery	0.048	0.007	1938	4411	1.226	0.140	0.035	0.062
Had diarrhoea in two weeks before survey	0.177	0.012	1769	4017	1.317	0.070	0.152	0.201
Treated with oral rehydration salts (ORS)	0.226	0.032	317	709	1.308	0.139	0.163	0.289
Taken to a health provider	0.235	0.030	317	709	1.184	0.128	0.175	0.295
Vaccination card seen	0.388	0.032	304	691	1.161	0.084	0.323	0.453
Received BCG	0.578	0.041	304	691	1.448	0.071	0.497	0.660
Received DPT (3 doses)	0.285	0.037	304	691	1.443	0.131	0.211	0.360
Received polio (3 doses)	0.411	0.041	304	691	1.458	0.100	0.329	0.493
Received measles	0.294	0.038	304	691	1.445	0.129	0.218	0.370
Fully immunized	0.202	0.033	304	691	1.433	0.163	0.136	0.268
Height-for-age (below -2SD)	0.410	0.021	831	1867	1.158	0.050	0.369	0.452
Weight-for-height (below -2SD)	0.096	0.010	831	1867	1.040	0.110	0.075	0.117
Weight-for-age (below -2SD)	0.344	0.021	831	1867	1.279	0.062	0.301	0.387
Anaemic (children)	0.560	0.019	768	1717	1.059	0.035	0.521	0.599
Anaemic (women)	0.249	0.015	971	2177	1.053	0.059	0.220	0.278
BMI <18.5	0.243	0.016	902	2036	1.114	0.065	0.211	0.275
Has heard of HIV/AIDS	0.947	0.007	2230	5010	1.435	0.007	0.933	0.960
Knows about condoms	0.410	0.018	2230	5010	1.746	0.044	0.374	0.446
Knows about limiting partners	0.683	0.015	2230	5010	1.559	0.022	0.653	0.714
Had 2+ sex partners in past 12 months	0.002	0.002	694	1558	0.912	0.723	0.000	0.006
High-risk sex	0.028	0.007	694	1558	1.132	0.255	0.014	0.042
Condom use at high-risk sex	0.307	0.118	19	43	1.087	0.385	0.071	0.544
Abstinence among youth	0.960	0.016	536	1210	1.923	0.017	0.927	0.993
Sexually active in past 12 months among youth	0.021	0.007	536	1210	1.173	0.346	0.007	0.036
Had an injection in past 12 months	0.266	0.018	2230	5010	1.896	0.067	0.230	0.301
Had HIV test and received results in past 12 months	0.014	0.003	1052	2368	0.871	0.224	0.008	0.021
Accepting attitudes towards people with HIV	0.080	0.011	2114	4742	1.914	0.141	0.058	0.103
HIV prevalence among tested for HIV 15-49	0.022	0.004	965	2000	0.881	0.188	0.014	0.031
Total fertility rate (3 years)	6.175	0.316	na	13861	1.959	0.051	5.544	6.806
Neonatal mortality (0-9 years)	39.681	3.940	3865	8769	1.101	0.099	31.800	47.562
Postneonatal mortality (0-9 years)	35.853	4.028	3871	8783	1.277	0.112	27.798	43.909
Infant mortality (0-9 years)	75.534	4.863	3872	8785	1.024	0.064	65.808	85.261
Child mortality (0-9 years)	50.596	5.179	3908	8860	1.260	0.102	40.238	60.954
Under-five mortality (0-9 years)	122.309	6.645	3916	8879	1.095	0.054	109.019	135.598
MEN								
Urban residence	0.124	0.012	1041	2222	1.178	0.097	0.100	0.148
Literate	0.615	0.018	1041	2222	1.188	0.029	0.579	0.651
No education	0.367	0.016	1041	2222	1.054	0.043	0.336	0.399
Secondary education or higher	0.203	0.012	1041	2222	0.989	0.061	0.178	0.227
Want no more children	0.397	0.025	572	1228	1.204	0.062	0.348	0.446
Want to delay birth at least 2 years	0.409	0.025	572	1228	1.228	0.062	0.358	0.459
Ideal family size	4.755	0.135	971	2057	1.365	0.028	4.485	5.025
Has heard of HIV/AIDS (15-49)	0.984	0.005	953	2041	1.325	0.005	0.973	0.995
Knows about condoms (15-49)	0.618	0.017	953	2041	1.082	0.028	0.584	0.652
Knows about limiting partners (15-49)	0.815	0.017	953	2041	1.322	0.020	0.782	0.848
Had 2+ sex partners in past 12 months (15-49)	0.035	0.009	530	1147	1.159	0.263	0.017	0.054
High-risk sex (15-49)	0.088	0.013	530	1147	1.059	0.148	0.062	0.114
Condom use at high-risk sex (age 15-49)	0.460	0.073	46	101	0.982	0.158	0.315	0.606
Abstinence among youth	0.857	0.019	382	807	1.069	0.022	0.819	0.895
Sexually active in past 12 months among youth	0.090	0.014	382	807	0.985	0.160	0.061	0.119
Paid for sexual intercourse in past 12 months	0.010	0.003	1041	2222	1.052	0.329	0.003	0.016
Had an injection in past 12 months (age 15-49)	0.224	0.014	953	2041	1.068	0.064	0.195	0.253
HIV test and received results past 12 months (15-49)	0.017	0.005	953	2041	1.167	0.290	0.007	0.026
Accepting attitudes towards people with HIV (15-49)	0.136	0.017	938	2009	1.483	0.122	0.103	0.170
HIV prevalence among tested for HIV 15-49	0.004	0.002	878	1812	1.000	0.506	0.000	0.009

na = Not applicable

Table B.9 Sampling errors for Somali Region, Ethiopia 2005

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban residence	0.177	0.070	669	486	4.770	0.398	0.036	0.317
Literate	0.098	0.044	669	486	3.855	0.452	0.009	0.187
No education	0.906	0.044	669	486	3.900	0.049	0.817	0.994
Secondary education or higher	0.052	0.031	669	486	3.601	0.598	0.000	0.113
Net attendance ratio for primary school	0.138	0.034	988	647	2.322	0.245	0.070	0.206
Currently pregnant	0.100	0.015	669	486	1.333	0.155	0.069	0.130
Children ever born to women age 40-49	6.690	0.196	113	73	0.769	0.029	6.299	7.082
Currently using any contraceptive method	0.031	0.028	508	363	3.634	0.897	0.000	0.088
Currently using pill	0.000	0.000	508	363	na	na	0.000	0.000
Currently using IUD	0.000	0.000	508	363	na	na	0.000	0.000
Currently using female sterilization	0.000	0.000	508	363	na	na	0.000	0.000
Currently using rhythm method	0.004	0.004	508	363	1.397	0.954	0.000	0.012
Want no more children	0.103	0.020	508	363	1.458	0.191	0.064	0.143
Ideal family size	9.743	0.633	547	400	2.806	0.065	8.478	11.009
Perinatal mortality (0-6 years)	29.815	7.857	666	480	0.996	0.264	14.101	45.530
Mothers received tetanus injection for last birth	0.094	0.032	398	288	2.195	0.342	0.030	0.159
Mothers received medical assistance at delivery	0.052	0.031	663	477	2.977	0.601	0.000	0.115
Had diarrhoea in two weeks before survey	0.122	0.015	604	432	1.097	0.124	0.092	0.152
Treated with oral rehydration salts (ORS)	0.158	0.053	68	53	1.153	0.338	0.051	0.264
Taken to a health provider	0.085	0.041	68	53	1.099	0.481	0.003	0.166
Vaccination card seen	0.081	0.049	101	78	1.705	0.605	0.000	0.178
Received BCG	0.171	0.055	101	78	1.453	0.321	0.061	0.280
Received DPT (3 doses)	0.056	0.039	101	78	1.759	0.699	0.000	0.134
Received polio (3 doses)	0.102	0.040	101	78	1.377	0.393	0.022	0.183
Received measles	0.064	0.036	101	78	1.354	0.559	0.000	0.135
Fully immunized	0.028	0.019	101	78	1.226	0.699	0.000	0.067
Height-for-age (below -2SD)	0.452	0.036	255	177	1.144	0.081	0.379	0.525
Weight-for-height (below -2SD)	0.237	0.020	255	177	0.721	0.084	0.197	0.277
Weight-for-age (below -2SD)	0.509	0.038	255	177	1.177	0.074	0.434	0.585
Anaemic (children)	0.856	0.032	176	124	1.242	0.037	0.792	0.920
Anaemic (women)	0.398	0.042	257	181	1.362	0.106	0.314	0.483
BMI <18.5	0.349	0.039	272	202	1.375	0.113	0.271	0.428
Has heard of HIV/AIDS	0.500	0.051	669	486	2.635	0.102	0.398	0.602
Knows about condoms	0.106	0.055	669	486	4.642	0.521	0.000	0.217
Knows about limiting partners	0.262	0.051	669	486	2.995	0.194	0.160	0.364
Had 2+ sex partners in past 12 months	0.000	0.000	226	161	na	na	0.000	0.000
High-risk sex	0.000	0.000	226	161	na	na	0.000	0.000
Abstinence among youth	1.000	0.000	102	77	na	0.000	1.000	1.000
Sexually active in past 12 months among youth	0.000	0.000	102	77	na	na	0.000	0.000
Had an injection in past 12 months	0.057	0.010	669	486	1.140	0.179	0.037	0.078
Had HIV test and received results in past 12 months	0.013	0.012	333	243	1.903	0.924	0.000	0.036
Accepting attitudes towards people with HIV	0.086	0.047	340	243	3.091	0.546	0.000	0.181
HIV prevalence among tested for HIV 15-49	0.013	0.009	258	189	1.281	0.697	0.000	0.031
Total fertility rate (3 years)	5.959	0.517	na	1370	1.569	0.087	4.925	6.993
Neonatal mortality (0-9 years)	27.037	4.956	1438	1030	0.983	0.183	17.125	36.950
Postneonatal mortality (0-9 years)	29.586	6.382	1439	1030	1.218	0.216	16.821	42.350
Infant mortality (0-9 years)	56.623	7.241	1440	1031	1.004	0.128	42.141	71.105
Child mortality (0-9 years)	39.043	8.745	1452	1039	1.594	0.224	21.553	56.534
Under-five mortality (0-9 years)	93.455	9.669	1455	1041	1.029	0.103	74.118	112.793
MEN								
Urban residence	0.128	0.039	281	202	1.951	0.304	0.050	0.206
Literate	0.220	0.047	281	202	1.887	0.212	0.127	0.313
No education	0.819	0.028	281	202	1.223	0.034	0.762	0.875
Secondary education or higher	0.079	0.026	281	202	1.588	0.324	0.028	0.130
Want no more children	0.040	0.012	184	137	0.833	0.300	0.016	0.065
Want to delay birth at least 2 years	0.216	0.030	184	137	0.985	0.139	0.156	0.276
Ideal family size	12.912	0.587	221	166	1.070	0.045	11.737	14.087
Has heard of HIV/AIDS (15-49)	0.643	0.058	250	180	1.914	0.090	0.527	0.760
Knows about condoms (15-49)	0.158	0.034	250	180	1.480	0.216	0.090	0.226
Knows about limiting partners (15-49)	0.320	0.046	250	180	1.547	0.143	0.229	0.412
Had 2+ sex partners in past 12 months (15-49)	0.032	0.020	158	116	1.399	0.617	0.000	0.071
High-risk sex (15-49)	0.026	0.013	158	116	1.000	0.493	0.000	0.051
Condom use at high-risk sex (age 15-49)	0.000	0.000	7	3	na	na	0.000	0.000
Abstinence among youth	0.928	0.032	80	52	1.099	0.034	0.864	0.992
Sexually active in past 12 months among youth	0.054	0.027	80	52	1.044	0.490	0.001	0.108
Paid for sexual intercourse in past 12 months	0.002	0.002	281	202	0.715	1.000	0.000	0.005
Had an injection in past 12 months (age 15-49)	0.038	0.012	250	180	1.008	0.323	0.013	0.062
HIV test and received results past 12 months (15-49)	0.000	0.000	250	180	na	na	0.000	0.000
Accepting attitudes towards people with HIV (15-49)	0.130	0.028	170	116	1.103	0.220	0.073	0.187
HIV prevalence among tested for HIV 15-49	0.000	0.000	168	140	na	na	0.000	0.000

na = Not applicable

Table B.10 Sampling errors for Benishangul-Gumuz, Ethiopia 2005

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban residence	0.104	0.023	846	124	2.148	0.217	0.059	0.149
Literate	0.232	0.021	846	124	1.437	0.090	0.191	0.274
No education	0.732	0.024	846	124	1.562	0.033	0.684	0.780
Secondary education or higher	0.064	0.011	846	124	1.327	0.174	0.042	0.087
Net attendance ratio for primary school	0.484	0.049	818	125	2.546	0.101	0.386	0.582
Currently pregnant	0.102	0.009	846	124	0.904	0.092	0.083	0.121
Children ever born to women age 40-49	6.736	0.247	132	21	1.104	0.037	6.242	7.230
Currently using any contraceptive method	0.111	0.017	632	92	1.352	0.152	0.077	0.145
Currently using pill	0.013	0.003	632	92	0.646	0.225	0.007	0.019
Currently using IUD	0.000	0.000	632	92	na	na	0.000	0.000
Currently using female sterilization	0.003	0.002	632	92	0.997	0.701	0.000	0.008
Currently using rhythm method	0.006	0.003	632	92	0.997	0.503	0.000	0.012
Want no more children	0.408	0.026	632	92	1.336	0.064	0.356	0.460
Ideal family size	4.990	0.293	803	119	2.463	0.059	4.403	5.576
Perinatal mortality (0-6 years)	41.647	7.187	710	107	0.905	0.173	27.273	56.020
Mothers received tetanus injection for last birth	0.205	0.025	460	69	1.364	0.124	0.154	0.256
Mothers received medical assistance at delivery	0.051	0.007	698	105	0.842	0.146	0.036	0.065
Had diarrhoea in two weeks before survey	0.213	0.024	634	95	1.423	0.111	0.166	0.261
Treated with oral rehydration salts (ORS)	0.249	0.042	130	20	1.112	0.168	0.165	0.333
Taken to a health provider	0.296	0.052	130	20	1.227	0.177	0.191	0.401
Vaccination card seen	0.287	0.070	114	16	1.613	0.243	0.147	0.427
Received BCG	0.535	0.073	114	16	1.512	0.136	0.390	0.680
Received DPT (3 doses)	0.307	0.067	114	16	1.491	0.218	0.173	0.440
Received polio (3 doses)	0.367	0.060	114	16	1.293	0.164	0.247	0.488
Received measles	0.334	0.063	114	16	1.387	0.190	0.207	0.460
Fully immunized	0.185	0.044	114	16	1.150	0.237	0.097	0.273
Height-for-age (below -2SD)	0.397	0.036	312	46	1.249	0.091	0.325	0.469
Weight-for-height (below -2SD)	0.160	0.029	312	46	1.419	0.184	0.101	0.219
Weight-for-age (below -2SD)	0.446	0.039	312	46	1.288	0.087	0.369	0.523
Anaemic (children)	0.543	0.048	268	39	1.549	0.088	0.447	0.639
Anaemic (women)	0.313	0.037	398	59	1.588	0.117	0.240	0.387
BMI <18.5	0.329	0.027	361	53	1.100	0.083	0.274	0.383
Has heard of HIV/AIDS	0.677	0.040	846	124	2.514	0.060	0.596	0.758
Knows about condoms	0.290	0.031	846	124	1.991	0.107	0.228	0.352
Knows about limiting partners	0.433	0.040	846	124	2.340	0.092	0.353	0.513
Had 2+ sex partners in past 12 months	0.007	0.004	324	47	0.782	0.503	0.000	0.015
High-risk sex	0.020	0.008	324	47	0.988	0.383	0.005	0.036
Condom use at high-risk sex	0.551	0.183	9	1	1.039	0.332	0.185	0.917
Abstinence among youth	0.956	0.014	127	19	0.790	0.015	0.928	0.985
Sexually active in past 12 months among youth	0.011	0.008	127	19	0.897	0.755	0.000	0.028
Had an injection in past 12 months	0.253	0.034	846	124	2.271	0.134	0.185	0.321
Had HIV test and received results in past 12 months	0.008	0.004	423	62	0.862	0.477	0.000	0.015
Accepting attitudes towards people with HIV	0.107	0.016	598	84	1.252	0.148	0.075	0.138
HIV prevalence among tested for HIV 15-49	0.009	0.004	389	55	0.867	0.462	0.001	0.017
Total fertility rate (3 years)	5.189	0.381	na	352	1.511	0.073	4.427	5.951
Neonatal mortality (0-9 years)	43.804	5.530	1403	210	0.931	0.126	32.744	54.863
Postneonatal mortality (0-9 years)	40.387	9.721	1405	210	1.636	0.241	20.946	59.828
Infant mortality (0-9 years)	84.191	10.399	1405	210	1.253	0.124	63.393	104.988
Child mortality (0-9 years)	79.603	11.381	1425	214	1.337	0.143	56.841	102.365
Under-five mortality (0-9 years)	157.092	16.281	1427	214	1.439	0.104	124.529	189.655
MEN								
Urban residence	0.073	0.019	382	54	1.392	0.255	0.036	0.110
Literate	0.474	0.041	382	54	1.608	0.087	0.392	0.556
No education	0.499	0.031	382	54	1.205	0.062	0.437	0.561
Secondary education or higher	0.126	0.017	382	54	1.025	0.138	0.091	0.161
Want no more children	0.254	0.044	265	37	1.648	0.174	0.165	0.342
Want to delay birth at least 2 years	0.420	0.038	265	37	1.247	0.090	0.344	0.495
Ideal family size	6.671	0.459	369	51	1.687	0.069	5.753	7.589
Has heard of HIV/AIDS (15-49)	0.946	0.023	348	50	1.894	0.024	0.900	0.992
Knows about condoms (15-49)	0.582	0.040	348	50	1.502	0.068	0.503	0.662
Knows about limiting partners (15-49)	0.721	0.051	348	50	2.121	0.071	0.619	0.824
Had 2+ sex partners in past 12 months (15-49)	0.127	0.042	240	34	1.935	0.328	0.044	0.211
High-risk sex (15-49)	0.050	0.014	240	34	1.029	0.290	0.021	0.079
Condom use at high-risk sex (age 15-49)	0.600	0.207	11	2	1.339	0.345	0.186	1.015
Condom use at high-risk sex (age 15-59)	0.600	0.207	11	2	1.339	0.345	0.186	1.015
Abstinence among youth	0.913	0.028	94	14	0.960	0.031	0.857	0.969
Sexually active in past 12 months among youth	0.073	0.027	94	14	0.989	0.366	0.020	0.126
Paid for sexual intercourse in past 12 months	0.018	0.010	382	54	1.418	0.537	0.000	0.037
Had an injection in past 12 months (age 15-49)	0.285	0.054	348	50	2.223	0.189	0.178	0.393
HIV test and received results past 12 months (15-49)	0.015	0.005	348	50	0.755	0.327	0.005	0.025
Accepting attitudes towards people with HIV (15-49)	0.146	0.025	329	47	1.287	0.172	0.095	0.196
HIV prevalence among tested for HIV 15-49	0.000	0.000	304	45	na	na	0.000	0.000

na = Not applicable

Table B.11 Sampling errors for SNNP Region, Ethiopia 2005

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban residence	0.068	0.010	2087	2995	1.791	0.145	0.048	0.088
Literate	0.224	0.016	2087	2995	1.766	0.072	0.192	0.256
No education	0.657	0.019	2087	2995	1.865	0.030	0.618	0.695
Secondary education or higher	0.067	0.007	2087	2995	1.344	0.110	0.052	0.082
Net attendance ratio for primary school	0.345	0.020	2109	3129	1.770	0.059	0.304	0.386
Currently pregnant	0.102	0.008	2087	2995	1.170	0.076	0.087	0.118
Children ever born to women age 40-49	7.511	0.180	309	450	1.198	0.024	7.150	7.872
Currently using any contraceptive method	0.119	0.015	1366	1988	1.682	0.124	0.089	0.148
Currently using pill	0.019	0.005	1366	1988	1.268	0.247	0.010	0.028
Currently using IUD	0.000	0.000	1366	1988	na	na	0.000	0.000
Currently using female sterilization	0.000	0.000	1366	1988	na	na	0.000	0.000
Currently using rhythm method	0.003	0.002	1366	1988	1.160	0.585	0.000	0.006
Want no more children	0.378	0.019	1366	1988	1.456	0.051	0.340	0.416
Ideal family size	4.687	0.138	1860	2655	2.051	0.030	4.410	4.964
Perinatal mortality (0-6 years)	29.644	4.083	1741	2517	1.005	0.138	21.477	37.810
Mothers received tetanus injection for last birth	0.369	0.021	1129	1632	1.446	0.056	0.327	0.410
Mothers received medical assistance at delivery	0.042	0.006	1730	2500	1.197	0.153	0.029	0.054
Had diarrhoea in two weeks before survey	0.251	0.015	1568	2273	1.217	0.058	0.222	0.280
Treated with oral rehydration salts (ORS)	0.159	0.021	396	571	1.039	0.134	0.116	0.201
Taken to a health provider	0.186	0.019	396	571	0.898	0.105	0.147	0.225
Vaccination card seen	0.355	0.033	277	408	1.161	0.094	0.288	0.421
Received BCG	0.642	0.034	277	408	1.175	0.053	0.575	0.710
Received DPT (3 doses)	0.332	0.034	277	408	1.214	0.104	0.263	0.401
Received polio (3 doses)	0.502	0.034	277	408	1.136	0.068	0.434	0.570
Received measles	0.377	0.030	277	408	1.026	0.079	0.318	0.436
Fully immunized	0.203	0.024	277	408	0.993	0.118	0.155	0.250
Height-for-age (below -2SD)	0.516	0.021	729	1057	1.077	0.040	0.475	0.558
Weight-for-height (below -2SD)	0.065	0.010	729	1057	1.084	0.156	0.045	0.086
Weight-for-age (below -2SD)	0.347	0.017	729	1057	0.929	0.050	0.313	0.382
Anaemic (children)	0.462	0.019	687	1004	0.955	0.040	0.424	0.499
Anaemic (women)	0.235	0.018	1003	1437	1.371	0.078	0.198	0.271
BMI <18.5	0.267	0.020	910	1295	1.375	0.076	0.227	0.308
Has heard of HIV/AIDS	0.873	0.016	2087	2995	2.161	0.018	0.841	0.904
Knows about condoms	0.359	0.021	2087	2995	2.046	0.060	0.316	0.402
Knows about limiting partners	0.579	0.027	2087	2995	2.515	0.047	0.525	0.633
Had 2+ sex partners in past 12 months	0.004	0.003	647	942	0.999	0.611	0.000	0.009
High-risk sex	0.005	0.003	647	942	0.898	0.485	0.000	0.010
Condom use at high-risk sex	0.444	0.240	5	5	0.964	0.539	0.000	0.923
Abstinence among youth	0.987	0.005	543	765	0.967	0.005	0.978	0.997
Sexually active in past 12 months among youth	0.005	0.003	543	765	0.990	0.627	0.000	0.010
Had an injection in past 12 months	0.316	0.016	2087	2995	1.593	0.051	0.283	0.348
Had HIV test and received results in past 12 months	0.014	0.004	1049	1504	1.146	0.293	0.006	0.023
Accepting attitudes towards people with HIV	0.057	0.007	1842	2613	1.335	0.126	0.043	0.072
HIV prevalence among tested for HIV 15-49	0.001	0.001	997	1290	0.721	0.716	0.000	0.002
Total fertility rate (3 years)	5.638	0.218	na	8308	1.428	0.039	5.202	6.074
Neonatal mortality (0-9 years)	36.448	4.033	3586	5219	1.064	0.111	28.382	44.514
Postneonatal mortality (0-9 years)	48.702	4.583	3587	5221	1.157	0.094	39.536	57.868
Infant mortality (0-9 years)	85.150	6.517	3588	5222	1.220	0.077	72.115	98.185
Child mortality (0-9 years)	62.515	5.812	3629	5279	1.165	0.093	50.892	74.139
Under-five mortality (0-9 years)	142.343	8.821	3632	5284	1.256	0.062	124.700	159.985
MEN								
Urban residence	0.064	0.010	880	1244	1.248	0.161	0.043	0.084
Literate	0.570	0.024	880	1244	1.460	0.043	0.521	0.619
No education	0.326	0.024	880	1244	1.536	0.074	0.278	0.375
Secondary education or higher	0.153	0.013	880	1244	1.062	0.084	0.127	0.178
Want no more children	0.295	0.021	514	730	1.052	0.072	0.252	0.337
Want to delay birth at least 2 years	0.495	0.023	514	730	1.027	0.046	0.449	0.540
Ideal family size	5.737	0.175	787	1116	1.067	0.031	5.386	6.087
Has heard of HIV/AIDS (15-49)	0.972	0.010	811	1143	1.766	0.011	0.952	0.992
Knows about condoms (15-49)	0.572	0.027	811	1143	1.581	0.048	0.517	0.627
Knows about limiting partners (15-49)	0.771	0.027	811	1143	1.796	0.034	0.718	0.824
Had 2+ sex partners in past 12 months (15-49)	0.065	0.011	464	657	1.002	0.176	0.042	0.088
High-risk sex (15-49)	0.046	0.012	464	657	1.226	0.258	0.022	0.070
Condom use at high-risk sex (age 15-49)	0.365	0.137	21	31	1.269	0.375	0.091	0.638
Abstinence among youth	0.924	0.014	300	425	0.889	0.015	0.897	0.951
Sexually active in past 12 months among youth	0.036	0.009	300	425	0.850	0.254	0.018	0.054
Paid for sexual intercourse in past 12 months	0.002	0.001	880	1244	0.951	0.720	0.000	0.005
Had an injection in past 12 months (age 15-49)	0.177	0.018	811	1143	1.336	0.101	0.141	0.213
HIV test and received results past 12 months (15-49)	0.013	0.004	811	1143	0.990	0.305	0.005	0.021
Accepting attitudes towards people with HIV (15-49)	0.083	0.013	789	1111	1.273	0.150	0.058	0.108
HIV prevalence among tested for HIV 15-49	0.004	0.002	758	1010	1.023	0.582	0.000	0.009

na = Not applicable

Table B.12 Sampling errors for Gambela Region, Ethiopia 2005

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban residence	0.149	0.024	729	44	1.797	0.159	0.102	0.197
Literate	0.228	0.027	729	44	1.748	0.119	0.174	0.283
No education	0.595	0.036	729	44	1.960	0.060	0.524	0.667
Secondary education or higher	0.084	0.017	729	44	1.623	0.199	0.051	0.117
Net attendance ratio for primary school	0.422	0.037	646	37	1.653	0.088	0.348	0.497
Currently pregnant	0.083	0.014	729	44	1.328	0.164	0.056	0.110
Children ever born to women age 40-49	5.304	0.188	97	6	0.648	0.036	4.927	5.681
Currently using any contraceptive method	0.159	0.026	511	31	1.577	0.160	0.108	0.211
Currently using pill	0.025	0.011	511	31	1.569	0.436	0.003	0.046
Currently using IUD	0.000	0.000	511	31	na	na	0.000	0.000
Currently using female sterilization	0.000	0.000	511	31	na	na	0.000	0.000
Currently using rhythm method	0.001	0.001	511	31	0.735	1.019	0.000	0.003
Want no more children	0.435	0.036	511	31	1.641	0.083	0.363	0.507
Ideal family size	4.667	0.176	662	40	1.592	0.038	4.314	5.020
Perinatal mortality (0-6 years)	23.939	7.986	517	31	1.183	0.334	7.967	39.911
Mothers received tetanus injection for last birth	0.242	0.033	385	23	1.497	0.136	0.176	0.307
Mothers received medical assistance at delivery	0.153	0.025	515	31	1.426	0.166	0.102	0.203
Had diarrhoea in two weeks before survey	0.151	0.012	480	29	0.670	0.077	0.127	0.174
Treated with oral rehydration salts (ORS)	0.276	0.071	74	4	1.312	0.259	0.133	0.418
Taken to a health provider	0.402	0.059	74	4	0.932	0.147	0.284	0.521
Vaccination card seen	0.225	0.052	85	5	1.099	0.233	0.120	0.330
Received BCG	0.493	0.071	85	5	1.288	0.145	0.350	0.636
Received DPT (3 doses)	0.203	0.051	85	5	1.113	0.254	0.100	0.306
Received polio (3 doses)	0.414	0.055	85	5	1.012	0.134	0.303	0.525
Received measles	0.307	0.083	85	5	1.598	0.270	0.142	0.473
Fully immunized	0.159	0.039	85	5	0.911	0.246	0.081	0.237
Height-for-age (below -2SD)	0.293	0.054	189	11	1.487	0.183	0.186	0.400
Weight-for-height (below -2SD)	0.068	0.015	189	11	0.808	0.218	0.038	0.098
Weight-for-age (below -2SD)	0.267	0.033	189	11	0.988	0.123	0.202	0.333
Anaemic (children)	0.618	0.048	176	10	1.282	0.078	0.522	0.715
Anaemic (women)	0.420	0.042	339	21	1.608	0.101	0.335	0.505
BMI <18.5	0.385	0.035	327	20	1.303	0.091	0.315	0.455
Has heard of HIV/AIDS	0.629	0.060	729	44	3.337	0.095	0.509	0.748
Knows about condoms	0.253	0.029	729	44	1.827	0.116	0.194	0.312
Knows about limiting partners	0.340	0.036	729	44	2.076	0.107	0.267	0.413
Had 2+ sex partners in past 12 months	0.006	0.006	222	14	1.145	0.988	0.000	0.018
High-risk sex	0.050	0.019	222	14	1.322	0.388	0.011	0.089
Condom use at high-risk sex	0.000	0.000	11	1	na	na	0.000	0.000
Abstinence among youth	0.845	0.040	109	7	1.147	0.047	0.765	0.925
Sexually active in past 12 months among youth	0.073	0.040	109	7	1.581	0.541	0.000	0.153
Had an injection in past 12 months	0.252	0.026	729	44	1.600	0.102	0.201	0.304
Had HIV test and received results in past 12 months	0.006	0.004	381	23	0.903	0.577	0.000	0.014
Accepting attitudes towards people with HIV	0.151	0.021	472	28	1.272	0.139	0.109	0.192
HIV prevalence among tested for HIV 15-49	0.055	0.022	342	19	1.750	0.392	0.012	0.098
Total fertility rate (3 years)	3.999	0.468	na	126	1.130	0.117	3.064	4.934
Neonatal mortality (0-9 years)	41.603	13.631	1072	65	2.090	0.328	14.341	68.866
Postneonatal mortality (0-9 years)	50.616	8.138	1074	65	1.007	0.161	34.341	66.891
Infant mortality (0-9 years)	92.219	16.259	1074	65	1.612	0.176	59.700	124.738
Child mortality (0-9 years)	69.784	17.930	1086	66	1.817	0.257	33.924	105.644
Under-five mortality (0-9 years)	155.567	29.589	1088	66	2.308	0.190	96.389	214.746
MEN								
Urban residence	0.135	0.027	339	21	1.429	0.197	0.082	0.188
Literate	0.575	0.045	339	21	1.674	0.078	0.485	0.665
No education	0.275	0.045	339	21	1.843	0.163	0.186	0.365
Secondary education or higher	0.317	0.051	339	21	2.025	0.162	0.215	0.420
Want no more children	0.242	0.044	186	12	1.409	0.183	0.153	0.331
Want to delay birth at least 2 years	0.471	0.059	186	12	1.618	0.126	0.353	0.590
Ideal family size	5.999	0.620	330	20	2.140	0.103	4.759	7.239
Has heard of HIV/AIDS (15-49)	0.877	0.032	317	19	1.728	0.036	0.813	0.941
Knows about condoms (15-49)	0.542	0.049	317	19	1.760	0.091	0.443	0.640
Knows about limiting partners (15-49)	0.609	0.052	317	19	1.900	0.086	0.504	0.713
Had 2+ sex partners in past 12 months (15-49)	0.124	0.021	201	12	0.890	0.167	0.082	0.165
High-risk sex (15-49)	0.282	0.033	201	12	1.029	0.116	0.216	0.347
Condom use at high-risk sex (age 15-49)	0.453	0.063	60	4	0.966	0.138	0.327	0.578
Abstinence among youth	0.499	0.060	113	6	1.260	0.119	0.380	0.618
Sexually active in past 12 months among youth	0.371	0.060	113	6	1.313	0.161	0.251	0.491
Paid for sexual intercourse in past 12 months	0.044	0.012	339	21	1.046	0.265	0.021	0.067
Had an injection in past 12 months (age 15-49)	0.250	0.034	317	19	1.375	0.134	0.183	0.318
HIV test and received results past 12 months (15-49)	0.006	0.005	317	19	1.096	0.783	0.000	0.016
Accepting attitudes towards people with HIV (15-49)	0.325	0.050	284	17	1.790	0.153	0.226	0.425
HIV prevalence among tested for HIV 15-49	0.067	0.016	277	16	1.070	0.241	0.035	0.099

na = Not applicable

Table B.13 Sampling errors for Harari Region, Ethiopia 2005

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban residence	0.673	0.030	844	39	1.876	0.045	0.612	0.734
Literate	0.549	0.031	844	39	1.837	0.057	0.486	0.612
No education	0.399	0.025	844	39	1.491	0.063	0.349	0.449
Secondary education or higher	0.427	0.027	844	39	1.584	0.063	0.373	0.481
Net attendance ratio for primary school	0.543	0.048	565	23	1.890	0.088	0.448	0.639
Currently pregnant	0.067	0.011	844	39	1.228	0.157	0.046	0.089
Children ever born to women age 40-49	5.246	0.374	109	5	1.203	0.071	4.498	5.993
Currently using any contraceptive method	0.335	0.034	486	22	1.567	0.100	0.268	0.402
Currently using pill	0.058	0.016	486	22	1.465	0.268	0.027	0.089
Currently using IUD	0.016	0.007	486	22	1.140	0.405	0.003	0.029
Currently using female sterilization	0.000	0.000	486	22	na	na	0.000	0.000
Currently using rhythm method	0.042	0.015	486	22	1.663	0.359	0.012	0.073
Want no more children	0.408	0.027	486	22	1.207	0.066	0.354	0.461
Ideal family size	4.196	0.218	658	31	1.852	0.052	3.760	4.632
Perinatal mortality (0-6 years)	24.634	7.402	516	22	1.073	0.300	9.830	39.437
Mothers received tetanus injection for last birth	0.378	0.039	337	15	1.440	0.103	0.301	0.456
Mothers received medical assistance at delivery	0.314	0.027	514	22	1.084	0.087	0.259	0.369
Had diarrhoea in two weeks before survey	0.188	0.024	482	21	1.197	0.125	0.141	0.235
Treated with oral rehydration salts (ORS)	0.226	0.049	91	4	1.052	0.216	0.128	0.324
Taken to a health provider	0.313	0.056	91	4	1.052	0.179	0.201	0.425
Vaccination card seen	0.410	0.057	93	4	1.119	0.139	0.296	0.523
Received BCG	0.674	0.057	93	4	1.166	0.084	0.561	0.787
Received DPT (3 doses)	0.458	0.048	93	4	0.921	0.104	0.363	0.553
Received polio (3 doses)	0.520	0.038	93	4	0.741	0.074	0.443	0.597
Received measles	0.399	0.044	93	4	0.871	0.110	0.311	0.488
Fully immunized	0.349	0.034	93	4	0.681	0.096	0.281	0.416
Height-for-age (below -2SD)	0.387	0.034	231	10	1.009	0.087	0.320	0.454
Weight-for-height (below -2SD)	0.091	0.019	231	10	0.985	0.212	0.052	0.129
Weight-for-age (below -2SD)	0.267	0.052	231	10	1.639	0.195	0.163	0.371
Anaemic (children)	0.561	0.053	175	7	1.267	0.094	0.455	0.667
Anaemic (women)	0.224	0.027	345	16	1.203	0.121	0.170	0.279
BMI <18.5	0.206	0.023	376	17	1.129	0.114	0.159	0.253
Has heard of HIV/AIDS	0.982	0.009	844	39	1.962	0.009	0.964	1.000
Knows about condoms	0.607	0.023	844	39	1.361	0.038	0.561	0.653
Knows about limiting partners	0.775	0.020	844	39	1.412	0.026	0.735	0.816
Had 2+ sex partners in past 12 months	0.004	0.004	255	12	0.980	0.998	0.000	0.011
High-risk sex	0.037	0.011	255	12	0.968	0.309	0.014	0.060
Condom use at high-risk sex	0.216	0.155	9	0	1.063	0.715	0.000	0.526
Abstinence among youth	0.918	0.020	212	10	1.037	0.021	0.879	0.957
Sexually active in past 12 months among youth	0.032	0.012	212	10	0.949	0.359	0.009	0.055
Had an injection in past 12 months	0.262	0.020	844	39	1.336	0.077	0.221	0.302
Had HIV test and received results in past 12 months	0.078	0.017	435	20	1.329	0.219	0.044	0.113
Accepting attitudes towards people with HIV	0.424	0.019	827	38	1.093	0.044	0.387	0.462
HIV prevalence among tested for HIV 15-49	0.046	0.013	345	16	1.135	0.279	0.020	0.072
Total fertility rate (3 years)	3.772	0.494	na	106	2.145	0.131	2.785	4.760
Neonatal mortality (0-9 years)	35.459	6.951	956	41	0.957	0.196	21.557	49.361
Postneonatal mortality (0-9 years)	30.165	7.371	959	41	1.094	0.244	15.424	44.906
Infant mortality (0-9 years)	65.624	11.921	959	41	1.159	0.182	41.783	89.466
Child mortality (0-9 years)	39.957	10.547	963	42	1.296	0.264	18.863	61.052
Under-five mortality (0-9 years)	102.959	16.570	966	42	1.274	0.161	69.820	136.099
MEN								
Urban residence	0.622	0.035	359	16	1.385	0.057	0.551	0.693
Literate	0.784	0.035	359	16	1.610	0.045	0.714	0.854
No education	0.205	0.036	359	16	1.684	0.175	0.133	0.277
Secondary education or higher	0.516	0.035	359	16	1.307	0.067	0.447	0.585
Want no more children	0.309	0.037	193	9	1.113	0.120	0.235	0.384
Want to delay birth at least 2 years	0.465	0.035	193	9	0.978	0.076	0.395	0.536
Ideal family size	4.173	0.143	316	15	0.895	0.034	3.888	4.459
Has heard of HIV/AIDS (15-49)	0.998	0.002	337	15	0.800	0.002	0.994	1.002
Knows about condoms (15-49)	0.740	0.030	337	15	1.241	0.040	0.681	0.799
Knows about limiting partners (15-49)	0.959	0.014	337	15	1.333	0.015	0.930	0.988
Had 2+ sex partners in past 12 months (15-49)	0.022	0.011	216	10	1.072	0.488	0.001	0.043
High-risk sex (15-49)	0.208	0.027	216	10	0.972	0.130	0.154	0.261
Condom use at high-risk sex (age 15-49)	0.769	0.069	43	2	1.068	0.090	0.631	0.908
Abstinence among youth	0.762	0.060	100	4	1.413	0.079	0.641	0.883
Sexually active in past 12 months among youth	0.171	0.049	100	4	1.305	0.289	0.072	0.270
Paid for sexual intercourse in past 12 months	0.013	0.005	359	16	0.775	0.363	0.003	0.022
Had an injection in past 12 months (age 15-49)	0.195	0.032	337	15	1.479	0.164	0.131	0.258
HIV test and received results past 12 months (15-49)	0.074	0.015	337	15	1.058	0.205	0.043	0.104
Accepting attitudes towards people with HIV (15-49)	0.430	0.035	336	15	1.285	0.081	0.361	0.500
HIV prevalence among tested for HIV 15-49	0.022	0.009	262	13	0.939	0.389	0.005	0.039

na = Not applicable

Table B.14 Sampling errors for Addis Ababa Region, Ethiopia 2005

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban residence	0.990	0.002	1869	756	1.016	0.002	0.985	0.994
Literate	0.799	0.012	1869	756	1.335	0.016	0.774	0.824
No education	0.176	0.012	1869	756	1.382	0.069	0.152	0.200
Secondary education or higher	0.581	0.015	1869	756	1.296	0.025	0.552	0.611
Net attendance ratio for primary school	0.806	0.020	663	264	1.263	0.025	0.766	0.847
Currently pregnant	0.015	0.003	1869	756	1.013	0.191	0.009	0.020
Children ever born to women age 40-49	4.365	0.284	265	107	1.689	0.065	3.797	4.933
Currently using any contraceptive method	0.569	0.022	544	224	1.021	0.038	0.525	0.612
Currently using pill	0.106	0.016	544	224	1.194	0.149	0.074	0.138
Currently using IUD	0.039	0.010	544	224	1.183	0.253	0.019	0.058
Currently using female sterilization	0.018	0.007	544	224	1.262	0.402	0.004	0.032
Currently using rhythm method	0.092	0.011	544	224	0.892	0.120	0.070	0.115
Want no more children	0.477	0.021	544	224	0.980	0.044	0.435	0.519
Ideal family size	3.275	0.064	1795	727	1.372	0.020	3.147	3.402
Perinatal mortality (0-6 years)	48.451	12.107	389	158	1.139	0.250	24.238	72.665
Mothers received tetanus injection for last birth	0.677	0.031	315	129	1.166	0.045	0.616	0.738
Mothers received medical assistance at delivery	0.788	0.045	380	153	1.923	0.058	0.697	0.878
Had diarrhoea in two weeks before survey	0.129	0.021	360	146	1.202	0.166	0.086	0.172
Treated with oral rehydration salts (ORS)	0.453	0.077	46	19	1.034	0.169	0.300	0.607
Taken to a health provider	0.446	0.063	46	19	0.855	0.142	0.320	0.573
Vaccination card seen	0.683	0.051	78	32	0.980	0.075	0.580	0.785
Received BCG	0.935	0.041	78	32	1.476	0.044	0.853	1.017
Received DPT (3 doses)	0.838	0.052	78	32	1.241	0.062	0.735	0.941
Received polio (3 doses)	0.855	0.048	78	32	1.213	0.056	0.758	0.951
Received measles	0.788	0.056	78	32	1.208	0.071	0.676	0.899
Fully immunized	0.699	0.058	78	32	1.130	0.084	0.582	0.816
Height-for-age (below -2SD)	0.184	0.040	170	67	1.239	0.215	0.105	0.263
Weight-for-height (below -2SD)	0.017	0.010	170	67	1.033	0.599	0.000	0.038
Weight-for-age (below -2SD)	0.110	0.032	170	67	1.274	0.287	0.047	0.173
Anaemic (children)	0.375	0.056	119	45	1.170	0.148	0.264	0.487
Anaemic (women)	0.146	0.016	676	271	1.191	0.111	0.114	0.179
BMI <18.5	0.154	0.012	803	325	0.937	0.078	0.130	0.178
Has heard of HIV/AIDS	0.992	0.004	1869	756	1.765	0.004	0.985	0.999
Knows about condoms	0.785	0.012	1869	756	1.280	0.016	0.760	0.809
Knows about limiting partners	0.874	0.011	1869	756	1.392	0.012	0.853	0.895
Had 2+ sex partners in past 12 months	0.003	0.003	289	117	0.991	1.005	0.000	0.010
High-risk sex	0.157	0.031	289	117	1.444	0.197	0.095	0.219
Condom use at high-risk sex	0.349	0.061	46	18	0.861	0.175	0.227	0.472
Abstinence among youth	0.870	0.017	780	314	1.397	0.019	0.836	0.903
Sexually active in past 12 months among youth	0.030	0.008	780	314	1.301	0.266	0.014	0.046
Had an injection in past 12 months	0.319	0.013	1869	756	1.212	0.041	0.293	0.345
Had HIV test and received results in past 12 months	0.109	0.010	840	339	0.967	0.095	0.088	0.130
Accepting attitudes towards people with HIV	0.469	0.017	1846	750	1.468	0.036	0.435	0.503
HIV prevalence among tested for HIV 15-49	0.061	0.011	673	280	1.193	0.181	0.039	0.083
Total fertility rate (3 years)	1.377	0.130	na	2110	1.283	0.094	1.117	1.636
Neonatal mortality (0-9 years)	22.923	6.091	813	336	1.135	0.266	10.742	35.105
Postneonatal mortality (0-9 years)	21.927	6.648	813	336	1.144	0.303	8.630	35.223
Infant mortality (0-9 years)	44.850	10.162	813	336	1.290	0.227	24.525	65.175
Child mortality (0-9 years)	27.939	9.366	823	341	1.418	0.335	9.208	46.670
Under-five mortality (0-9 years)	71.536	16.039	823	341	1.531	0.224	39.459	103.613
MEN								
Urban residence	0.987	0.007	698	292	1.576	0.007	0.973	1.000
Literate	0.936	0.012	698	292	1.288	0.013	0.912	0.960
No education	0.072	0.011	698	292	1.084	0.148	0.051	0.093
Secondary education or higher	0.732	0.024	698	292	1.440	0.033	0.684	0.780
Want no more children	0.533	0.046	228	97	1.396	0.087	0.440	0.625
Want to delay birth at least 2 years	0.216	0.028	228	97	1.015	0.128	0.161	0.272
Ideal family size	3.263	0.120	677	283	0.982	0.037	3.024	3.502
Has heard of HIV/AIDS (15-49)	0.994	0.004	635	266	1.279	0.004	0.986	1.002
Knows about condoms (15-49)	0.778	0.025	635	266	1.501	0.032	0.728	0.827
Knows about limiting partners (15-49)	0.831	0.019	635	266	1.298	0.023	0.793	0.870
Had 2+ sex partners in past 12 months (15-49)	0.061	0.014	289	123	1.002	0.231	0.033	0.090
High-risk sex (15-49)	0.444	0.030	289	123	1.024	0.068	0.384	0.504
Condom use at high-risk sex (age 15-49)	0.709	0.042	131	55	1.048	0.059	0.625	0.792
Abstinence among youth	0.673	0.024	276	116	0.845	0.036	0.625	0.721
Sexually active in past 12 months among youth	0.183	0.021	276	116	0.900	0.115	0.141	0.225
Paid for sexual intercourse in past 12 months	0.015	0.004	698	292	0.954	0.297	0.006	0.023
Had an injection in past 12 months (age 15-49)	0.265	0.018	635	266	1.029	0.068	0.229	0.301
HIV test and received results past 12 months (15-49)	0.110	0.016	635	266	1.295	0.146	0.078	0.142
Accepting attitudes towards people with HIV (15-49)	0.440	0.029	629	265	1.478	0.067	0.381	0.498
HIV prevalence among tested for HIV 15-49	0.030	0.008	472	214	1.014	0.265	0.014	0.046

na = Not applicable

Table B.15 Sampling errors for Dire Dawa Region, Ethiopia 2005

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban residence	0.713	0.018	807	69	1.133	0.025	0.677	0.750
Literate	0.530	0.045	807	69	2.548	0.084	0.441	0.620
No education	0.467	0.043	807	69	2.471	0.093	0.381	0.554
Secondary education or higher	0.337	0.040	807	69	2.394	0.118	0.258	0.417
Net attendance ratio for primary school	0.548	0.043	535	46	1.771	0.079	0.461	0.634
Currently pregnant	0.039	0.007	807	69	1.045	0.184	0.024	0.053
Children ever born to women age 40-49	5.627	0.227	132	12	0.816	0.040	5.173	6.081
Currently using any contraceptive method	0.340	0.039	420	37	1.671	0.114	0.262	0.417
Currently using pill	0.067	0.013	420	37	1.093	0.199	0.041	0.094
Currently using IUD	0.006	0.004	420	37	0.967	0.591	0.000	0.014
Currently using female sterilization	0.003	0.003	420	37	1.034	0.994	0.000	0.008
Currently using rhythm method	0.022	0.007	420	37	0.920	0.297	0.009	0.036
Want no more children	0.360	0.037	420	37	1.557	0.101	0.287	0.433
Ideal family size	5.272	0.276	744	63	2.080	0.052	4.720	5.824
Perinatal mortality (0-6 years)	24.023	11.010	413	38	1.394	0.458	2.003	46.042
Mothers received tetanus injection for last birth	0.517	0.035	274	25	1.197	0.068	0.446	0.587
Mothers received medical assistance at delivery	0.267	0.036	411	37	1.366	0.134	0.195	0.338
Had diarrhoea in two weeks before survey	0.116	0.015	380	34	0.960	0.130	0.086	0.146
Treated with oral rehydration salts (ORS)	0.313	0.069	45	4	0.986	0.222	0.174	0.452
Taken to a health provider	0.257	0.042	45	4	0.653	0.163	0.173	0.341
Vaccination card seen	0.548	0.069	78	7	1.246	0.125	0.411	0.685
Received BCG	0.754	0.051	78	7	1.049	0.067	0.653	0.856
Received DPT (3 doses)	0.614	0.065	78	7	1.205	0.106	0.484	0.745
Received polio (3 doses)	0.651	0.053	78	7	0.990	0.081	0.546	0.756
Received measles	0.557	0.049	78	7	0.889	0.088	0.459	0.655
Fully immunized	0.434	0.057	78	7	1.043	0.131	0.320	0.548
Height-for-age (below -2SD)	0.308	0.027	182	16	0.775	0.089	0.254	0.363
Weight-for-height (below -2SD)	0.114	0.021	182	16	0.939	0.188	0.071	0.157
Weight-for-age (below -2SD)	0.296	0.039	182	16	1.148	0.131	0.218	0.373
Anaemic (children)	0.607	0.051	156	14	1.286	0.083	0.506	0.708
Anaemic (women)	0.258	0.031	298	26	1.236	0.121	0.195	0.321
BMI <18.5	0.242	0.018	363	31	0.790	0.074	0.207	0.278
Has heard of HIV/AIDS	0.969	0.009	807	69	1.504	0.010	0.950	0.987
Knows about condoms	0.567	0.028	807	69	1.625	0.050	0.510	0.624
Knows about limiting partners	0.693	0.034	807	69	2.112	0.050	0.624	0.761
Had 2+ sex partners in past 12 months	0.015	0.011	202	18	1.311	0.742	0.000	0.038
High-risk sex	0.092	0.023	202	18	1.106	0.245	0.047	0.137
Condom use at high-risk sex	0.437	0.134	20	2	1.174	0.306	0.170	0.704
Abstinence among youth	0.891	0.020	221	19	0.961	0.023	0.851	0.931
Sexually active in past 12 months among youth	0.029	0.010	221	19	0.902	0.352	0.009	0.049
Had an injection in past 12 months	0.249	0.017	807	69	1.130	0.069	0.215	0.284
Had HIV test and received results in past 12 months	0.052	0.011	388	33	0.948	0.207	0.030	0.073
Accepting attitudes towards people with HIV	0.371	0.028	784	67	1.624	0.076	0.315	0.427
HIV prevalence among tested for HIV 15-49	0.044	0.015	292	28	1.250	0.343	0.014	0.073
Total fertility rate (3 years)	3.623	0.534	na	192	2.073	0.147	2.556	4.691
Neonatal mortality (0-9 years)	29.139	6.908	827	74	1.166	0.237	15.322	42.956
Postneonatal mortality (0-9 years)	42.050	10.827	827	74	1.506	0.257	20.397	63.704
Infant mortality (0-9 years)	71.189	15.811	828	75	1.627	0.222	39.567	102.811
Child mortality (0-9 years)	70.188	14.943	839	76	1.464	0.213	40.301	100.074
Under-five mortality (0-9 years)	136.380	19.671	841	76	1.528	0.144	97.038	175.722
MEN								
Urban residence	0.672	0.025	330	30	0.964	0.037	0.622	0.721
Literate	0.766	0.034	330	30	1.476	0.045	0.697	0.835
No education	0.228	0.033	330	30	1.424	0.145	0.162	0.294
Secondary education or higher	0.525	0.033	330	30	1.215	0.064	0.458	0.592
Want no more children	0.370	0.053	154	14	1.348	0.142	0.265	0.475
Want to delay birth at least 2 years	0.452	0.038	154	14	0.944	0.084	0.376	0.528
Ideal family size	3.986	0.278	315	28	1.657	0.070	3.429	4.542
Has heard of HIV/AIDS (15-49)	0.978	0.010	306	27	1.232	0.011	0.957	0.999
Knows about condoms (15-49)	0.709	0.031	306	27	1.198	0.044	0.647	0.772
Knows about limiting partners (15-49)	0.856	0.032	306	27	1.587	0.037	0.792	0.920
Had 2+ sex partners in past 12 months (15-49)	0.076	0.020	167	15	0.959	0.260	0.036	0.115
High-risk sex (15-49)	0.223	0.042	167	15	1.305	0.189	0.138	0.307
Condom use at high-risk sex (age 15-49)	0.709	0.091	37	3	1.208	0.129	0.526	0.892
Abstinence among youth	0.758	0.047	128	11	1.243	0.062	0.663	0.852
Sexually active in past 12 months among youth	0.166	0.049	128	11	1.495	0.297	0.067	0.265
Paid for sexual intercourse in past 12 months	0.014	0.006	330	30	0.973	0.455	0.001	0.026
Had an injection in past 12 months (age 15-49)	0.176	0.019	306	27	0.858	0.106	0.139	0.214
HIV test and received results past 12 months (15-49)	0.073	0.015	306	27	1.042	0.213	0.042	0.104
Accepting attitudes towards people with HIV (15-49)	0.433	0.028	300	27	0.976	0.065	0.377	0.489
HIV prevalence among tested for HIV 15-49	0.019	0.010	173	22	1.012	0.559	0.000	0.040

na = Not applicable

DATA QUALITY TABLES

Appendix C

Table C.1 Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Ethiopia 2005

	Female		Male			Female		Male	
Age	Number	Percent	Number	Percent	Age	Number	Percent	Number	Percent
0	1,090	3.2	1,194	3.5	36	226	0.7	220	0.7
1	956	2.8	999	3.0	37	229	0.7	198	0.6
2	942	2.8	1,027	3.1	38	354	1.0	301	0.9
3	1,124	3.3	1,119	3.3	39	145	0.4	118	0.4
4	1,153	3.4	1,086	3.2	40	569	1.7	624	1.9
5	933	2.8	922	2.7	41	141	0.4	99	0.3
6	1,230	3.6	1,288	3.8	42	208	0.6	208	0.6
7	1,271	3.7	1,336	4.0	43	140	0.4	119	0.4
8	1,232	3.6	1,261	3.7	44	132	0.4	128	0.4
9	972	2.9	980	2.9	45	448	1.3	500	1.5
10	1,193	3.5	1,343	4.0	46	186	0.5	137	0.4
11	789	2.3	816	2.4	47	139	0.4	142	0.4
12	1,163	3.4	1,131	3.4	48	243	0.7	180	0.5
13	1,009	3.0	982	2.9	49	140	0.4	82	0.2
14	708	2.1	975	2.9	50	252	0.7	425	1.3
15	781	2.3	827	2.5	51	157	0.5	99	0.3
16	690	2.0	752	2.2	52	238	0.7	144	0.4
17	585	1.7	602	1.8	53	170	0.5	98	0.3
18	892	2.6	890	2.6	54	157	0.5	72	0.2
19	461	1.4	441	1.3	55	409	1.2	258	0.8
20	1,070	3.2	911	2.7	56	167	0.5	105	0.3
21	309	0.9	397	1.2	57	96	0.3	67	0.2
22	500	1.5	543	1.6	58	143	0.4	93	0.3
23	416	1.2	358	1.1	59	44	0.1	44	0.1
24	357	1.1	318	0.9	60	432	1.3	373	1.1
25	947	2.8	722	2.1	61	52	0.2	64	0.2
26	393	1.2	320	1.0	62	94	0.3	117	0.3
27	422	1.2	329	1.0	63	82	0.2	119	0.4
28	605	1.8	476	1.4	64	75	0.2	108	0.3
29	242	0.7	171	0.5	65	154	0.5	236	0.7
30	847	2.5	871	2.6	66	49	0.1	47	0.1
31	223	0.7	193	0.6	67	61	0.2	93	0.3
32	304	0.9	321	1.0	68	62	0.2	105	0.3
33	222	0.7	215	0.6	69	40	0.1	51	0.2
34	229	0.7	189	0.6	70+	710	2.1	874	2.6
35	688	2.0	690	2.1	Don't know/ missing	8	0.0	11	0.0
					Total	33,900	100.0	33,656	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 interviewed (weighted), by five-year age groups, Ethiopia 2005

Age group	Household popoulation of women age 10-54	Interviewed women age 15-49		Percentage of eligible women interviewed
		Number	Percent	
10-14	4,861	na	na	na
15-19	3,409	3,247	23.2	95.2
20-24	2,652	2,535	18.1	95.6
25-29	2,609	2,530	18.1	97.0
30-34	1,825	1,787	12.8	97.9
25-39	1,642	1,602	11.4	97.6
40-44	1,190	1,160	8.3	97.5
45-49	1,156	1,134	8.1	98.1
50-54	975	na	na	na
15-49	14,484	13,996	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 10-64, interviewed men age 15-59, and percentage of eligible men interviewed (weighted), Ethiopia 2005

Age group	Household popoulation of men age 10-64	Interviewed men age 15-59		Percentage of eligible men interviewed
		Number	Percent	
10-14	2,614	na	na	na
15-19	1,551	1,384	22.2	89.3
20-24	1,184	1,081	17.3	91.3
25-29	885	779	12.5	88.0
30-34	836	783	12.5	93.7
25-39	717	675	10.8	94.1
40-44	532	504	8.1	94.6
45-49	480	438	7.0	91.3
50-54	368	345	5.5	93.6
55-59	260	254	4.1	97.8
60-64	363	na	na	na
15-49	6,813	6,243	100.0	91.6

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 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 for which information on age-specific demographic and health characteristics is missing (weighted), Ethiopia 2005

Characteristic	Reference group	Percentage with missing information	Number of cases
Birth date	Births in the 15 years preceding the survey		
Month only		1.19	31,814
Month and year		0.05	31,814
Age at death	Deceased children born in the 15 years preceding the survey	0.29	4,371
Age/date at first union[1]	Ever-married women age 15-49 and ever-married men age 15-59	0.16	10.554
Respondent's education	All women age 15-49 and all men age 15-59	0.00	14,070
Diarrhoea in past 2 weeks	Living children age 0-59 months	0.70	10,109
Anthropometry	Living children age 0-59 months (from household questionnaire)		
Height		5.28	5,280
Weight		3.92	5,280
Height or weight		5.28	5,280
Anaemia			
Children	Living children age 6-59 months (from household questionnaire)	11.79	4,691
Women	All women (from household questionnaire)	11.94	6,963

[1] Both year and age missing

Table C.4 Births by calendar years

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio, by calendar year and status of child at birth (living (L), dead (D), and total (T)) (weighted), Ethiopia 2005

Calendar year	Number of births			Percentage with complete birth date[1]			Sex ratio at birth[2]			Calendar year ratio[3]		
	L	D	T	L	D	T	L	D	T	L	D	T
2005	1,168	70	1,239	100.0	100.0	100.0	113.2	210.9	117.1	na	na	na
2004	2,167	195	2,362	99.9	100.0	99.9	104.4	127.7	106.2	na	na	na
2003	1,779	203	1,982	99.9	100.0	99.9	101.3	137.9	104.5	86.2	105.5	87.8
2002	1,963	189	2,152	99.8	100.0	99.8	109.6	133.5	111.5	101.3	84.7	99.5
2001	2,097	245	2,342	99.9	98.8	99.8	93.2	136.7	97.0	110.8	109.7	110.7
2000	1,822	257	2,078	99.9	100.0	99.9	101.7	68.7	96.9	88.4	89.8	88.6
1999	2,024	327	2,351	98.9	96.2	98.5	102.5	126.0	105.5	100.7	103.4	101.1
1998	2,199	375	2,574	99.0	97.3	98.7	104.1	138.6	108.5	107.8	104.5	107.3
1997	2,054	392	2,446	97.8	95.9	97.5	112.0	98.6	109.8	102.2	105.8	102.7
1996	1,822	365	2,187	98.4	95.9	98.0	92.6	126.9	97.6	92.5	98.0	93.4
2001-2005	9,175	903	10,077	99.9	99.7	99.9	103.2	138.7	106.0	na	na	na
1996-2000	9,920	1,715	11,636	98.8	96.9	98.5	102.7	111.2	103.9	na	na	na
1991-1995	7,755	1,607	9,362	98.2	96.3	97.9	105.3	116.1	107.1	na	na	na
1986-1990	4,721	1,510	6,231	98.2	96.0	97.7	103.9	146.7	112.8	na	na	na
<1986	4,818	2,065	6,884	97.6	96.3	97.2	108.7	125.1	113.4	na	na	na
All	36,390	7,800	44,190	98.7	96.8	98.4	104.3	125.2	107.7	na	na	na

na = Not applicable
[1] Both year and month of birth given
[2] $(B_m/B_f)*100$, where B_m and B_f are the numbers of male and female births, respectively
[3] $[2B_x/(B_{x-1}+B_{x+1})]*100$, where B_x is the number births in calendar year x

Table C.5 Reporting of age at death in days

Distribution of reported deaths under one month of age by age at death in days and the percentage of neonatal deaths reported to occur at ages 0-6 days, for five-year periods preceding the survey (weighted), Ethiopia 2005

Age at death (days)	Number of years preceding the survey				
	0-4	5-9	10-14	15-19	Total 0-19
<1	84	82	59	52	277
1	118	161	119	98	496
2	44	27	35	35	142
3	36	42	42	38	159
4	6	11	2	13	32
5	16	11	18	7	52
6	0	4	5	2	11
7	32	47	29	38	146
8	10	9	15	10	43
9	6	6	3	3	18
10	8	7	10	7	32
11	2	2	2	2	8
12	10	3	4	7	24
13	2	0	0	1	3
14	10	4	5	10	27
15	24	34	28	21	107
18	3	0	1	0	4
19	0	2	1	0	4
20	5	5	11	4	25
21	15	14	20	4	53
22	2	0	0	0	2
23	0	1	0	0	1
24	1	1	1	1	4
25	0	4	1	2	8
27	2	2	0	2	5
28	3	2	0	0	5
31+	3	1	2	1	7
Total 0-30	437	484	411	356	1,687
Percent early neonatal[1]	69.3	70.1	68.5	68.9	69.3

[1] ≤6 days/≤30 days

Table C.6 Reporting of age at death in months

Distribution of reported deaths under two years of age by age at death in months and the percentage of infant deaths reported at age under one month, for five-year periods preceding the survey, Ethiopia 2005

Age at death (months)	Number of years preceding the survey				
	0-4	5-9	10-14	15-19	Total 0-19
<1[a]	437	484	412	356	1,688
1	89	96	85	59	329
2	63	62	65	51	241
3	48	52	67	50	217
4	34	33	22	26	116
5	26	37	21	15	100
6	53	64	59	44	220
7	23	34	35	30	123
8	27	35	21	36	119
9	10	30	23	21	83
10	12	14	12	14	52
11	4	14	17	14	49
12	25	86	78	43	233
13	4	6	2	6	18
14	7	4	6	0	17
15	4	2	0	4	10
16	0	4	7	1	11
17	3	3	3	0	9
18	8	16	18	7	49
19	1	2	0	2	5
20	2	3	0	0	5
21	0	4	0	0	4
23	3	0	0	0	3
24+	3	1	0	3	7
1 Year	47	89	83	80	300
Total 0-11	827	956	839	715	3,338
Percent neonatal[1]	52.8	50.6	49.0	49.8	50.6

[a] Includes deaths under one month reported in days
[1] Under one month / under one year

Table C.7 Data on siblings

Number of sisters and brothers reported by interviewed women and completeness of age data for living siblings and age at death (AD) and years since death (YSD), data for dead siblings, Ethiopia 2005

Sibling status and completeness of reporting	Sisters		Brothers		Total	
	Number	Percent	Number	Percent	Number	Percent
All siblings	38,392	100.0	42,138	100.0	80,530	100.0
Living	30,367	79.1	32,385	76.9	62,752	77.9
Dead	7,989	20.8	9,659	22.9	17,648	21.9
Status unknown	36	0.1	94	0.2	129	0.2
Living siblings	30,367	100.0	32,385	100.0	62,752	100.0
Age reported	30,234	99.6	32,241	99.6	62,475	99.6
Age missing	133	0.4	144	0.4	277	0.4
Dead siblings	7,989	100.0	9,659	100.0	17,648	100.0
AD and YSD reported	7,833	98.1	9,452	97.9	17,285	97.9
Missing only AD	59	0.7	81	0.8	140	0.8
Missing only YSD	9	0.1	12	0.1	21	0.1
Missing both AD and YSD	87	1.1	115	1.2	202	1.1

Table C.8 Indicators of data quality

Percent distribution of respondents and siblings by year of birth, Ethiopia 2005

Year of birth	Respondents	Siblings
Before 1945	0.0	3.4
1945-49	2.9	3.7
1950-54	7.4	5.2
1955-59	9.9	8.5
1960-64	11.2	10.8
1965-69	15.6	13.5
1970-74	17.3	15.0
1975 or later	35.7	39.9
Total	100.0	100.0
Lower range	1947	1914
Upper range	1982	1997
Median	1971	1971
No. of cases	14,070	80,484

Table C.9 Sibship size and sex ratio of siblings

Mean sibship size and sex ratio of siblings, Ethiopia 2005

Year of birth of respondents	Mean sibship size	Sex ratio of siblings at birth
<1950	6.1	104.9
1950-54	6.3	111.9
1955-59	6.4	109.3
1960-64	6.6	110.7
1965-69	6.8	105.2
1970-74	6.8	111.4
1975-79	6.9	108.5
1980-84	6.9	114.7

PERSONS INVOLVED IN THE 2005 ETHIOPIA DEMOGRAPHIC AND HEALTH SURVEY

Appendix ***D***

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Mesay Ketsela
Eyerusalem Mamo
Netsanet Beyene
Olana Kena
Mesfin Teshome
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QUESTIONNAIRES

Appendix ***E***

HOUSEHOLD QUESTIONNAIRE

IMPLEMENTING ORGANIZATION: PHCCO

IDENTIFICATION

LOCALITY NAME _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBER . . . . . [ ][ ][ ]

HOUSEHOLD NUMBER . . . . . [ ][ ][ ]

REGION . . . . . [ ][ ]

LARGE CITY/SMALL CITY/TOWN/RURAL
(LARGE CITY=1, SMALL CITY=2, TOWN=3, RURAL=4) . . . . . [ ]

ALTITUDE . . . . . [ ][ ][ ][ ]

HOUSEHOLD SELECTED FOR MALE INTERVIEW? . . . . . [ ]
(YES= 1, NO = 2)

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY [ ][ ]
				MONTH [ ][ ]
				YEAR [ ][ ][ ][ ]
INTERVIEWER'S NAME	_____	_____	_____	INT. NUMBER [ ][ ]
RESULT*	_____	_____	_____	RESULT [ ]
NEXT VISIT: DATE	_____	_____		TOTAL NUMBER OF VISITS [ ]
TIME	_____	_____		

*RESULT CODES:

1 COMPLETED
2 NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME
4 POSTPONED
5 REFUSED
6 DWELLING VACANT OR ADDRESS NOT A DWELLING
7 DWELLING DESTROYED
8 DWELLING NOT FOUND
9 OTHER _____
(SPECIFY)

TOTAL PERSONS IN HOUSEHOLD [ ][ ]

TOTAL ELIGIBLE WOMEN [ ][ ]

TOTAL ELIGIBLE MEN [ ][ ]

LINE NO. OF RESPONDENT TO HOUSEHOLD QUESTIONNAIRE [ ][ ]

LANGUAGE OF QUESTIONNAIRE: [ ] LANGUAGE OF INTERVIEW: [ ] LANGUAGE OF RESPONDENT: [ ]

LANGUAGE CODES: AMARIGNA = 1, OROMIGNA = 2, TIGRIGNA = 3, OTHER = 6

TRANSLATOR USED: [ ]
(YES = 1, NO = 2)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____	[ ][ ]	[ ][ ]
DATE _____ [ ][ ]	DATE _____ [ ][ ]		

HOUSEHOLD SCHEDULE

Now we would like some information about the people who usually live in your household or who are staying with you now.

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	ELIGIBILITY		
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household.	What is the relationship of (NAME) to the head of the household?*	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)?	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CHECK COVER PAGE. IF HOUSE-HOLD SELECTED FOR MALE INTERVIEW: CIRCLE LINE NUMBER OF ALL MEN AGE 15-59	CIRCLE LINE NUMBER OF ALL CHILDREN UNDER AGE 6
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(8A)	(9)
			M F	YES NO	YES NO	IN YEARS			
01			1 2	1 2	1 2		01	01	01
02			1 2	1 2	1 2		02	02	02
03			1 2	1 2	1 2		03	03	03
04			1 2	1 2	1 2		04	04	04
05			1 2	1 2	1 2		05	05	05
06			1 2	1 2	1 2		06	06	06
07			1 2	1 2	1 2		07	07	07
08			1 2	1 2	1 2		08	08	08
09			1 2	1 2	1 2		09	09	09
10			1 2	1 2	1 2		10	10	10

* CODES FOR Q. 3
RELATIONSHIP TO HEAD OF HOUSEHOLD:
01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = NIECE/NEPHEW BY BLOOD
10 = NIECE/NEPHEW BY MARRIAGE
11 = OTHER RELATIVE
12 = ADOPTED/FOSTER/STEPCHILD
13 = NOT RELATED
98 = DON'T KNOW

SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS				EDUCATION						BIRTH REGIS-TRATION	LINE NO.
IF AGE 0-17 YEARS				IF AGE 5 YEARS OR OLDER		IF AGE 5-24 YEARS				IF AGE 0-4	
Is (NAME)'s biological mother alive?	Does (NAME)'s biological mother live in this house-hold? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER**	Is (NAME)'s biological father alive?	Does (NAME)'s biological father live in this house-hold? IF YES: What is his name? RECORD FATHER'S LINE NUMBER**	Has (NAME) ever attended school?	What is the highest grade (NAME) completed? ***	Did (NAME) attend school at any time during the 1997 E.C. school year?	During this/that school year, what grade [is/was] (NAME) attending? ***	Did (NAME) attend school at any time during the previous school year, that is, 1996 E.C.?	During that school year, what grade did (NAME) attend?***	Does (NAME) have a birth certificate? IF NO, PROBE: Has (NAME)'s birth ever been regis-tered with the munici-pality/local authorities? ****	
(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	
Y N DK 1 2 8 GO TO 12		Y N DK 1 2 8 GO TO 14		YES NO 1 2 NEXT LINE	GRADE	YES NO 1 2 GO TO 18	GRADE	YES NO 1 2 NEXT LINE	GRADE	1 2 3 8	01
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	02
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	03
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	04
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	05
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	06
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	07
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	08
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	09
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	10

**Qs. 11 AND 13
RECORD '00' IF PARENT NOT LISTED IN THE HOUSEHOLD SCHEDULE.

***CODES FOR Qs. 15, 17 AND 19
EDUCATION LEVEL:
00=LESS THAN 1 YEAR COMPLETED (FOR Q. 15 ONLY. THIS CODE IS NOT ALLOWED FOR Qs. 17 AND 19)
01-12=GRADE COMPLETED
13=TECHNICAL/VOCATIONAL CERTIFICATE
14=UNIVERSITY/COLLEGE DIPLOMA
15=UNIVERSITY/COLLEGE DEGREE OR HIGHER
98=DON'T KNOW

****CODES FOR Q.20
1 = CERTIFICATE
2 = REGISTRATION
3 = NEITHER
8 = DON'T KNOW

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	ELIGIBILITY		
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household.	What is the relationship of (NAME) to the head of the household?*	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)?	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CHECK COVER PAGE. IF HOUSE-HOLD SELECTED FOR MALE INTERVIEW: CIRCLE LINE NUMBER OF ALL MEN AGE 15-59	CIRCLE LINE NUMBER OF ALL CHILDREN UNDER AGE 6
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(8A)	(9)
			M F	YES NO	YES NO	IN YEARS			
11			1 2	1 2	1 2		11	11	11
12			1 2	1 2	1 2		12	12	12
13			1 2	1 2	1 2		13	13	13
14			1 2	1 2	1 2		14	14	14
15			1 2	1 2	1 2		15	15	15
16			1 2	1 2	1 2		16	16	16
17			1 2	1 2	1 2		17	17	17
18			1 2	1 2	1 2		18	18	18
19			1 2	1 2	1 2		19	19	19
20			1 2	1 2	1 2		20	20	20

*CODES FOR Q. 3
RELATIONSHIP TO HEAD OF HOUSEHOLD:
01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = NIECE/NEPHEW BY BLOOD
10 = NIECE/NEPHEW BY MARRIAGE
11 = OTHER RELATIVE
12 = ADOPTED/FOSTER/STEPCHILD
13 = NOT RELATED
98 = DON'T KNOW

**Qs.11 AND 13 RECORD '00' IF PARENT NOT LISTED IN THE HOUSEHOLD SCHEDULE.

***CODES FOR Qs.15, 17, AND 19
EDUCATION GRADE:
00 = LESS THAN 1 YEAR COMPLETED (FOR Q. 15 ONLY. THIS CODE IS NOT ALLOWED FOR Qs. 17 AND 19)
01-12=GRADE COMPLETED
13=TECHNICAL/VOCATIONAL CERTIFICATE
14=UNIVERSITY/COLLEGE DIPLOMA
15=UNIVERSITY/COLLEGE DEGREE OR HIGHER
98=DON'T KNOW

****CODES FOR Q.20
1 = CERTIFICATE
2 = REGISTRATION
3 = NEITHER
8 = DON'T KNOW

SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS				EDUCATION						BIRTH REGIS-TRATION	LINE NO.
IF AGE 0-17 YEARS				IF AGE 5 YEARS OR OLDER		IF AGE 5-24 YEARS				IF AGE 0-4	
Is (NAME)'s biological mother alive?	Does (NAME)'s biological mother live in this house-hold? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER**	Is (NAME)'s biological father alive?	Does (NAME)'s biological father live in this house-hold? IF YES: What is his name? RECORD FATHER'S LINE NUMBER**	Has (NAME) ever attended school?	What is the highest grade (NAME) completed? ***	Did (NAME) attend school at any time during the 1997 E.C. school year?	During this/that school year, what grade [is/was] (NAME) attending? ***	Did (NAME) attend school at any time during the previous school year, that is, 1996 E.C.?	During that school year, what grade did (NAME) attend?***	Does (NAME) have a birth certificate? IF NO, PROBE: Has (NAME)'s birth ever been regis-tered with the munici-pality/local authorities? ****	
(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	
Y N DK 1 2 8 GO TO 12		Y N DK 1 2 8 GO TO 14		YES NO 1 2 NEXT LINE	GRADE	YES NO 1 2 GO TO 18	GRADE	YES NO 1 2 NEXT LINE	GRADE	1 2 3 8	11
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	12
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	13
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	14
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	15
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	16
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	17
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	18
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	19
1 2 8 GO TO 12		1 2 8 GO TO 14		1 2 NEXT LINE		1 2 GO TO 18		1 2 NEXT LINE		1 2 3 8	20

TICK HERE IF CONTINUATION SHEET USED ☐

Just to make sure that I have a complete household listing:

1) Are there any other persons such as small children or infants that we have not listed? YES ☐ → ENTER EACH IN TABLE NO ☐ →

2) Are there any other people who may not be members of your family, such as domestic servants, lodgers or friends who usually live here? YES ☐ → ENTER EACH IN TABLE NO ☐ →

3) Are there any guests or temporary visitors staying here, or anyone else who slept here last night, who have not been listed? YES ☐ → ENTER EACH IN TABLE NO ☐ →

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
21	What is the main source of drinking water for members of your household?	PIPED WATER PIPED INTO DWELLING . . . . . 11 PIPED INTO COMPOUND . . . . . 12 PIPED OUTSIDE COMPOUND . 13 TUBE WELL OR BOREHOLE . . . . . 21 DUG WELL PROTECTED WELL . . . . . 31 UNPROTECTED WELL . . . . . 32 WATER FROM SPRING PROTECTED SPRING . . . . . 41 UNPROTECTED SPRING . . . . . 42 RAINWATER . . . . . 51 TANKER TRUCK . . . . . 61 SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/ IRRIGATION CHANNEL) . . . . . 81 BOTTLED WATER . . . . . 91 OTHER _____ 96 (SPECIFY)	26 23 26 23 23
22	What is the main source of water used by your household for other purposes such as cooking and handwashing?	PIPED WATER PIPED INTO DWELLING . . . . . 11 PIPED INTO COMPOUND . . . . . 12 PIPED OUTSIDE COMPOUND . 13 TUBE WELL OR BOREHOLE . . . . . 21 DUG WELL PROTECTED WELL . . . . . 31 UNPROTECTED WELL . . . . . 32 WATER FROM SPRING PROTECTED SPRING . . . . . 41 UNPROTECTED SPRING . . . . . 42 RAINWATER . . . . . 51 TANKER TRUCK . . . . . 61 SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/ IRRIGATION CHANNEL) . . . . . 81 OTHER _____ 96 (SPECIFY)	26 26
23	Where is that water source located?	IN OWN DWELLING . . . . . 1 IN OWN COMPOUND . . . . . 2 ELSEWHERE 3	26
24	How long does it take to go there, get water, and come back?	MINUTES . . . . . [ ][ ][ ] ON PREMISES . . . . . 996 DON'T KNOW 998	26
25	Who usually goes to this source to fetch the water for your household?	ADULT WOMAN . . . . . 1 ADULT MAN . . . . . 2 FEMALE CHILD UNDER 15 YEARS OLD . . . . . 3 MALE CHILD UNDER 15 YEARS OLD . . . . . 4 OTHER _____ 6 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
26	Do you treat your water in any way to make it safer to drink?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	 → 27A
27	What do you usually do to the water to make it safer to drink? Anything else? RECORD ALL MENTIONED.	BOIL . . . . . A ADD BLEACH/CHLORINE . . . . . B STRAIN THROUGH A CLOTH . . . . . C USE WATER FILTER (CERAMIC/ SAND/COMPOSITE/ETC.) . . . . . D SOLAR DISINFECTION . . . . . E LET IT STAND AND SETTLE . . . . . F OTHER _____ X (SPECIFY)	
27A	How does your household primarily dispose of household waste?	COLLECTED BY MUNICIPALITY . . . . . 1 COLLECTED BY PRIVATE ESTABLISHMENT . . . . . 2 DUMPED IN STREET/OPEN SPACE . 3 DUMPED IN RIVER . . . . . 4 BURNED . . . . . 5 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	
28	What kind of toilet facility do members of your household usually use?	FLUSH OR POUR FLUSH TOILET FLUSH TO PIPED SEWER SYSTEM . . . . . 11 FLUSH TO SEPTIC TANK . . . . . 12 FLUSH TO PIT LATRINE . . . . . 13 FLUSH TO SOMEWHERE ELSE . 14 FLUSH, DON'T KNOW WHERE . 15 PIT LATRINE VENTILATED IMPROVED PIT LATRINE (VIP) . . . . . 21 PIT LATRINE WITH SLAB . . . . . 22 PIT LATRINE WITHOUT SLAB/ OPEN PIT . . . . . 23 COMPOSTING TOILET . . . . . 31 BUCKET TOILET . . . . . 41 HANGING TOILET/HANGING LATRINE . . . . . 51 NO FACILITY/BUSH/FIELD . . . . . 61 OTHER _____ 96 (SPECIFY)	 → 31
29	Do you share this toilet facility with other households?	YES . . . . . 1 NO 2	 → 31
30	How many households use this toilet facility?	NO. OF HOUSEHOLDS IF LESS THAN 10 . . . . . [0][ ] 10 OR MORE HOUSEHOLDS . . . 95 DON'T KNOW 98	
31	Does your household have: Electricity? A watch? A radio? A television? A mobile telephone? A non-mobile telephone? A refrigerator? A table? A chair? A bed? An electric mitad? A kerosene lamp/pressure lamp?	YES NO ELECTRICITY . . . . . 1 2 WATCH . . . . . 1 2 RADIO . . . . . 1 2 TELEVISION . . . . . 1 2 MOBILE TELEPHONE . . . . . 1 2 NON-MOBILE TELEPHONE . . . 1 2 REFRIGERATOR . . . . . 1 2 TABLE . . . . . 1 2 CHAIR . . . . . 1 2 BED . . . . . 1 2 ELECTRIC MITAD . . . . . 1 2 KEROSENE/PRESSURE LAMP 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
32	What type of fuel does your household mainly use for cooking?	ELECTRICITY . . . . . 01 LPG . . . . . 02 NATURAL GAS . . . . . 03 BIOGAS . . . . . 04 KEROSENE . . . . . 05 CHARCOAL . . . . . 07 WOOD . . . . . 08 STRAW/SHRUBS/GRASS . . . . . 09 ANIMAL DUNG . . . . . 11 OTHER _____ 96 (SPECIFY)	→ 34
33	In this household, is food cooked on a stove or an open fire? PROBE FOR TYPE.	OPEN FIRE OR STOVE WITHOUT CHIMNEY/HOOD . . . . . 1 OPEN FIRE OR STOVE WITH CHIMNEY/HOOD . . . . . 2 CLOSED STOVE WITH CHIMNEY . . . 3 OTHER _____ 6 (SPECIFY)	
34	Is the cooking usually done in the house, in a separate building, or outdoors?	IN THE HOUSE . . . . . 1 IN A SEPARATE BUILDING . . . . . 2 OUTDOORS . . . . . 3 OTHER _____ 6 (SPECIFY)	→ 36
35	Do you have a separate room which is used as a kitchen?	YES . . . . . 1 NO 2	
36	MAIN MATERIAL OF THE FLOOR. RECORD OBSERVATION.	NATURAL FLOOR EARTH/SAND . . . . . 11 DUNG . . . . . 12 RUDIMENTARY FLOOR WOOD PLANKS . . . . . 21 REED/BAMBOO . . . . . 22 FINISHED FLOOR PARQUET OR POLISHED WOOD . . . . . 31 VINYL . . . . . 32 CERAMIC TILES . . . . . 33 CEMENT/BRICKS . . . . . 34 CARPET . . . . . 35 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
37	MAIN MATERIAL OF THE ROOF. RECORD OBSERVATION.	NATURAL ROOFING THATCH/LEAF . . . . . 12 RUDIMENTARY ROOFING RUSTIC MAT/PLASTIC SHEETS . 21 REED/BAMBOO . . . . . 22 WOOD PLANKS . . . . . 23 FINISHED ROOFING CORRUGATED IRON . . . . . 31 WOOD . . . . . 32 CALAMINE/CEMENT FIBER . . . 33 CEMENT/CONCRETE . . . . . 35 ROOFING SHINGLES . . . . . 36 OTHER _____ 96 (SPECIFY)	
38	MAIN MATERIAL OF THE WALLS. RECORD OBSERVATION.	NATURAL WALLS NO WALLS . . . . . 11 CANE/TRUNKS/BAMBOO/REED . 12 RUDIMENTARY WALLS BAMBOO/WOOD WITH . . . . . 21 STONE WITH MUD . . . . . 22 UNCOVERED ADOBE . . . . . 23 PLYWOOD . . . . . 24 CARTON . . . . . 25 FINISHED WALLS CEMENT . . . . . 31 STONE WITH LIME/CEMENT . . . 32 BRICKS . . . . . 33 CEMENT BLOCKS . . . . . 34 COVERED ADOBE . . . . . 35 WOOD PLANKS/SHINGLES . . . 36 OTHER _____ 96 (SPECIFY)	
39	TYPE OF WINDOWS. RECORD OBSERVATION.	YES NO ANY WINDOWS . . . . . 1 2 WINDOWS WITH GLASS . . . 1 2 WINDOWS WITH SCREENS . 1 2 WINDOWS WITH CURTAINS OR SHUTTERS 1 2	
40	How many rooms in this household are used for sleeping?	ROOMS . . . . . [ ][ ]	
41	Does any member of this household own: A bicycle? A motorcycle or motor scooter? An animal-drawn cart? A car or truck? A boat without a motor? A boat with a motor?	YES NO BICYCLE . . . . . 1 2 MOTORCYCLE/SCOOTER . . . 1 2 ANIMAL-DRAWN CART . . . . . 1 2 CAR/TRUCK . . . . . 1 2 BOAT WITHOUT MOTOR . . . . . 1 2 BOAT WITH MOTOR 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
42	Does any member of this household own any land that can be used for agriculture?	YES . . . . . 1 NO 2	→ 44
43	How many (LOCAL UNITS) of agricultural land do members of this household own? IF MORE THAN 97, ENTER '97'. IF UNKNOWN, ENTER '98'.	LOCAL UNITS . . . . . [ ][ ] _____ (SPECIFY)	
44	Does this household own any livestock, herds, or farm animals?	YES . . . . . 1 NO 2	→ 46
45	How many of the following animals does this household own? Cattle? Milk cows, oxen, or bulls? Horses, donkeys, or mules? Camels? Goats? Sheep? Chickens? IF NONE, ENTER '00'. IF MORE THAN 97, ENTER '97'. IF UNKNOWN, ENTER '98'.	CATTLE . . . . . [ ][ ] COWS/OXEN/BULLS . . . . . [ ][ ] HORSES/DONKEYS/MULES . [ ][ ] CAMELS . . . . . [ ][ ] GOATS . . . . . [ ][ ] SHEEP . . . . . [ ][ ] CHICKENS . . . . . [ ][ ]	
46	Does any member of this household have an account with a bank/credit association/micro finance?	YES . . . . . 1 NO 2	
48	Does your household have any mosquito nets that can be used while sleeping?	YES . . . . . 1 NO 2	→ 48K
48A	How many mosquito nets does your household have? IF 7 OR MORE NETS, RECORD '7'.	NUMBER OF NETS . . . . . [ ]	

MALARIA

		NET # 1	NET # 2	NET # 3
48B	ASK RESPONDENT TO SHOW YOU THE NET(S) IN THE HOUSEHOLD. IF MORE THAN 3 NETS, USE ADDITIONAL QUESTIONNAIRE(S).	OBSERVED . . . . . 1 NOT OBSERVED . 2	OBSERVED . . . . . 1 NOT OBSERVED . 2	OBSERVED . . . . . 1 NOT OBSERVED . 2
48C	How long ago did your household obtain the mosquito net?	MOS. AGO… . [ ][ ] MORE THAN 3 YEARS AGO . . . 95	MOS. AGO….. [ ][ ] MORE THAN 3 YEARS AGO . . . 95	MOS. AGO….. [ ][ ] MORE THAN 3 YEARS AGO . . . 95
48D	OBSERVE OR ASK THE BRAND OF MOSQUITO NET.	PERMANENT NET PERMANET 2 . 1 (SKIP TO 48H) PRETREATED NET SIAM DUTCH THAILAND . . . 2 (SKIP TO 48F) UNTREATED NET A TO Z TANZANIA 3 OTHER . . . . . 6 UNSURE 8	PERMANENT NET PERMANET 2 . 1 (SKIP TO 48H) PRETREATED NET SIAM DUTCH THAILAND . . . 2 (SKIP TO 48F) UNTREATED NET A TO Z TANZANIA 3 OTHER . . . . . 6 UNSURE 8	PERMANENT NET PERMANET 2 . 1 (SKIP TO 48H) PRETREATED NET SIAM DUTCH THAILAND . . . 2 (SKIP TO 48F) UNTREATED NET A TO Z TANZANIA . 3 OTHER . . . . . 6 UNSURE 8
48E	When you got the net, was it already treated with an insecticide to kill or repel mosquitos?	YES . . . . . 1 NO . . . . . 2 NOT SURE 8	YES . . . . . 1 NO . . . . . 2 NOT SURE . . . 8	YES . . . . . 1 NO . . . . . 2 NOT SURE 8
48F	Since you got the mosquito net, was it ever soaked or dipped in a liquid to repel mosquitos or bugs?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 48H) NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 48H) NOT SURE . . . 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 48H) NOT SURE 8
48G	How long ago was the net last soaked or dipped? IF LESS THAN 1 MONTH, RECORD '00'.	MOS. AGC . . . . . [ ][ ] MORE THAN 2 YEARS AGO . 95 NOT SURE . . . 98	MOS. AGO . . . [ ][ ] MORE THAN 2 YEARS AGO . 95 NOT SURE . . . 98	MOS. AGO…. . [ ][ ] MORE THAN 2 YEARS AGO . 95 NOT SURE . . . 98
48H	Did anyone sleep under this mosquito net last night?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 48J) NOT SURE 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 48J) NOT SURE . . . 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 48J) NOT SURE . . . 8

	QUESTIONS AND FILTERS	NET #1	NET#2	NET #3
48I	Who slept under this mosquito net last night?	NAME _____ LINE NO. . . [ ][ ] NAME _____ LINE NO. . . [ ][ ] NAME _____ LINE NO. . . [ ][ ] NAME _____ LINE NO. . . [ ][ ]	NAME _____ LINE NO. . . [ ][ ] NAME _____ LINE NO. . . [ ][ ] NAME _____ LINE NO. . . [ ][ ] NAME _____ LINE NO. . . [ ][ ]	NAME _____ LINE NO. . . [ ][ ] NAME _____ LINE NO. . . [ ][ ] NAME _____ LINE NO. . . [ ][ ] NAME _____ LINE NO. . . [ ][ ]
48J		GO BACK TO Q.48B FOR NEXT NET; OR, IF NO MORE NETS, GO TO Q.48K.	GO BACK TO Q.48B FOR NEXT NET; OR, IF NO MORE NETS, GO TO Q.48K.	GO BACK TO Q.48B FOR NEXT NET; OR, IF NO MORE NETS, GO TO Q.48K.

48K	Has your house ever been sprayed with insecticide for malaria prevention by spraymen from the District Health Office?	YES . . . . . 1 NO . . . . . 2 NOT SURE 8	→ 49
48L	How many months ago was your house sprayed? IF LESS THAN 1 MONTH, RECORD '00'.	MONTHS AGO . . . . . [ ][ ] NOT SURE 98	
48M	OBSERVE THE INNER WALLS OF THE ROOMS USUALLY USED FOR SLEEPING FOR VISIBLE WHITE INSECTICIDE POWDER.	VISIBLE . . . . . 1 NOT VISIBLE 2	
49	ASK RESPONDENT FOR A TEASPOONFUL OF COOKING SALT. TEST SALT FOR IODINE. RECORD PPM (PARTS PER MILLION)	0 PPM (NO IODINE) . . . . . 1 LESS THAN 15 PPM . . . . . 2 MORE THAN 15 PPM . . . . . 3 NO SALT IN HH . . . . . 4 SALT NOT TESTED _____ 5 (SPECIFY REASON)	

WEIGHT AND HEIGHT MEASUREMENT

CHECK COVER PAGE:

HOUSEHOLD SELECTED FOR MALE SURVEY ☐ ↓

HOUSEHOLD NOT SELECTED FOR MALE SURVEY ☐ → SKIP TO INTERVIEWER'S OBSERVATION ON LAST PAGE

CHECK COLUMNS (8) AND (9): RECORD THE LINE NUMBER, NAME AND AGE OF ALL WOMEN AGE 15-49 AND ALL CHILDREN UNDER AGE 6.

WOMEN 15-49				WEIGHT AND HEIGHT MEASUREMENT OF WOMEN 15-49			
LINE NO. FROM COL. (8)	NAME FROM COL. (2)	AGE FROM COL. (7)	What is (NAME'S) date of birth?	WEIGHT (KILOGRAMS)	HEIGHT (CENTIMETERS)	MEASURED LYING DOWN OR STANDING UP	RESULT 1 MEASURED 2 NOT PRESENT 3 REFUSED 6 OTHER
(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)
☐☐		YEARS ☐☐		☐☐☐.☐	☐☐☐.☐		☐
☐☐		☐☐		☐☐☐.☐	☐☐☐.☐		☐
☐☐		☐☐		☐☐☐.☐	☐☐☐.☐		☐

CHILDREN UNDER AGE 6				WEIGHT AND HEIGHT MEASUREMENT OF CHILDREN BORN IN 1992 OR LATER			
LINE NO. FROM COL. (9)	NAME FROM COL. (2)	AGE FROM COL. (7)	What is (NAME'S) date of birth?*	WEIGHT (KILOGRAMS)	HEIGHT (CENTIMETERS)	MEASURED LYING DOWN OR STANDING UP	RESULT 1 MEASURED 2 NOT PRESENT 3 REFUSED 6 OTHER
☐☐		☐☐	DAY ☐☐ MONTH ☐☐ YEAR ☐☐☐☐	0☐☐.☐	☐☐☐.☐	LYING 1 STAND. 2	☐
☐☐		☐☐	☐☐ ☐☐ ☐☐☐☐	0☐☐.☐	☐☐☐.☐	1 2	☐
☐☐		☐☐	☐☐ ☐☐ ☐☐☐☐	0☐☐.☐	☐☐☐.☐	1 2	☐
☐☐		☐☐	☐☐ ☐☐ ☐☐☐☐	0☐☐.☐	☐☐☐.☐	1 2	☐
☐☐		☐☐	☐☐ ☐☐ ☐☐☐☐	0☐☐.☐	☐☐☐.☐	1 2	☐
☐☐		☐☐	☐☐ ☐☐ ☐☐☐☐	0☐☐.☐	☐☐☐.☐	1 2	☐

TICK HERE IF CONTINUATION SHEET USED ☐

* FOR CHILDREN NOT INCLUDED IN ANY BIRTH HISTORY, ASK DAY, MONTH AND YEAR. FOR ALL OTHER CHILDREN, COPY MONTH AND YEAR FROM 215 IN MOTHER'S BIRTH HISTORY AND ASK DAY.

HEMOGLOBIN MEASUREMENT

CHECK COVER PAGE:

HOUSEHOLD SELECTED FOR MALE SURVEY ☐ ↓

HOUSEHOLD NOT SELECTED FOR MALE SURVEY ☐ → SKIP TO INTERVIEWER'S OBSERVATION ON LAST PAGE

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* CIRCLE CODE (AND SIGN)	HEMOGLOBIN LEVEL (G/DL)	CURRENTLY PREGNANT	RESULT 1 MEASURED 2 NOT PRESENT 3 REFUSED 6 OTHER
(58)	(59)	(60)	(61)	(62)	(63)
AGE 15-17 AGE 18-49 1 2 GO TO 60 ↵	☐☐	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	☐☐.☐	YES NO/DK 1 2	☐
1 2 GO TO 60 ↵	☐☐	1 2 SIGN _____ NEXT LINE ↵	☐☐.☐	1 2	☐
1 2 GO TO 60 ↵	☐☐	1 2 SIGN _____ NEXT LINE ↵	☐☐.☐	1 2	☐

HEMOGLOBIN MEASUREMENT OF CHILDREN BORN IN 1992 E.C. 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 1 MEASURED 2 NOT PRESENT 3 REFUSED 6 OTHER
1 2 ↳ NEXT CHILD	☐☐	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	☐☐.☐		☐
1 2 ↳ NEXT CHILD	☐☐	1 2 SIGN _____ NEXT LINE ↵	☐☐.☐		☐
1 2 ↳ NEXT CHILD	☐☐	1 2 SIGN _____ NEXT LINE ↵	☐☐.☐		☐
1 2 ↳ NEXT CHILD	☐☐	1 2 SIGN _____ NEXT LINE ↵	☐☐.☐		☐
1 2 ↳ NEXT CHILD	☐☐	1 2 SIGN _____ NEXT LINE ↵	☐☐.☐		☐
1 2 ↳ NEXT CHILD	☐☐	1 2 SIGN _____ NEXT LINE ↵	☐☐.☐		☐

2005 Ethiopia Demographic and Health Survey
Informed Consent
Anemia Testing

Hello, my name is _____ and I am from the Population and Housing Census Commission Office, which, in collaboration with the Federal Ministry of Health is currently carrying out Demographic and Health Survey, all over the country, in scientifically, sampled enumeration areas. As part of this survey we are collecting information on Anemia prevalence among women and children in the sampled households by conducting Anemia testing.

Anemia is a serious health problem that results from poor nutrition. The Anemia testing is being done to help the government to find out how common it is. This enables the government to develop programs to prevent and treat anemia. But to do this it needs reliable information. That is why we are now collecting a few drops of blood from a finger from women and from children under six years of age for the test. The instruments I use for taking the blood are completely clean, sterile and safe. The blood will be analyzed with new equipment and the results of the test will be given to you right after the blood is taken. The results will be kept confidential.

Do you have any questions?

May I now ask that you and your child _____ participate in the anemia test? However, if you decide not to have the test done, it is your right and I will respect your decision. Now please tell me if you agree to have the test done.

Yes_____ No _____

Signature of interviewer _____

64	CHECK 61 AND 62: NUMBER OF PERSONS WITH HEMOGLOBIN LEVEL BELOW THE CUTOFF POINT* ONE OR MORE ☐ → GIVE EACH WOMAN/PARENT/RESPONSIBLE ADULT RESULT OF HEMOGLOBIN MEASUREMENT AND CONTINUE WITH 65.** NONE ☐ → GIVE EACH WOMAN/PARENT/RESPONSIBLE ADULT RESULT OF HEMOGLOBIN MEASUREMENT AND END INTERVIEW.
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 _____ about (your condition/the condition of NAME OF CHILD(REN)). This will assist you in obtaining appropriate treatment for the condition. Do you agree that the information about the level of hemoglobin in (your blood/the blood of NAME OF CHILD(REN)) may be given to the doctor?

NAME OF PERSON WITH HEMOGLOBIN BELOW THE CUTOFF POINT	NAME OF PARENT/RESPONSIBLE ADULT	AGREES TO REFERRAL?
WOMEN AGE 18-49		
		YES . . . . . 1 NO 2
		YES . . . . . 1 NO 2
		YES . . . . . 1 NO 2
		YES . . . . . 1 NO 2
WOMEN AGE 15-17 AND CHILDREN		
		YES . . . . . 1 NO 2
		YES . . . . . 1 NO 2
		YES . . . . . 1 NO 2
		YES . . . . . 1 NO 2
		YES . . . . . 1 NO 2
		YES . . . . . 1 NO 2
		YES . . . . . 1 NO 2
		YES . . . . . 1 NO 2
		YES . . . . . 1 NO 2

* The cutoff point is 9 g/dl for pregnant women and ____ g/dl for children and for women who are not pregnant (or who don't know if they are pregnant), based on the altitude from the coverpage and the adjustment factor in the Editor's and Supervisor's Manual.

** 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.

HIV TESTING - WOMEN AND MEN

CHECK COVER PAGE:

HOUSEHOLD SELECTED FOR MALE SURVEY ☐ ↓

HOUSEHOLD NOT SELECTED FOR MALE SURVEY ☐ → SKIP TO INTERVIEWER'S OBSERVATION ON LAST PAGE

CHECK COLUMNS (8) AND (8A): RECORD THE LINE NUMBER, SEX AND AGE OF ALL WOMEN AGE 15-49 AND MEN AGE 15-59. THIS PAGE WILL BE DESTROYED IN OFFICE BEFORE TEST RESULTS ARE ADDED TO DATA FILE.

LINE NO. FROM COL. (8) OR (8A)	SEX FROM COL. (4)	AGE FROM COL. (7)	CHECK AGE FROM COL. (68):	LINE NO. OF PARENT/ RESPONSIBLE ADULT. RECORD '00' IF NOT LISTED IN HOUSEHOLD SCHEDULE	READ CONSENT STATEMENT TO WOMAN/PARENT/RESPONSIBLE ADULT* CIRCLE CODE (AND SIGN)	READ CONSENT STATEMENT TO WOMAN/MAN CIRCLE CODE (AND SIGN)	RESULT 1 SAMPLE TAKEN 2 REFUSED 3 NOT PRESENT 4 TECH. PROBLEM 6 OTHER (SPECIFY)	SAMPLE BAR CODE
(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)
☐☐	M F 1 2	YEARS ☐☐	AGE 15-17 AGE 18+ 1 2 GO TO 72 ↵	☐☐	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	☐ _____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER PASTE THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
☐☐	M F 1 2	YEARS ☐☐	AGE 15-17 AGE 18+ 1 2 GO TO 72 ↵	☐☐	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	☐ _____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER PASTE THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
☐☐	M F 1 2	YEARS ☐☐	AGE 15-17 AGE 18+ 1 2 GO TO 72 ↵	☐☐	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	☐ _____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER PASTE THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
☐☐	M F 1 2	YEARS ☐☐	AGE 15-17 AGE 18+ 1 2 GO TO 72 ↵	☐☐	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	☐ _____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER PASTE THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
☐☐	M F 1 2	YEARS ☐☐	AGE 15-17 AGE 18+ 1 2 GO TO 72 ↵	☐☐	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	☐ _____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER PASTE THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
☐☐	M F 1 2	YEARS ☐☐	AGE 15-17 AGE 18+ 1 2 GO TO 72 ↵	☐☐	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	☐ _____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER PASTE THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
☐☐	M F 1 2	YEARS ☐☐	AGE 15-17 AGE 18+ 1 2 GO TO 72 ↵	☐☐	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	☐ _____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER PASTE THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM
☐☐	M F 1 2	YEARS ☐☐	AGE 15-17 AGE 18+ 1 2 GO TO 72 ↵	☐☐	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	GRANTED REFUSED 1 2 SIGN _____ NEXT LINE ↵	☐ _____	PASTE FIRST LABEL HERE PASTE SECOND LABEL ON FILTER PAPER PASTE THIRD LABEL ON BLOOD SAMPLE TRANSMITTAL FORM

2005 Ethiopia Demographic and Health Survey
Informed Consent
HIV testing

Hello, my name is _____ and I am from the Population and Housing Census Commission Office, which, in collaboration with the Federal Ministry of Health, is currently carrying out the Demographic and Health Survey, all over the country, in scientifically, sampled enumeration areas. As part of this survey we are collecting information on HIV prevalence among women and men in the sampled households by collecting blood for conducting an HIV test.

HIV is the virus that causes AIDS. The HIV test is being done to help the government to find out how common it is and its rate of spreading. This enables the government to devise means of controlling and preventing the spread of the disease and also provide care and support for those who have it. But to do this it needs reliable information. That is why we are now collecting a few drops of blood from a finger for the HIV test.

The instruments I use for taking the blood are completely clean, sterile and safe. The samples will be coded so that all the information will be kept anonymous.

The blood sample will be sent to the Ethiopian Health and Nutrition Research Institute (EHNRI) Laboratory, in Addis Ababa. No identifiers such as names will be attached to the test. So we will not be able to tell you the test result. No one else will be able to know your test results either.

If you want to know whether you have HIV, I can provide a voucher for you to go to the nearest health institution, which provides VCT, that is, counseling and a test for HIV.

Do you have any questions so far?

May I now ask you to participate in the test? You can say yes to the test or you can say no.
It is up to you to decide.

Will you take the test?

Yes_____ No _____

Signature of interviewer _____

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF THE SUPERVISOR: _____ DATE: _____

14 APRIL 2005

2005 ETHIOPIA DEMOGRAPHIC AND HEALTH SURVEY
WOMAN'S QUESTIONNAIRE

IMPLEMENTING ORGANIZATION:
PHCCO

IDENTIFICATION

LOCALITY NAME _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBER . . . . . .

HOUSEHOLD NUMBER . . . . . .

REGION . . . . . .

LARGE CITY/SMALL CITY/TOWN/RURAL
(LARGE CITY=1, SMALL CITY=2, TOWN=3, RURAL=4) . . . . . .

NAME AND LINE NUMBER OF WOMAN _____

HOUSEHOLD SELECTED FOR MALE INTERVIEW? . . . . . .
(YES= 1, NO = 2)

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY MONTH YEAR
INTERVIEWER'S NAME	_____	_____	_____	INT. NUMBER
RESULT*	_____	_____	_____	RESULT
NEXT VISIT: DATE	_____	_____		TOTAL NUMBER OF VISITS
TIME	_____	_____		

*RESULT CODES:

1	COMPLETED	4	REFUSED		
2	NOT AT HOME	5	PARTLY COMPLETED	7	OTHER _____ (SPECIFY)
3	POSTPONED	6	INCAPACITATED		

LANGUAGE OF QUESTIONNAIRE: LANGUAGE OF INTERVIEW: LANGUAGE OF RESPONDENT

LANGUAGE CODES: AMARIGNA = 1, OROMIGNA = 2, TIGRIGNA = 3, OTHER = 6

TRANSLATOR USED:
(YES = 1, NO = 2)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION

Hello. My name is _____ and I am working with the Population and Housing Census Commission Office (PHCCO). We are conducting a national survey about the health of women, men and children. We would very much appreciate your participation in this survey. I would like to ask you about your health (and the health of your children). This information will help the government to plan health services. The survey usually takes about 45 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shown to other persons.

At this time, do you want to ask me anything about the survey?
May I begin the interview now?

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME. MORNING = 1 EVENING = 2	MORNING/EVENING . . . . . [ ] HOUR . . . . . [ ][ ] MINUTES . . . . . [ ][ ]	
101A	COLLECT ANY RELEVANT DOCUMENTS THAT MAY HAVE INFORMATION ON THE RESPONDENT'S AND HER CHILDREN'S AGE AND IMMUNIZATIONS.		
102	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS . . . . . [ ][ ] ALWAYS . . . . . 95 VISITOR 96	→ 104
103	Just before you moved here, did you live in a city, in a town, or in the countryside?	CITY . . . . . 1 TOWN . . . . . 2 COUNTRYSIDE 3	
104	In what month and year were you born?	MONTH . . . . . [ ][ ] DON'T KNOW MONTH . . . . . 98 YEAR . . . . . [ ][ ][ ][ ] DON'T KNOW YEAR 9998	
105	How old were you at your last birthday? COMPARE AND CORRECT 104 AND/OR 105 IF INCONSISTENT.	AGE IN COMPLETED YEARS [ ][ ]	
106	Have you ever attended school?	YES . . . . . 1 NO 2	→ 110
108	What is the highest grade you completed?	GRADE . . . . . [ ][ ] TECH./VOC. CERTIFICATE . . . . . 13 UNIVERSITY/COLLEGE DIPLOMA . . . 14 UNIVERSITY/COLLEGE DEGREE OR HIGHER 15	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
109	CHECK 108: GRADE 00-06 ☐ ↓ GRADE 07 AND ABOVE ☐ → 113		
110	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT. IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CANNOT READ AT ALL . . . . . 1 ABLE TO READ ONLY PARTS OF SENTENCE . . . . . 2 ABLE TO READ WHOLE SENTENCE 3 NO CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED 5	
111	Have you ever participated in a Basic Education Program or any other program that involves learning to read or write (not including primary school)?	YES . . . . . 1 NO 2	
112	CHECK 110: CODE '2', '3' OR '4' CIRCLED ☐ ↓ CODE '1' OR '5' CIRCLED ☐ → 114		
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?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
114	Do you listen to the radio almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
115	Do you watch television almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
115A	In the last 12 months, on how many separate occasions have you traveled away from your home community and slept away?	NUMBER OF TRIPS . . . . . ☐☐ NONE 00	→ 116
115B	In the last 12 months, have you been away from your home community for more than one month at a time?	YES . . . . . 1 NO 2	
116	What is your religion?	ORTHODOX . . . . . 1 CATHOLIC . . . . . 2 PROTESTANT . . . . . 3 MOSLEM . . . . . 4 TRADITIONAL . . . . . 5 OTHER _____ 6 (SPECIFY)	
117	What is your ethnicity? RECORD THE MAJOR ETHNIC GROUP.	_____ ☐☐	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES . . . . . 1 NO 2	→ 206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES . . . . . 1 NO 2	→ 204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME . . . . . [ ][ ] DAUGHTERS AT HOME . . . . . [ ][ ]	
204	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES . . . . . 1 NO 2	→ 206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE . . . . . [ ][ ] DAUGHTERS ELSEWHERE . [ ][ ]	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES . . . . . 1 NO 2	→ 208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD . . . . . [ ][ ] GIRLS DEAD . . . . . [ ][ ]	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL . . . . . [ ][ ]	
209	CHECK 208: Just to make sure that I have this right: you have had in TOTAL _____ births during your life. Is that correct? YES [ ] ↓ NO [ ] → PROBE AND CORRECT 201-208 AS NECESSARY.		
210	CHECK 208: ONE OR MORE BIRTHS [ ] ↓ NO BIRTHS [ ] →		226

211 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had.
RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.
(IF THERE ARE MORE THAN 12 BIRTHS, USE AN ADDITIONAL QUESTIONNAIRE).

212 What name was given to your (first/next) baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?
01	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (NEXT BIRTH)	DAYS . . . 1 MONTHS 2 YEARS . . 3	
02	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 NO 2
03	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 NO 2
04	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 NO 2
05	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 NO 2
06	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 NO 2
07	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 NO 2

212 What name was given to your next baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?
08	SING 1 MULT 2	BOY 1 GIRL 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES . . 1 NO . . . 2 → 220	AGE IN YEARS [ ][ ]	YES . . . 1 NO 2	LINE NUMBER [ ][ ] → (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3 [ ][ ]	YES . . . . 1 NO 2
09	SING 1 MULT 2	BOY 1 GIRL 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES . . 1 NO . . . 2 → 220	AGE IN YEARS [ ][ ]	YES . . . 1 NO 2	LINE NUMBER [ ][ ] → (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3 [ ][ ]	YES . . . . 1 NO 2
10	SING 1 MULT 2	BOY 1 GIRL 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES . . 1 NO . . . 2 → 220	AGE IN YEARS [ ][ ]	YES . . . 1 NO 2	LINE NUMBER [ ][ ] → (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3 [ ][ ]	YES . . . . 1 NO 2
11	SING 1 MULT 2	BOY 1 GIRL 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES . . 1 NO . . . 2 → 220	AGE IN YEARS [ ][ ]	YES . . . 1 NO 2	LINE NUMBER [ ][ ] → (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3 [ ][ ]	YES . . . . 1 NO 2
12	SING 1 MULT 2	BOY 1 GIRL 2	MONTH [ ][ ] YEAR [ ][ ][ ][ ]	YES . . 1 NO . . . 2 → 220	AGE IN YEARS [ ][ ]	YES . . . 1 NO 2	LINE NUMBER [ ][ ] → (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3 [ ][ ]	YES . . . . 1 NO 2

222	Have you had any live births since the birth of (NAME OF LAST BIRTH)? IF YES, RECORD BIRTH(S) IN TABLE.	YES . . . . . 1 NO 2

223 COMPARE 208 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND MARK:

NUMBERS ARE SAME [ ] ↓ NUMBERS ARE DIFFERENT [ ] → (PROBE AND RECONCILE)

CHECK: FOR EACH BIRTH: YEAR OF BIRTH IS RECORDED IN Q.215. [ ]

FOR EACH LIVING CHILD: CURRENT AGE IS RECORDED IN Q.217. [ ]

FOR EACH DEAD CHILD: AGE AT DEATH IS RECORDED IN Q.220. [ ]

FOR AGE AT DEATH 12 MONTHS OR 1 YEAR: PROBE TO DETERMINE EXACT NUMBER OF MONTHS. [ ]

224 CHECK 215 AND ENTER THE NUMBER OF BIRTHS IN 1992 E.C. OR LATER. IF NONE, RECORD '0'. [ ]

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
225	FOR EACH BIRTH SINCE MESKEREM 1992, ENTER 'B' IN THE MONTH OF BIRTH IN COLUMN 1 OF THE CALENDAR. FOR EACH BIRTH, ASK THE NUMBER OF MONTHS THE PREGNANCY LASTED AND RECORD 'P' IN EACH OF THE PRECEDING MONTHS ACCORDING TO THE DURATION OF PREGNANCY. (NOTE: THE NUMBER OF 'P's MUST BE ONE LESS THAN THE NUMBER OF MONTHS THAT THE PREGNANCY LASTED.) WRITE THE NAME OF THE CHILD TO THE LEFT OF THE 'B' CODE.		
226	Are you pregnant now?	YES . . . . . 1 NO . . . . . 2 UNSURE 8	→ 229
227	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'P's IN 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 <u>then</u>, did you want to wait until <u>later</u>, or did you not want to have any (more) children at all?	THEN . . . . . 1 LATER . . . . . 2 NOT AT ALL 3	
229	Have you ever had a pregnancy that miscarried, was aborted, or ended in a stillbirth?	YES . . . . . 1 NO 2	→ 237
230	When did the last such pregnancy end?	MONTH . . . . . [ ][ ] YEAR . . . . . [ ][ ][ ][ ]	
231	CHECK 230: LAST PREGNANCY ENDED IN MESKEREM 1992 OR LATER ↓ LAST PREGNANCY ENDED BEFORE MESKEREM 1992 [ ]		→ 237
232	How many months pregnant were you when the last such pregnancy ended? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'T' IN COLUMN 1 OF CALENDAR IN THE MONTH THAT THE PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.	MONTHS . . . . . [ ][ ]	
233	Since Meskerem 1992, have you had any other pregnancies that did not result in a live birth?	YES . . . . . 1 NO 2	→ 237
234	ASK THE DATE AND THE DURATION OF PREGNANCY FOR EACH EARLIER NON-LIVE BIRTH PREGNANCY BACK TO MESKEREM 1992. ENTER 'T' IN COLUMN 1 OF CALENDAR IN THE MONTH THAT EACH PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.		
235	Did you have any pregnancies that terminated before 1992 E.C. that did not result in a live birth?	YES . . . . . 1 NO 2	→ 237
236	When did the last such pregnancy that terminated before 1992 E.C. end?	MONTH . . . . . [ ][ ] YEAR . . . . . [ ][ ][ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
237	When did your last menstrual period start? _____ (DATE, IF GIVEN)	DAYS AGO . . . . . 1 [ ][ ] WEEKS AGO . . . . . 2 [ ][ ] MONTHS AGO . . . . . 3 [ ][ ] YEARS AGO . . . . . 4 [ ][ ] IN MENOPAUSE/ HAS HAD HYSTERECTOMY . . . 994 BEFORE LAST BIRTH . . . . . 995 NEVER MENSTRUATED 996	
238	From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant if she has sexual relations?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 239A
239	Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods?	JUST BEFORE HER PERIOD BEGINS . . . . . 1 DURING HER PERIOD . . . . . 2 RIGHT AFTER HER PERIOD HAS ENDED . . . . . 3 HALFWAY BETWEEN TWO PERIODS . . . . . 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	
239A	Are you the primary care giver for any children?	YES . . . . . 1 NO 2	→ 301
239B	Are any of these children for whom you are the primary caregiver under the age of 18?	YES . . . . . 1 NO 2	→ 301
239C	Now I would like to ask you about the children who are under the age of 18 and for whom you are the primary caregiver. 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 . . . . . 1 NO . . . . . 2 UNSURE 8	

SECTION 3. CONTRACEPTION

301	Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. Which ways or methods have you heard about? FOR METHODS NOT MENTIONED SPONTANEOUSLY, ASK: Have you ever heard of (METHOD)? CIRCLE CODE 1 IN 301 FOR EACH METHOD MENTIONED SPONTANEOUSLY. THEN PROCEED DOWN COLUMN 301, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 1 IF METHOD IS RECOGNIZED, AND CODE 2 IF NOT RECOGNIZED. THEN, FOR EACH METHOD WITH CODE 1 CIRCLED IN 301, ASK 302.		302 Have you ever used (METHOD)?
01	FEMALE STERILIZATION Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	Have you ever had an operation to avoid having any more children? YES . . . . . 1 NO 2
02	MALE STERILIZATION Men can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	Have you ever had a partner who had an operation to avoid having any more children? YES . . . . . 1 NO 2
03	PILL Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
04	IUD Women can have a loop or coil placed inside their uterus by a doctor or a nurse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
05	INJECTABLES Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
06	IMPLANTS (or NORPLANTS) Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for five or moreyears.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
07	CONDOM Men can put a rubber sheath on their penis before sexual intercourse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
08	DIAPHRAGM/FOAM/JELLY Women can place a sheath and/or a suppository/tablet/jelly/cream in their vagina before intercourse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
09	STANDARD DAYS METHOD Women can use a cycle of beads to count the days they are most likely to get pregnant and avoid sexual intercourse during those days.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
10	LACTATIONAL AMENORRHEA METHOD (LAM)	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
11	RHYTHM METHOD Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
12	WITHDRAWAL Men can be careful and pull out before climax.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
13	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES . . . . . 1 _____ (SPECIFY) _____ (SPECIFY) NO 2	YES . . . . . 1 NO . . . . . 2 YES . . . . . 1 NO 2
303	CHECK 302: NOT A SINGLE "YES" (NEVER USED) ☐ ↓ AT LEAST ONE "YES" (EVER USED) ☐ → 307		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
304	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES . . . . . 1 NO 2	→ 306
305	ENTER '0' IN COLUMN 1 OF CALENDAR IN EACH BLANK MONTH.		→ 331
306	What have you used or done? CORRECT 302 AND 303 (AND 301 IF NECESSARY).		
307	Now I would like to ask you about the first time that you did something or used a method to avoid getting pregnant. How many living children did you have at that time, if any? IF NONE, RECORD '00'.	NUMBER OF CHILDREN . . . . . [ ][ ]	
308	CHECK 302 (01): WOMAN NOT STERILIZED [ ] ↓ WOMAN STERILIZED [ ]		→ 311A
309	CHECK 226: NOT PREGNANT OR UNSURE [ ] ↓ PREGNANT [ ]		→ 322
310	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES . . . . . 1 NO 2	→ 322
311 311A	Which method are you using? CIRCLE ALL MENTIONED. IF MORE THAN ONE METHOD MENTIONED, FOLLOW SKIP INSTRUCTION FOR HIGHEST METHOD ON LIST. CIRCLE 'A' FOR FEMALE STERILIZATION.	FEMALE STERILIZATION . . . . . A MALE STERILIZATION . . . . . B PILL . . . . . C IUD . . . . . D INJECTABLES . . . . . E IMPLANTS . . . . . F CONDOM . . . . . G DIAPHRAGM/FOAM/JELLY . . . . . H STANDARD DAYS METHOD . . . . . I LACTATIONAL AMEN. METHOD . . . . . J RHYTHM METHOD . . . . . K WITHDRAWAL . . . . . L OTHER _____ X (SPECIFY)	→ 319 → 315 → 315 → 319A
312	May I see the package of (pills/condoms) you are using? RECORD NAME OF BRAND.	PACKAGE SEEN . . . . . 1 BRAND NAME _____ [ ][ ] (SPECIFY) PACKAGE NOT SEEN 2	→ 314
313	Do you know the brand name of the (pills/condoms) you are using? RECORD NAME OF BRAND.	BRAND NAME _____ [ ][ ] (SPECIFY) DON'T KNOW 98	
314	How many (pill cycles/packages of condoms) did you get the last time?	NUMBER OF CYCLES/PACKAGES [ ][ ][ ] DON'T KNOW 998	
315	The last time you obtained (CURRENT METHOD IN 311), how much did you pay in total, including the cost of the method and any consultation you may have had?	COST . . . . . [ ][ ][ ] . [ ][ ] FREE . . . . . 995 DON'T KNOW 998	→ 319A

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
319	In what month and year was the sterilization performed?		
319A	In what month and year did you start using (CURRENT METHOD) continuously? PROBE: For how long have you been using (CURRENT METHOD) now without stopping?	MONTH . . . . . [ ][ ] YEAR . . . . . [ ][ ][ ][ ]	
321	CHECK 319/319A: YEAR IS 1992 E.C. OR LATER [ ] ENTER CODE FOR METHOD USED IN MONTH OF INTERVIEW IN COLUMN 1 OF THE CALENDAR AND IN EACH MONTH BACK TO THE DATE STARTED USING. ENTER METHOD SOURCE CODE IN COLUMN 2 OF CALENDAR IN MONTH STARTED USING. THEN CONTINUE WITH 322. YEAR IS 1991 E.C. OR EARLIER [ ] ENTER CODE FOR METHOD USED IN MONTH OF INTERVIEW IN COLUMN 1 OF THE CALENDAR AND EACH MONTH BACK TO MESKEREM 1992. THEN SKIP TO → 329		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
322	I would like to ask you some questions about the times you or your partner may have used a method to avoid getting pregnant during the last few years. USE CALENDAR TO PROBE FOR EARLIER PERIODS OF USE AND NONUSE, STARTING WITH MOST RECENT USE, BACK TO MESKEREM 1992. USE NAMES OF CHILDREN, DATES OF BIRTH, AND PERIODS OF PREGNANCY AS REFERENCE POINTS. **IN COLUMN 1**, ENTER METHOD USE CODE OR '0' FOR NONUSE IN EACH BLANK MONTH. ILLUSTRATIVE QUESTIONS: COLUMN 1: * When was the last time you used a method? Which method was that? * When did you start using that method? How long after the birth of (NAME)? * How long did you use the method then? **IN COLUMN 2**, ENTER METHOD SOURCE CODE IN FIRST MONTH OF EACH USE. ILLUSTRATIVE QUESTIONS: COLUMN 2: * Where did you obtain the method when you started using it? * Where did you get advice on how to use the method [for LAM or rhythm]? **IN COLUMN 3**, ENTER CODES FOR DISCONTINUATION NEXT TO LAST MONTH OF USE. NUMBER OF CODES IN COLUMN 3 MUST BE SAME AS NUMBER OF INTERRUPTIONS OF METHOD USE IN COLUMN 1. ASK WHY SHE STOPPED USING THE METHOD. IF A PREGNANCY FOLLOWED, ASK WHETHER SHE BECAME PREGNANT UNINTENTIONALLY WHILE USING THE METHOD OR DELIBERATELY STOPPED TO GET PREGNANT. ILLUSTRATIVE QUESTIONS: COLUMN 3: * Why did you stop using the (METHOD)? * Did you become pregnant while using (METHOD), did you stop using to get pregnant, or did you stop for some other reason? IF DELIBERATELY STOPPED TO BECOME PREGNANT, ASK: * How many months did it take you to get pregnant after you stopped using (METHOD)? AND ENTER '0' IN EACH SUCH MONTH IN COLUMN 1.		
323	CHECK 311/311A: CIRCLE METHOD CODE: IF NO CODE CIRCLED IN 311/311A, CIRCLE '00'. IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	NO CODE CIRCLED . . . . . 00 FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 PILL . . . . . 03 IUD . . . . . 04 INJECTABLES . . . . . 05 IMPLANTS . . . . . 06 CONDOM . . . . . 07 DIAPHRAGM/FOAM/JELLY . . . . . 08 STANDARD DAYS METHOD . . . . . 09 LACTATIONAL AMEN. METHOD . . . 10 RHYTHM METHOD . . . . . 11 WITHDRAWAL . . . . . 12 OTHER METHOD 96	→ 331 → 333 → 330 → 327 → 333
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 2	→ 326
325	Were you ever told by a health facility/family planning worker/ reproductive health agent about side effects or problems you might have with the method?	YES . . . . . 1 NO 2	→ 327
326	Were you told what to do if you experienced side effects or problems?	YES . . . . . 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
327	CHECK 324: CODE '1' CIRCLED → At that time, were you told about other methods of family planning that you could use? CODE '1' NOT CIRCLED → When you obtained (CURRENT METHOD) from (SOURCE OF METHOD FROM CALENDAR) in (DATE), were you told about other methods of family planning that you could use?	YES . . . . . 1 NO 2	 → 329
328	Were you ever told by a health facility/family planning worker/ reproductive health agent about other methods of family planning that you could use?	YES . . . . . 1 NO 2	
329	CHECK 311/311A: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 PILL . . . . . 03 IUD . . . . . 04 INJECTABLES . . . . . 05 IMPLANTS . . . . . 06 CONDOM . . . . . 07 DIAPHRAGM/FOAM/JELLY . . . . . 08 STANDARD DAYS METHOD . . . . . 09 LACTATIONAL AMEN. METHOD . . . 10 RHYTHM METHOD . . . . . 11 WITHDRAWAL . . . . . 12 OTHER METHOD 96	→ 333 → 333
330	Where did you obtain (CURRENT METHOD) the last time? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL . . . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. HEALTH POST . . . . . 13 GOVT. HEALTH STATION/CLINIC 14 CBD . . . . . 15 OTHER PUBLIC _____ 16 (SPECIFY) NON GOVT (NGO) NGO HEALTH FACILITY . . . . . 21 CBD/CBRHA . . . . . 22 OTHER NGO _____ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ DOCTOR . . . . . 31 PHARMACY . . . . . 32 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER SOURCE DRUG VENDOR . . . . . 41 SHOP . . . . . 42 FRIEND/RELATIVE . . . . . 43 OTHER _____ 96 (SPECIFY)	→ 333
331	Do you know of a place where you can obtain a method of family planning?	YES . . . . . 1 NO 2	→ 333

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
332	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Any other place? RECORD ALL PLACES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL . . . . . A GOVT. HEALTH CENTER . . . . . B GOVT. HEALTH POST . . . . . C GOVT. HEALTH STATION/CLINIC D CBD . . . . . E OTHER PUBLIC _____ F (SPECIFY) NON GOVT (NGO) NGO HEALTH FACILITY . . . . . G CBD/CBRHA . . . . . H OTHER NGO _____ I (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ DOCTOR . . . . . J PHARMACY . . . . . K OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER SOURCE DRUG VENDOR . . . . . M SHOP . . . . . N FRIEND/RELATIVE . . . . . O OTHER _____ X (SPECIFY)	
333	In the last 12 months, were you visited by a community based health agent/distributor who talked to you about family planning?	YES . . . . . 1 NO 2	
334	In the last 12 months, have you visited a health facility for care for yourself (or your children)?	YES . . . . . 1 NO 2	→ 401
335	Did any staff member at the health facility speak to you about family planning methods?	YES . . . . . 1 NO 2	

SECTION 4. PREGNANCY, DELIVERY, POSTNATAL CARE AND NUTRITION

401	CHECK 224: ONE OR MORE BIRTHS IN MESKEREM 1992 OR LATER ☐ ↓ NO BIRTHS IN MESKEREM 1992 OR LATER ☐ →	550
402	ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 1992 E.C. OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES). Now I would like to ask you some questions about the health of all your children born in the last five years. (We will talk about each separately.)	

		LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH
403	LINE NUMBER FROM 212	LINE NUMBER . . . ☐☐	LINE NUMBER . . . ☐☐	LINE NUMBER . . . ☐☐
404	FROM 212 AND 216	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓	NAME _____ LIVING ☐ ↓ DEAD ☐ ↓
405	At the time you became pregnant with (NAME), did you want to become pregnant then, did you want to wait until later, or did you not want to have any (more) children at all?	THEN . . . . . 1 (SKIP TO 407) LATER . . . . . 2 NOT AT ALL . . . . . 3 (SKIP TO 407)	THEN . . . . . 1 (SKIP TO 429) LATER . . . . . 2 NOT AT ALL . . . . . 3 (SKIP TO 429)	THEN . . . . . 1 (SKIP TO 429) LATER . . . . . 2 NOT AT ALL . . . . . 3 (SKIP TO 429)
406	How much longer would you have liked to wait?	MONTHS 1 ☐☐ YEARS 2 ☐☐ DON'T KNOW . . . 998	MONTHS 1 ☐☐ YEARS 2 ☐☐ DON'T KNOW . . . 998	MONTHS 1 ☐☐ YEARS 2 ☐☐ DON'T KNOW . . . 998
407	Did you see anyone for antenatal care for this pregnancy? IF YES: Whom did you see? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS SEEN.	HEALTH PROF. . . . A OTHER PERSON TRAINED TRAD BIRTH ATTEN. . . . B UNTRAINED TRAD. BIRTH ATTEN. . . . C COMM. HEALTH AGENT . . . . . D OTHER _____ X (SPECIFY) NO ONE . . . . . Y (SKIP TO 414)		

	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
408	Where did you receive antenatal care for this pregnancy? CIRCLE ALL MENTIONED. IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	HOME YOUR HOME . . . A OTHER HOME . . . B PUBLIC SECTOR GOVT. HOSPITAL/ CLINIC . . . . . C GOVT. HEALTH CENTER . . . . . D GOVT. HEALTH POST . . . . . E OTHER PUBLIC _____ F (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY G PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . H OTHER PRIVATE MED. _____ I (SPECIFY) OTHER _____ X (SPECIFY)		
409	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS . . . [ ][ ] DON'T KNOW 98		
410	How many times did you receive antenatal care during this pregnancy?	NUMBER OF TIMES . [ ][ ] DON'T KNOW 98		
411	As part of your antenatal care during this pregnancy, were any of the following done at least once? Were you weighed? Was your blood pressure measured? Did you give a urine sample? Did you give a blood sample?	YES NO WEIGHT . . . 1 2 BP . . . . . 1 2 URINE . . . . . 1 2 BLOOD . . . 1 2		
412	During (any of) your antenatal care visit(s), were you told about the signs of pregnancy complications?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 414) ←┤ DON'T KNOW 8		
413	Were you told where to go if you had any of these complications?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
414	During this pregnancy, were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 417) ←┤ DON'T KNOW 8		
415	During this pregnancy, how many times did you get this tetanus injection?	TIMES . . . . . [ ] DON'T KNOW 8		

	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
416	CHECK 415:	2 OR MORE TIMES ☐ (SKIP TO 421) OTHER ☐		
417	At any time before this pregnancy, did you receive any tetanus injections?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 421) DON'T KNOW 8		
418	Before this pregnancy, how many times did you get a tetanus injection? IF 7 OR MORE TIMES, RECORD '7'.	TIMES . . . . . ☐☐ DON'T KNOW 8		
419	In what month and year did you receive the last tetanus injection before this pregnancy?	MONTH . . . ☐☐ DK MONTH . . . . . 98 YEAR ☐☐☐☐ (SKIP TO 421) DK YEAR 9998		
420	How many years ago did you receive that tetanus injection?	YEARS AGO . . . . . ☐☐		
421	During this pregnancy, were you given or did you buy any iron tablets? SHOW TABLETS.	YES . . . . . 1 NO . . . . . 2 (SKIP TO 422A) DON'T KNOW 8		
422	During the whole pregnancy, for how many days did you take the tablets? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS.	NUMBER OF DAYS ☐☐☐ DON'T KNOW . . . 998		
422A	During this pregnancy, did you receive any drug for intestinal parasites?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
423	During this pregnancy, did you have difficulty with your vision during daylight?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
424	During this pregnancy, did you suffer from night blindness [USE LOCAL TERM]?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
425	During this pregnancy, did you take any drugs to prevent you from getting malaria?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 429) DON'T KNOW 8		

	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
426	What drugs did you take? RECORD ALL MENTIONED. IF TYPE OF DRUG IS NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT.	FANSIDAR/SP . . . . . A CHLOROQUINE . . . B OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z		
427	CHECK 426: DRUGS TAKEN FOR MALARIA PREVENTION.	CODE 'A' CIRCLED CODE 'A' NOT CIRCLED (SKIP TO 429)		
428	How many times did you take Fansidar/SP during this pregnancy?	TIMES		
428A	CHECK 407: ANTENATAL CARE FROM A HEALTH PROFESSIONAL RECEIVED DURING THIS PREGNANCY	CODE 'A', CIRCLED OTHER (SKIP TO 429)		
428B	Did you get the Fansidar/SP during an antenatal visit to a health facility or from some other source?	ANTENATAL VISIT . 1 ANOTHER FACILITY . VISIT . . . . . 2 OTHER SOURCE _____ 6 (SPECIFY)		
429	When (NAME) was born, was he/she very large, larger than average, average, smaller than average, or very small?	VERY LARGE . . . . . 1 LARGER THAN AVERAGE . . . . . 2 AVERAGE . . . . . 3 SMALLER THAN AVERAGE . . . . . 4 VERY SMALL . . . . . 5 DON'T KNOW . . . 8	VERY LARGE . . . . . 1 LARGER THAN AVERAGE . . . . . 2 AVERAGE . . . . . 3 SMALLER THAN AVERAGE . . . . . 4 VERY SMALL . . . . . 5 DON'T KNOW . . . 8	VERY LARGE . . . . . 1 LARGER THAN AVERAGE . . . . . 2 AVERAGE . . . . . 3 SMALLER THAN AVERAGE . . . . . 4 VERY SMALL . . . . . 5 DON'T KNOW . . . 8
430	Was (NAME) weighed at birth?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 432) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 432) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 432) DON'T KNOW 8
431	How much did (NAME) weigh? RECORD WEIGHT IN KILOGRAMS FROM HEALTH CARD, IF AVAILABLE.	KG FROM CARD 1 [ ] . [ ][ ][ ] KG FROM RECALL 2 [ ] . [ ][ ][ ] DON'T KNOW . 99.998	KG FROM CARD 1 [ ] . [ ][ ][ ] KG FROM RECALL 2 [ ] . [ ][ ][ ] DON'T KNOW . 99.998	KG FROM CARD 1 [ ] . [ ][ ][ ] KG FROM RECALL 2 [ ] . [ ][ ][ ] DON'T KNOW . 99.998

	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
432	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS ASSISTING. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.	HEALTH PROF. . . . A OTHER PERSON TRAINED TRAD BIRTH ATTEN. . . . B UNTRAINED TRAD. BIRTH ATTEN. . . . C COMM. HEALTH AGENT . . . . . D RELATIVE/FRIEND . . E OTHER _____ X (SPECIFY) NO ONE . . . . . Y	HEALTH PROF. . . . A OTHER PERSON TRAINED TRAD BIRTH ATTEN. . . . B UNTRAINED TRAD. BIRTH ATTEN. . . . C COMM. HEALTH AGENT . . . . . D RELATIVE/FRIEND . . E OTHER _____ X (SPECIFY) NO ONE . . . . . Y	HEALTH PROF. . . . A OTHER PERSON TRAINED TRAD BIRTH ATTEN. . B UNTRAINED TRAD. BIRTH ATTEN. . C COMM. HEALTH AGENT . . . . . D RELATIVE/FRIEND . E OTHER _____ X (SPECIFY) NO ONE . . . . . Y
433	Where did you give birth to (NAME)? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	HOME YOUR HOME . . . 11 (SKIP TO 440) ← OTHER HOME . . . 12 PUBLIC SECTOR GOVT. HOSPITAL/ CLINIC . . . . . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. HEALTH POST . . . . . 23 OTHER PUBLIC _____ 26 (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY 31 PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . 41 OTHER PRIVATE MED. _____ 46 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 440) ←	HOME YOUR HOME . . . 11 (SKIP TO 441) ← OTHER HOME . . . 12 PUBLIC SECTOR GOVT. HOSPITAL/ CLINIC . . . . . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. HEALTH POST . . . . . 23 OTHER PUBLIC _____ 26 (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY 31 PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . 31 OTHER PRIVATE MED. _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 441) ←	HOME YOUR HOME . . . 11 (SKIP TO 441) ← OTHER HOME . . . 12 PUBLIC SECTOR GOVT. HOSPITAL/ CLINIC . . . . . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. HEALTH POST . . . . . 23 OTHER PUBLIC _____ 26 (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY 31 PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . 31 OTHER PRIVATE MED. _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 441) ←
434	How long after (NAME) was delivered did you stay there? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 [ ][ ] DAYS 2 [ ][ ] WEEKS 3 [ ][ ] DON'T KNOW . . . 998	HOURS 1 [ ][ ] DAYS 2 [ ][ ] WEEKS 3 [ ][ ] DON'T KNOW . . . 998	HOURS 1 [ ][ ] DAYS 2 [ ][ ] WEEKS 3 [ ][ ] DON'T KNOW . . . 998
435	Was (NAME) delivered by caesarean section?	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
436	Before you were discharged after (NAME) was born, did a health professional check on your health?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 439) ←	YES . . . . . 1 (SKIP TO 451) ← NO 2	YES . . . . . 1 (SKIP TO 451) ← NO 2

	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
437	How many hours, days or weeks after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 DAYS 2 WEEKS 3 DON'T KNOW . . . 998		
438	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PROF. . . . 11 OTHER PERSON TRAINED TRAD. BIRTH ATTEN. 12 UNTRAINED TRAD. BIRTH ATTEN. 13 COMM. HEALTH AGENT . . . . 15 OTHER _____ 96 (SPECIFY) (SKIP TO 449)		
439	After you were discharged, did a health professional or a traditional birth attendant check on your health?	YES . . . . . 1 (SKIP TO 442) NO . . . . . 2 (SKIP TO 449)	YES . . . . . 1 (SKIP TO 451) NO 2	YES . . . . . 1 (SKIP TO 451) NO 2
440	Why didn't you deliver in a health facility? PROBE: Any other reason? RECORD ALL MENTIONED.	COST TOO MUCH . . A FACILITY NOT OPEN . B TOO FAR/ NO TRANSPORTATION C DON'T TRUST FACILITY/POOR QUALITY SERVICE D NO FEMALE PROVIDER AT FACILITY . . E HUSBAND/FAMILY DID NOT ALLOW . . F NOT NECESSARY . . G NOT CUSTOMARY . . H OTHER _____ X (SPECIFY)		
441	After (NAME) was born, did a health professional or a traditional birth attendant check on your health?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 445)	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
442	How many hours, days or weeks after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 DAYS 2 WEEKS 3 DON'T KNOW . . . 998		

	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
443	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PROF. . . . 11 OTHER PERSON TRAINED TRAD. BIRTH ATTEN. 12 UNTRAINED TRAD. BIRTH ATTEN. 13 COMM. HEALTH AGENT . . . . . 15 OTHER _____ 96 (SPECIFY)		
444	Where did this first check take place? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	HOME YOUR HOME . . . . . 11 OTHER HOME . . . . . 12 PUBLIC SECTOR GOVT. HOSPITAL/ CLINIC . . . . . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. HEALTH POST . . . . . 23 OTHER PUBLIC _____ 26 (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY . 31 PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . 41 OTHER PRIVATE MED._____ 46 (SPECIFY) OTHER_____ 96 (SPECIFY)		
444A	CHECK 439: ☐ NOT ASKED OR NO ↓ ☐ YES ↓ (SKIP TO 449)			
445	In the two months after (NAME) was born, did a health professional or traditional birth attendant check on his/her health?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 449) ← DON'T KNOW 8		
446	How many hours, days or weeks after the birth of (NAME) did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 ☐☐ DAYS 2 ☐☐ WEEKS 3 ☐☐ DON'T KNOW . . . 998		

	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
447	Who checked on (NAME)'s health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PROF. . . . 11 OTHER PERSON . . . TRAINED TRAD. BIRTH ATTEN. . 12 UNTRAINED TRAD. BIRTH ATTEN. . 13 COMM. HEALTH AGENT . . . . . 15 OTHER _____ 96 (SPECIFY)		
448	Where did this first check of (NAME) take place? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	HOME YOUR HOME . . . 11 OTHER HOME . . . 12 PUBLIC SECTOR GOVT. HOSPITAL/ CLINIC 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. HEALTH POST . . . . . 23 OTHER PUBLIC _____ 26 (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY 31 PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . 41 OTHER PRIVATE MED. _____ 46 (SPECIFY) OTHER _____ 96 (SPECIFY)		
449	In the first two months after delivery, did you receive a vitamin A dose like this? SHOW CAPSULE.	YES . . . . . 1 NO 2		
450	Has your menstrual period returned since the birth of (NAME)?	YES . . . . . 1 (SKIP TO 452) NO . . . . . 2 (SKIP TO 453)		
451	Did your period return between the birth of (NAME) and your next pregnancy?		YES . . . . . 1 NO . . . . . 2 (SKIP TO 455)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 455)
452	For how many months after the birth of (NAME) did you <u>not</u> have a period?	MONTHS . . . [ ][ ] DON'T KNOW 98	MONTHS . . . [ ][ ] DON'T KNOW 98	MONTHS . . . [ ][ ] DON'T KNOW 98
453	CHECK 226: IS RESPONDENT PREGNANT?	NOT PREG-NANT [ ] PREGNANT OR UNSURE [ ] (SKIP TO 455)		

	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
454	Have you resumed sexual relations since the birth of (NAME)?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 456)		
455	For how many months after the birth of (NAME) did you not have sexual relations?	MONTHS . . . [ ][ ] DON'T KNOW 98	MONTHS . . . [ ][ ] DON'T KNOW 98	MONTHS . . . [ ][ ] DON'T KNOW 98
456	Did you ever breastfeed (NAME)?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 463)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 463)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 463)
457	How long after birth did you first put (NAME) to the breast? IF LESS THAN 1 HOUR, RECORD '00' HOURS. IF LESS THAN 24 HOURS, RECORD HOURS. OTHERWISE, RECORD DAYS.	IMMEDIATELY . . . 000 HOURS 1 [ ][ ] DAYS 2 [ ][ ]		
457A	Did you squeeze out and throw away the first milk?	YES . . . . . 1 NO 2		
458	In the first three days after delivery, was (NAME) given anything to drink other than breast milk?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 460)		
459	What was (NAME) given to drink? Anything else? RECORD ALL LIQUIDS MENTIONED.	MILK (OTHER THAN BREAST MILK) . A PLAIN WATER . . . B SUGAR OR GLUCOSE WATER . . . C GRIPE WATER . . . D SUGAR-SALT-WATER SOLUTION . . . . . E FRUIT JUICE . . . . . F INFANT FORMULA . G TEA/INFUSIONS . . . H HONEY . . . . . I FRESH BUTTER . . . J FENUGREEK . . . . . K OTHER _____ X (SPECIFY)		
460	CHECK 404: IS CHILD LIVING?	LIVING DEAD (SKIP TO 462)	LIVING DEAD (SKIP TO 462)	LIVING DEAD (SKIP TO 462)
461	Are you still breastfeeding (NAME)?	YES . . . . . 1 (SKIP TO 464) NO 2	YES . . . . . 1 (SKIP TO 466) NO 2	YES . . . . . 1 (SKIP TO 466) NO 2
462	For how many months did you breastfeed (NAME)?	MONTHS . . . [ ][ ] DON'T KNOW . . . 98	MONTHS . . . [ ][ ] DON'T KNOW . . . 98	MONTHS . . . [ ][ ] DON'T KNOW . . . 98

	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
463	CHECK 404: IS CHILD LIVING?	LIVING ☐ (SKIP TO 466) DEAD ☐ (GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 468)	LIVING ☐ (SKIP TO 466) DEAD ☐ (GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 468)	LIVING ☐ (SKIP TO 466) DEAD ☐ (GO BACK TO 405 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 468)
464	How many times did you breastfeed last night between sunset and sunrise? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF NIGHTTIME FEEDINGS . ☐☐		
465	How many times did you breastfeed yesterday during the daylight hours? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF DAYLIGHT FEEDINGS . ☐☐		
466	Did (NAME) drink anything from a bottle with a nipple yesterday or last night?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
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
468	CHECK 215 AND 218: HAS AT LEAST ONE CHILD BORN IN 1994 E.C. OR LATER AND LIVING WITH HER RECORD NAME OF YOUNGEST CHILD LIVING WITH HER (AND CONTINUE WITH 469) _____ (NAME)	DOES NOT HAVE ANY CHILDREN BORN IN 1994 E.C. OR LATER AND LIVING WITH HER	501

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	YES	NO	DK	SKIP
469	Now I would like to ask you about liquids (NAME FROM 468) drank yesterday during the day or at night. Did (NAME FROM 468) drink:					
	Plain water?	PLAIN WATER	1	2	8	
	Commercially produced infant formula?	FORMULA	1	2	8	
	Any other milk such as powdered, or fresh animal milk?	MILK	1	2	8	
	Fruit juice?	JUICE	1	2	8	
	Tea or coffee?	TEA/COFFEE	1	2	8	
	Any other liquids?	OTHER LIQUIDS	1	2	8	
470	Now I would like to ask you about the food (NAME FROM 468) ate yesterday during the day or at night, either separately or combined with other foods. Did (NAME FROM 468) eat:					
	a. Any porridge or gruel (made from grains other than teff)?	a	1	2	8	
	b. Any Cerifam, Fafa, Milupa, Babylac, Mother's Choice or other commercially fortified baby food?	b	1	2	8	
	c. Bread, pasta, rice, noodles, biscuits, cookies or any other food made from oats, maize, barley, wheat, sorghum,millet, or other grain?	c	1	2	8	
	d. Any food made from teff, like injera, kita or porridge?	d	1	2	8	
	e. Any white potatoes, white yams, bulla, kocho, cassava, or any other foods made from roots?	e	1	2	8	
	f. Any pumpkin, carrots, squash or sweet potatoes that are yellow or orange inside?	f	1	2	8	
	g. Any dark green, leafy vegetables like kale, spinach or amaranth leaves?	g	1	2	8	
	h. Any ripe mangoes, papayas?	h	1	2	8	
	i. Any other fruits or vegetables?	i	1	2	8	
	j. Any liver, kidney, heart or other organ meats?	j	1	2	8	
	k. Any beef, pork, lamb, goat, rabbit [or wild game meat such as antelope or deer]?	k	1	2	8	
	l. Any chicken, duck or other birds?	l	1	2	8	
	m. Any eggs?	m	1	2	8	
	n. Any fresh or dried fish or shellfish?	n	1	2	8	
	o. Any foods made from beans, peas, lentils or pulses?	o	1	2	8	
	p. Any nuts or seeds such as peanuts, sesame or sunflower seeds?	p	1	2	8	
	q. Any cheese or yogurt?	q	1	2	8	
	r. Any foods made with oil, fat, or butter?	r	1	2	8	
	s. Any other solid or semi-solid food?	s	1	2	8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
471	CHECK 470: AT LEAST ONE "YES"	NOT A SINGLE "YES"	501
472	How many times did (NAME) eat solid, semisolid, or soft foods other than liquids yesterday during the day or at night? IF 7 OR MORE TIMES, RECORD '7'.	NUMBER OF TIMES . . . . . . DON'T KNOW 8	

SECTION 5. IMMUNIZATION, HEALTH, AND WOMEN'S NUTRITION

501	ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 1992 E.C. OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES).			
502	LINE NUMBER FROM 212	LAST BIRTH LINE NUMBER . . . . . [ ][ ]	NEXT-TO-LAST BIRTH LINE NUMBER . . . . . [ ][ ]	SECOND-FROM-LAST BIRTH LINE NUMBER . . . . . [ ][ ]
503	FROM 212 AND 216	NAME_____ LIVING [ ] DEAD [ ] (GO TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 547)	NAME_____ LIVING [ ] DEAD [ ] (GO TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 547)	NAME_____ LIVING [ ] DEAD [ ] (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR IF NO MORE BIRTHS, GO TO 547)
504	Has (NAME) ever received a vitamin A dose like this? SHOW CAPSULE.	YES . . . . . 1 NO . . . . . 2 (SKIP TO 507) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 507) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 507) DON'T KNOW 8
505	How many months ago did (NAME) take the last dose?	MONTHS AGO . . [ ][ ] DON'T KNOW 98	MONTHS AGO . . [ ][ ] DON'T KNOW 98	MONTHS AGO . . [ ][ ] DON'T KNOW 98
507	Do you have a card where (NAME'S) vaccinations are written down? IF YES: May I see it please?	YES, SEEN . . . . . 1 (SKIP TO 509) YES, NOT SEEN . . . . . 2 (SKIP TO 511) NO CARD 3	YES, SEEN . . . . . 1 (SKIP TO 509) YES, NOT SEEN . . . . . 2 (SKIP TO 511) NO CARD 3	YES, SEEN . . . . . 1 (SKIP TO 509) YES, NOT SEEN . . . . . 2 (SKIP TO 511) NO CARD 3
508	Did you ever have a vaccination card for (NAME)?	YES . . . . . 1 (SKIP TO 511) NO 2	YES . . . . . 1 (SKIP TO 511) NO 2	YES . . . . . 1 (SKIP TO 511) NO 2

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.

	LAST BIRTH			NEXT-TO-LAST BIRTH			SECOND-FROM-LAST BIRTH		
	DAY	MONTH	YEAR	DAY	MONTH	YEAR	DAY	MONTH	YEAR
BCG				BCG			BCG		
POLIO 0 (POLIO GIVEN AT BIRTH)				P0			P0		
POLIO 1				P1			P1		
POLIO 2				P2			P2		
POLIO 3				P3			P3		
DPT 1				D1			D1		
DPT 2				D2			D2		
DPT 3				D3			D3		
MEASLES				MEA			MEA		
VITAMIN A (MOST RECENT)				VIT A			VIT A		
VITAMIN A (2nd MOST RECENT)				VIT A			VIT A		

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
510	Has (NAME) received any vaccinations that are not recorded on this card? RECORD 'YES' ONLY IF RESPONDENT MENTIONS BCG, POLIO 0-3, DPT 1-3, AND/OR MEASLES VACCINES.	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 509) (SKIP TO 515) NO . . . . . 2 (SKIP TO 515) DON'T KNOW 8	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 509) (SKIP TO 515) NO . . . . . 2 (SKIP TO 515) DON'T KNOW 8	YES . . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 509) (SKIP TO 515) NO . . . . . 2 (SKIP TO 515) DON'T KNOW 8
511	Did (NAME) ever receive any vaccinations to prevent him/her from getting diseases?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 515) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 515) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 515) DON'T KNOW 8
512	Please tell me if (NAME) received any of the following vaccinations:			
512A	A BCG vaccination against tuberculosis, that is, an injection in the arm or shoulder that usually causes a scar?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
512B	Polio vaccine, that is, drops in the mouth?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 512E) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 512E) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 512E) DON'T KNOW 8
512C	Was the first polio vaccine received in the first two weeks after birth or later?	FIRST 2 WEEKS . . . 1 LATER 2	FIRST 2 WEEKS . . . 1 LATER 2	FIRST 2 WEEKS . . . 1 LATER 2
512D	How many times was the polio vaccine received?	NUMBER OF TIMES . . . . . [ ]	NUMBER OF TIMES . . . . . [ ]	NUMBER OF TIMES . . . . . [ ]
512E	A DPT vaccination, that is, an injection given in the thigh or buttocks, sometimes at the same time as polio drops?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 512G) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 512G) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 512G) DON'T KNOW 8
512F	How many times was a DPT vaccination received?	NUMBER OF TIMES . . . . . [ ]	NUMBER OF TIMES . . . . . [ ]	NUMBER OF TIMES . . . . . [ ]
512G	An injection to prevent measles?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
515	Has (NAME) had diarrhea in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 530) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 530) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 530) DON'T KNOW 8
516	Was there any blood in the stools?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
517	Now I would like to know how much (NAME) was given to drink during the diarrhea. Was he/she given less than usual to drink, about the same amount, or more than usual to drink? IF LESS, PROBE: Was he/she given much less than usual to drink or somewhat less?	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
518	When (NAME) had diarrhea, was he/she given less than usual to eat, about the same amount, more than usual, or nothing to eat? IF LESS, PROBE: Was he/she given much less than usual to eat or somewhat less?	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8
519	Did you seek advice or treatment for the diarrhea from any source?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 524)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 524)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 524)
520	Where did you seek advice or treatment? IF SOURCE IS A HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Anywhere else? RECORD ALL PLACES MENTIONED.	PUBLIC SECTOR GOVT HOSPITAL/ CLINIC A GOVT HEALTH CENTER . . . . . B GOVT HEALTH POST . . . . . C COMM. HEALTH . AGENT . . . . . D OTHER PUBLIC _____ E (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY F PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC/ DOCTOR . . . G PHARMACY . . . H OTHER PRIVATE MED. _____ I (SPECIFY) OTHER SOURCE DRUG VENDOR . J SHOP . . . . . K TRADITIONAL HEALER . . . . . L OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL/ CLINIC A GOVT HEALTH CENTER . . . . . B GOVT HEALTH POST . . . . . C COMM. HEALTH . AGENT . . . . . D OTHER PUBLIC _____ E (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY F PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC/ DOCTOR . . . G PHARMACY . . . H OTHER PRIVATE MED. _____ I (SPECIFY) OTHER SOURCE DRUG VENDOR . J SHOP . . . . . K TRADITIONAL HEALER . . . . . L OTHER _____ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL/ CLINIC A GOVT HEALTH CENTER . . . . . B GOVT HEALTH POST . . . . . C COMM. HEALTH . AGENT . . . . . D OTHER PUBLIC _____ E (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY F PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC/ DOCTOR . . . G PHARMACY . . . H OTHER PRIVATE MED. _____ I (SPECIFY) OTHER SOURCE DRUG VENDOR . J SHOP . . . . . K TRADITIONAL HEALER . . . . . L OTHER _____ X (SPECIFY)
521	CHECK 520:	TWO OR MORE CODES CIRCLED ONLY ONE CODE CIRCLED (SKIP TO 523)	TWO OR MORE CODES CIRCLED ONLY ONE CODE CIRCLED (SKIP TO 523)	TWO OR MORE CODES CIRCLED ONLY ONE CODE CIRCLED (SKIP TO 523)
522	Where did you first seek advice or treatment? USE LETTER CODE FROM 520.	FIRST PLACE . . .	FIRST PLACE . . .	FIRST PLACE . . .
523	How many days after the diarrhea began did you first seek advice or treatment for (NAME)? IF THE SAME DAY, RECORD '00'.	DAYS	DAYS	DAYS . . . . .
524	Does (NAME) still have diarrhea?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
525	Was he/she given any of the following to drink at any time since he/she started having the diarrhea:	YES NO DK	YES NO DK	YES NO DK
a	A fluid made from an ORS packet like LEMLEM?	FLUID FROM ORS PKT 1 2 8	FLUID FROM ORS PKT 1 2 8	FLUID FROM ORS PKT 1 2 8
b	Home made sugar and salt solution?	SUGAR/SALT 1 2 8	SUGAR/SALT 1 2 8	SUGAR/SALT 1 2 8
c	Other homemade fluid?	HOMEMADE FLUID 1 2 8	HOMEMADE FLUID 1 2 8	HOMEMADE FLUID 1 2 8
526	Was anything (else) given to treat the diarrhea?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 530) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 530) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 530) DON'T KNOW 8
527	What (else) was given to treat the diarrhea? Anything else? RECORD ALL TREATMENTS GIVEN.	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY . . . B ZINC . . . . . C OTHER (NOT ANTI-BIOTIC, ANTI-MOTILITY, OR ZINC) . . . . . D UNKNOWN PILL OR SYRUP . . . E INJECTION ANTIBIOTIC . . . . . F NON-ANTIBIOTIC . G UNKNOWN INJECTION . . . H (IV) INTRAVENOUS . I HOME REMEDY/ HERBAL MED-ICINE . . . . . J OTHER _____ X (SPECIFY)	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY . . . B ZINC . . . . . C OTHER (NOT ANTI-BIOTIC, ANTI-MOTILITY, OR ZINC) . . . . . D UNKNOWN PILL OR SYRUP . . . E INJECTION ANTIBIOTIC . . . . . F NON-ANTIBIOTIC . G UNKNOWN INJECTION . . . H (IV) INTRAVENOUS . I HOME REMEDY/ HERBAL MED-ICINE . . . . . J OTHER _____ X (SPECIFY)	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY . . . B ZINC . . . . . C OTHER (NOT ANTI-BIOTIC, ANTI-MOTILITY, OR ZINC) . . . . . D UNKNOWN PILL OR SYRUP . . . E INJECTION ANTIBIOTIC . . . . . F NON-ANTIBIOTIC . G UNKNOWN INJECTION . . . H (IV) INTRAVENOUS . I HOME REMEDY/ HERBAL MED-ICINE . . . . . J OTHER _____ X (SPECIFY)
528	CHECK 527: GIVEN ZINC?	CODE "C" CIRCLED CODE "C" NOT CIRCLED (SKIP TO 530)	CODE "C" CIRCLED CODE "C" NOT CIRCLED (SKIP TO 530)	CODE "C" CIRCLED CODE "C" NOT CIRCLED (SKIP TO 530)
529	How many times was (NAME) given zinc?	TIMES . . . . . [ ][ ] DON'T KNOW 98		
530	Has (NAME) been ill with a fever at any time in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
531	Has (NAME) had an illness with a cough at any time in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 534) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 534) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 534) DON'T KNOW 8

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
532	When (NAME) had an illness with a cough, did he/she breathe faster than usual with short, rapid breaths or have difficulty breathing?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 535) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 535) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 535) DON'T KNOW 8
533	When (NAME) had this illness, did he/she have a problem in the chest or a blocked or runny nose?	CHEST ONLY . . . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 535)	CHEST ONLY . . . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 535)	CHEST ONLY . . . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . . 3 OTHER _____ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 535)
534	CHECK 530: HAD FEVER?	YES NO OR DK (SKIP TO 546)	YES NO OR DK (SKIP TO 546)	YES NO OR DK (SKIP TO 546)
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? IF LESS, PROBE: Was he/she given much less than usual to drink or somewhat less?	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8
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? IF LESS, PROBE: Was he/she given much less than usual to eat or somewhat less?	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8
537	Did you seek advice or treatment for the illness from any source?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 542)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 542)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 542)

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
538	Where did you seek advice or treatment? Anywhere else? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT HOSPITAL/ CLINIC A GOVT HEALTH CENTER . . . . . B GOVT HEALTH POST . . . . . C COMM. HEALTH AGENT . . . . . D OTHER PUBLIC _____ (SPECIFY) E NON-GOVT. (NGO) HEALTH FACILITY F PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC/ DOCTOR . . . G PHARMACY . . . H OTHER PRIVATE MED. _____ (SPECIFY) I OTHER SOURCE DRUG VENDOR . J SHOP . . . . . K TRADITIONAL HEALER . . . . . L OTHER _____ (SPECIFY) X	PUBLIC SECTOR GOVT HOSPITAL/ CLINIC A GOVT HEALTH CENTER . . . . . B GOVT HEALTH POST . . . . . C COMM. HEALTH AGENT . . . . . D OTHER PUBLIC _____ (SPECIFY) E NON-GOVT. (NGO) HEALTH FACILITY F PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC/ DOCTOR . . . G PHARMACY . . . H OTHER PRIVATE MED. _____ (SPECIFY) I OTHER SOURCE DRUG VENDOR . J SHOP . . . . . K TRADITIONAL HEALER . . . . . L OTHER _____ (SPECIFY) X	PUBLIC SECTOR GOVT HOSPITAL/ CLINIC A GOVT HEALTH CENTER . . . . . B GOVT HEALTH POST . . . . . C COMM. HEALTH AGENT . . . . . D OTHER PUBLIC _____ (SPECIFY) E NON-GOVT. (NGO) HEALTH FACILITY F PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC/ DOCTOR . . . G PHARMACY . . . H OTHER PRIVATE MED. _____ (SPECIFY) I OTHER SOURCE DRUG VENDOR . J SHOP . . . . . K TRADITIONAL HEALER . . . . . L OTHER _____ (SPECIFY) X
539	CHECK 538:	TWO OR MORE CODES CIRCLED ONLY ONE CODE CIRCLED (SKIP TO 541)	TWO OR MORE CODES CIRCLED ONLY ONE CODE CIRCLED (SKIP TO 541)	TWO OR MORE CODES CIRCLED ONLY ONE CODE CIRCLED (SKIP TO 541)
540	Where did you first seek advice or treatment? 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)? IF THE SAME DAY, RECORD '00'.	DAYS	DAYS	DAYS . . . . .
542	Is (NAME) still sick with a (fever/ cough)?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
543	At any time during the illness, did (NAME) take any drugs for the illness?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 546) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 546) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 546) DON'T KNOW 8

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
544	What drugs did (NAME) take? Any other drugs? RECORD ALL MENTIONED. IF THE RESPONDANT HAS GIVEN A DRUG FOR THE CHILD BUT DOESN'T KNOW THE NAME OF THE DRUG, ASK TO SEE THE PACKET OF DRUGS SHE GAVE THE CHILD. BUT IF SHE DOESN'T HAVE ANY SAMPLE LEFT, THE INTERVIEWER HAS TO SHOW THE SAMPLES SHE HAS TO THE RESPONDANT IN ORDER TO HELP IDENTIFY.	ANTIMALARIAL DRUGS FANSIDAR/SP . . . A CHLOROQUINE . B ARTEMETHER-LUMEFANTRINE C QUININE . . . . . D OTHER ANTI-MALARIAL . . . G ANTIBIOTIC BACTRIM . . . . . H AMPICILIN . . . . . I AMOXYCILIN . . . J CHLORIAM-PHENICOL . . . K TETRACYCLINE . L OTHER ANTIBIOTIC . . . M OTHER DRUGS ASPIRIN . . . . . N IBUPROFEN . . . O PARACETAMOL . P OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	ANTIMALARIAL DRUGS FANSIDAR/SP . . . A CHLOROQUINE . B ARTEMETHER-LUMEFANTRINE C QUININE . . . . . D OTHER ANTI-MALARIAL . . . G ANTIBIOTIC BACTRIM . . . . . H AMPICILIN . . . . . I AMOXYCILIN . . . J CHLORIAM-PHENICOL . . . K TETRACYCLINE . L OTHER ANTIBIOTIC . . . M OTHER DRUGS ASPIRIN . . . . . N IBUPROFEN . . . O PARACETAMOL . P OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	ANTIMALARIAL DRUGS FANSIDAR/SP . . . A CHLOROQUINE . B ARTEMETHER-LUMEFANTRINE C QUININE . . . . . D OTHER ANTI-MALARIAL . . . G ANTIBIOTIC BACTRIM . . . . . H AMPICILIN . . . . . I AMOXYCILIN . . . J CHLORIAM-PHENICOL . . . K TETRACYCLINE . L OTHER ANTIBIOTIC . . . M OTHER DRUGS ASPIRIN . . . . . N IBUPROFEN . . . O PARACETAMOL . P OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z
544A	CHECK 544: ANY CODE A-M CIRCLED	☐ YES NO ☐ (SKIP TO 546)	☐ YES NO ☐ (SKIP TO 546)	☐ YES NO ☐ (SKIP TO 546)
545	Did you already have (NAME OF DRUG FROM 544) at home when the child became ill? IF YES, CIRCLE CODE FOR THAT DRUG. ASK SEPARATELY FOR EACH DRUG (A-M) GIVEN IN 544.	ANTIMALARIAL DRUGS FANSIDAR/SP . . . A CHLOROQUINE . B ARTEMETHER-LUMEFANTRINE C QUININE . . . . . D OTHER ANTI-MALARIAL . . . G ANTIBIOTIC BACTRIM . . . . . H AMPICILIN . . . . . I AMOXYCILIN . . . J CHLORIAM-PHENICOL . . . K TETRACYCLINE . L OTHER ANTIBIOTIC . . . M NO DRUG AT HOME Y	ANTIMALARIAL DRUGS FANSIDAR/SP . . . A CHLOROQUINE . B ARTEMETHER-LUMEFANTRINE C QUININE . . . . . D OTHER ANTI-MALARIAL . . . G ANTIBIOTIC BACTRIM . . . . . H AMPICILIN . . . . . I AMOXYCILIN . . . J CHLORIAM-PHENICOL . . . K TETRACYCLINE . L OTHER ANTIBIOTIC . . . M NO DRUG AT HOME Y	ANTIMALARIAL DRUGS FANSIDAR/SP . . . A CHLOROQUINE . B ARTEMETHER-LUMEFANTRINE C QUININE . . . . . D OTHER ANTI-MALARIAL . . . G ANTIBIOTIC BACTRIM . . . . . H AMPICILIN . . . . . I AMOXYCILIN . . . J CHLORIAM-PHENICOL . . . K TETRACYCLINE . L OTHER ANTIBIOTIC . . . M NO DRUG AT HOME Y
545A	CHECK 544:	☐ CODE A CIRCLED CODE A NOT CIRCLED ☐ (SKIP TO 545D)	☐ CODE A CIRCLED CODE A NOT CIRCLED ☐ (SKIP TO 545D)	☐ CODE A CIRCLED CODE A NOT CIRCLED ☐ (SKIP TO 545D)

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
545B	How long after the fever/cough started did (NAME) first take Fansidar/SP?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER STARTED . 2 THREE DAYS AFTER FEVER STARTED . 3 FOUR OR MORE DAYS AFTER FEVER STARTED . . . . . 4 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER STARTED . 2 THREE DAYS AFTER FEVER STARTED . 3 FOUR OR MORE DAYS AFTER FEVER STARTED . . . . . 4 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER STARTED . 2 THREE DAYS AFTER FEVER STARTED . 3 FOUR OR MORE DAYS AFTER FEVER STARTED . . . . . 4 DON'T KNOW 8
545C	For how many days did (NAME) take the Fansidar/SP? IF 7 OR MORE DAYS RECORD '7'.	DAYS . . . . . [ ] DON'T KNOW 8	DAYS . . . . . [ ] DON'T KNOW 8	DAYS . . . . . [ ] DON'T KNOW 8
545D	CHECK 544:	[ ] CODE B CIRCLED [ ] CODE B NOT CIRCLED (SKIP TO 545G)	[ ] CODE B CIRCLED [ ] CODE B NOT CIRCLED (SKIP TO 545G)	[ ] CODE B CIRCLED [ ] CODE B NOT CIRCLED (SKIP TO 545G)
545E	How long after the fever/cough started did (NAME) first take Chloroquine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER STARTED . 2 THREE DAYS AFTER FEVER STARTED . 3 FOUR OR MORE DAYS AFTER FEVER STARTED . . . . . 4 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER STARTED . 2 THREE DAYS AFTER FEVER STARTED . 3 FOUR OR MORE DAYS AFTER FEVER STARTED . . . . . 4 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER STARTED . 2 THREE DAYS AFTER FEVER STARTED . 3 FOUR OR MORE DAYS AFTER FEVER STARTED . . . . . 4 DON'T KNOW 8
545F	For how many days did (NAME) take the Chloroquine? IF 7 OR MORE DAYS RECORD '7'.	DAYS . . . . . [ ] DON'T KNOW 8	DAYS . . . . . [ ] DON'T KNOW 8	DAYS . . . . . [ ] DON'T KNOW 8
545G	CHECK 544:	[ ] CODE C CIRCLED [ ] CODE C NOT CIRCLED (SKIP TO 545J)	[ ] CODE C CIRCLED [ ] CODE C NOT CIRCLED (SKIP TO 545J)	[ ] CODE C CIRCLED [ ] CODE C NOT CIRCLED (SKIP TO 545J)
545H	How long after the fever/cough started did (NAME) first take Artemether-Lumefantrine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER STARTED . 2 THREE DAYS AFTER FEVER STARTED . 3 FOUR OR MORE DAYS AFTER FEVER STARTED . . . . . 4 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER STARTED . 2 THREE DAYS AFTER FEVER STARTED . 3 FOUR OR MORE DAYS AFTER FEVER STARTED . . . . . 4 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER STARTED . 2 THREE DAYS AFTER FEVER STARTED . 3 FOUR OR MORE DAYS AFTER FEVER STARTED . . . . . 4 DON'T KNOW 8
545I	For how many days did (NAME) take the Artemether-Lumefantrine? IF 7 OR MORE DAYS RECORD '7'.	DAYS . . . . . [ ] DON'T KNOW 8	DAYS . . . . . [ ] DON'T KNOW 8	DAYS . . . . . [ ] DON'T KNOW 8
545J	CHECK 544:	[ ] CODE D CIRCLED [ ] CODE D NOT CIRCLED (SKIP TO 546)	[ ] CODE D CIRCLED [ ] CODE D NOT CIRCLED (SKIP TO 546)	[ ] CODE D CIRCLED [ ] CODE D NOT CIRCLED (SKIP TO 546)

		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
545K	How long after the fever/cough started did (NAME) first take Quinine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER STARTED . 2 THREE DAYS AFTER FEVER STARTED . 3 FOUR OR MORE DAYS AFTER FEVER STARTED . . . . . 4 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER STARTED . 2 THREE DAYS AFTER FEVER STARTED . 3 FOUR OR MORE DAYS AFTER FEVER STARTED . . . . . 4 DON'T KNOW 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER STARTED . 2 THREE DAYS AFTER FEVER STARTED . 3 FOUR OR MORE DAYS AFTER FEVER STARTED . . . . . 4 DON'T KNOW 8
545L	For how many days did (NAME) take the Quinine? IF 7 OR MORE DAYS RECORD '7'.	DAYS . . . . . [ ] DON'T KNOW 8	DAYS . . . . . [ ] DON'T KNOW 8	DAYS . . . . . [ ] DON'T KNOW 8
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 215 AND 218, ALL ROWS: NUMBER OF CHILDREN BORN IN 1992 E.C. OR LATER LIVING WITH THE RESPONDENT ONE OR MORE ☐ ↓	NONE ☐ →	550
548	The last time (NAME OF YOUNGEST CHILD) passed stools, what was done to dispose of the stools?	CHILD USED TOILET OR LATRINE . . . 01 PUT/RINSED INTO TOILET OR LATRINE . . . . . 02 PUT/RINSED INTO DRAIN OR DITCH . . . . . 03 THROWN INTO GARBAGE . . . 04 BURIED . . . . . 05 LEFT IN THE OPEN . . . . . 06 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
549	CHECK 525(a) ALL COLUMNS: NO CHILD RECEIVED FLUID FROM ORS PACKET ☐ ↓	ANY CHILD RECEIVED FLUID FROM ORS PACKET ☐ →	551
550	Have you ever heard of a special product called ORS (like LEMLEM) that you can get for the treatment of diarrhea?	YES . . . . . 1 NO 2	
551	Now I would like to ask you some questions about medical care for you yourself. Many different factors can prevent women from getting medical advice or treatment for themselves. When you are sick and want to get medical advice or treatment, is each of the following a big problem or not?	BIG PROB-LEM / NOT A BIG PROB-LEM	
	Getting permission to go.	PERMISSION TO GO . . . 1 2	
	Getting money needed for treatment.	GETTING MONEY 1 2	
	The distance to the health facility.	DISTANCE 1 2	
	Getting transport.	GETTING TRANSPORT . 1 2	
	Not wanting to go alone.	GO ALONE 1 2	
	Concern that there may not be a female health provider.	NO FEMALE PROV. . . . 1 2	
	Concern that there may not be any health provider.	NO PROVIDER 1 2	
	No one to complete household chores.	HOUSEHOLD CHORES . 1 2	
554	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? IF YES: How many injections have you had? IF NUMBER OF INJECTIONS IS GREATER THAN 90, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . ☐☐ NONE 00	→ 557A

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
555	Among these injections, how many were administered by a doctor, a nurse, a pharmacist, a dentist, or any other health worker? IF NUMBER OF INJECTIONS IS GREATER THAN 90, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . [ ][ ] NONE 00	→ 557A
556	The last time you had an injection given to you by a health worker, where did you go to get the injection? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVERNMENT HOSPITAL/CLINIC . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. HEALTH POST . . . . . 13 COMM. HEALTH AGENT . . . . . 14 OTHER PUBLIC _____ 16 (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY 21 PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ DOCTOR . . . . . 31 DENTAL CLINIC/OFFICE . . . . . 32 PHARMACY . . . . . 33 OFFICE OR HOME OF NURSE/ HEALTH WORKER . . . . . 34 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER PLACE AT HOME . . . . . 41 OTHER _____ 96 (SPECIFY)	
557	Did the person who gave you that injection take the syringe and needle from a new, unopened package?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
557A	Do you have a tetanus injection card(s)? IF YES: May I see it please?	YES, SEEN . . . . . 1 YES, NOT SEEN . . . . . 2 NO CARD 3	→ 558
557B	(1) COPY VACCINATION DATE FOR EACH VACCINE FROM THE CARD STARTING WITH THE MOST RECENT. (2) WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A VACCINATION WAS GIVEN, BUT NO DATE IS RECORDED.	DAY MONTH YEAR [ ][ ][ ] [ ][ ][ ] [ ][ ][ ] [ ][ ][ ] [ ][ ][ ] [ ][ ][ ] [ ][ ][ ] [ ][ ][ ] [ ][ ][ ] [ ][ ][ ] [ ][ ][ ] [ ][ ][ ] [ ][ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
558	Do you currently smoke cigarettes?	YES . . . . . 1 NO 2	→ 560
559	In the last 24 hours, how many cigarettes did you smoke?	CIGARETTES . . . . . [ ][ ]	
560	Do you currently smoke or use any other type of tobacco like gaya, shisha or suret?	YES . . . . . 1 NO 2	→ 562
561	What (other) type of tobacco do you currently smoke or use? RECORD ALL MENTIONED	PIPE . . . . . A CHEWING TOBACCO . . . . . B SNUFF/SURET . . . . . C SHISHA . . . . . D GAYA . . . . . E OTHER _____ X (SPECIFY)	
562	Have you ever heard of an illness called tuberculosis or TB?	YES . . . . . 1 NO 2	→ 566
563	How does tuberculosis spread from one person to another? PROBE: Any other ways? RECORD ALL MENTIONED.	THROUGH THE AIR WHEN COUGHING OR SNEEZING . . . . . A THROUGH SHARING UTENSILS . . . . . B THROUGH TOUCHING A PERSON WITH TB . . . . . C THROUGH FOOD . . . . . D THROUGH SEXUAL CONTACT . . . . . E THROUGH MOSQUITO BITES . . . . . F OTHER _____ X (SPECIFY) DON'T' KNOW . . . . . Z	
564	Can tuberculosis be cured?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
565	If a member of your family got tuberculosis, would you want it to remain a secret or not?	YES, REMAIN A SECRET . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE/ DEPENDS 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
566	CHECK 468: HAS AT LEAST ONE CHILD BORN IN 1994 E.C. OR LATER AND LIVING WITH HER ↓ DOES NOT HAVE ANY CHILDREN BORN IN 1994 E.C.OR LATER AND LIVING WITH HER →		601
567	Now I would like to ask you about the foods and liquids you had yesterday during the day or at night, either separately or combined with other foods or liquids.		
	Did (YOU) eat or drink:	YES NO DK	
	a. Any porridge or gruel (made from grains other than teff)?	a 1 2 8	
	b. Bread, pasta, rice, noodles, biscuits, cookies or any other food made from oats, maize, barley, wheat, sorghum,millet, or other grain?	b 1 2 8	
	c. Any food made from teff, like injera, kita, or porridge?	c 1 2 8	
	d. Any white potatoes, white yams, bulla, kocho, cassava, or any other foods made from roots?	d 1 2 8	
	e. Any pumpkin, carrots, squash, or sweet potatoes that are yellow or orange inside?	e 1 2 8	
	f. Any dark green, leafy vegetables like kale, spinach or amaranth leaves?	f 1 2 8	
	g. Any ripe mangoes, ripe papayas?	g 1 2 8	
	h. Any other fruits or vegetables?	h 1 2 8	
	i. Any liver, kidney, heart or other organ meats?	i 1 2 8	
	j. Any beef, pork, lamb, goat, rabbit [or wild game meat such as antelope or deer]?	j 1 2 8	
	k. Any chicken, duck or other birds?	k 1 2 8	
	l. Any eggs?	l 1 2 8	
	m. Any fresh or dried fish or shellfish?	m 1 2 8	
	n. Any foods made from beans, peas, lentils or pulses?	n 1 2 8	
	o. Any nuts or seeds such as peanuts, sesame or sunflower seeds?	o 1 2 8	
	p. Any cheese, yogurt, milk or other milk products?	p 1 2 8	
	q. Any foods made with oil, fat, or butter?	q 1 2 8	
	r. Any tea or coffee?	r 1 2 8	
	s. Any sugary foods or drinks, such as pastry, cakes, chocolates, sweets or candies, sodas, fruit juices or drinks?	s 1 2 8	

SECTION 6. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Are you currently married or living together with a man as if married?	YES, CURRENTLY MARRIED . . . . . 1 YES, LIVING WITH A MAN . . . . . 2 NO, NOT IN UNION 3	→ 605
602	Have you ever been married or lived together with a man as if married?	YES, FORMERLY MARRIED . . . . . 1 YES, LIVED WITH A MAN . . . . . 2 NO 3	→ 604
603	ENTER '0' IN COLUMN 4 OF CALENDAR IN THE MONTH OF INTERVIEW, AND IN EACH MONTH BACK TO MESKEREM 1992.		→ 614
604	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED . . . . . 1 DIVORCED . . . . . 2 SEPARATED 3	→ 610
605	Is your husband/partner living with you now or is he staying elsewhere?	LIVING TOGETHER . . . . . 1 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 _____ LINE NO. . . . . [ ][ ]	
607	Besides yourself, does your husband/partner have other wives or does he live with women other than his wives as if married?	YES . . . . . 1 NO . . . . . 2 DK 8	→ 610
608	How many other wives or partners does your husband live with now?	OTHER NUMBER OF WIVES AND LIVE-IN PARTNERS . . . [ ][ ] DK 98	
609	Are you the first, second, … wife? IF Q. 608 IS DON'T KNOW: Do you know your rank? IF YES: Are you the first, second, … wife?	RANK . . . . . [ ][ ] DON'T KNOW 98	
610	Have you been married or lived with a man only once or more than once?	ONLY ONCE . . . . . 1 MORE THAN ONCE 2	
611	CHECK 610: MARRIED/ LIVED WITH A MAN ONLY ONCE → In what month and year did you start living with your husband/partner? MARRIED/ LIVED WITH A MAN MORE THAN ONCE → Now I would like to ask about when you started living with your first husband/partner. In what month and year was that?	MONTH . . . . . [ ][ ] DON'T KNOW MONTH . . . . . 98 YEAR . . . . . [ ][ ][ ][ ] DON'T KNOW YEAR 9998	→ 613
612	How old were you when you first started living with him?	AGE . . . . . [ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
613	DETERMINE MONTHS MARRIED OR LIVING WITH A MAN SINCE MESKEREM 1992. ENTER 'X' IN COLUMN 4 OF CALENDAR FOR EACH MONTH MARRIED OR LIVING WITH A MAN, AND ENTER 'O' FOR EACH MONTH NOT MARRIED/NOT LIVING WITH A MAN, SINCE MESKEREM 1992. FOR WOMEN WITH MORE THAN ONE UNION: PROBE FOR DATE WHEN CURRENT UNION STARTED AND, IF APPROPRIATE, FOR STARTING AND TERMINATION DATES OF ANY PREVIOUS UNIONS. FOR WOMEN NOT CURRENTLY IN UNION: PROBE FOR DATE WHEN LAST UNION STARTED AND FOR TERMINATION DATE AND, IF APPROPRIATE, FOR THE STARTING AND TERMINATION DATES OF ANY PREVIOUS UNIONS.		
613A	CHECK 604: IS RESPONDENT CURRENTLY WIDOWED? NOT ASKED OR NOT WIDOWED ☐ ↓	WIDOWED ☐	→ 613D
613B	CHECK 610. MARRIED MORE THAN ONCE ☐ ↓	MARRIED ONLY ONCE ☐	→ 614
613C	How did your previous marriage or union end?	DEATH/WIDOWHOOD . . . . . 1 DIVORCE . . . . . 2 SEPARATION 3	→ 614
613D	Who did most of your late husband's property go to?	RESPONDENT . . . . . 1 OTHER WIFE . . . . . 2 SPOUSE'S CHILDREN . . . . . 3 SPOUSE'S FAMILY . . . . . 4 EQUAL SHARE WITH OTHERS . . . . . 5 OTHER _____ 6 (SPECIFY) NO PROPERTY 7	→ 614
613E	Did you receive any of your late husband's assets or valuables?	YES . . . . . 1 NO 2	
614	CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
615	Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family life issues. How old were you when you had sexual intercourse for the very first time (if ever)?	NEVER HAD SEX . . . . . 00 AGE IN YEARS . . . . . ☐☐ FIRST TIME WHEN STARTED LIVING WITH (FIRST) HUSBAND/PARTNER 95	→ 616A → 616A
616	Do you intend to wait until you get married to have sexual intercourse for the first time?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/UNSURE 8	→ 637
616A	CHECK COVER PAGE: HOUSEHOLD SELECTED FOR MALE SURVEY ☐ ↓	HOUSEHOLD NOT SELECTED FOR MALE SURVEY ☐	→ 637
617	CHECK 105: 15-24 YEARS OLD ☐ ↓	25-49 YEARS OLD ☐	→ 622
618	The first time you had sexual intercourse, was a condom used?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/DON'T REMEMBER . . . 8	
619	How old was the person you first had sexual intercourse with?	AGE OF PARTNER . . . . . ☐☐ DON'T KNOW 98	→ 622

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
620	Was this person older than you, younger than you, or about the same age as you?	OLDER . . . . . 1 YOUNGER . . . . . 2 ABOUT THE SAME AGE . . . . . 3 DON'T KNOW/DON'T REMEMBER . . . 8	→ 622
621	Would you say this person was ten or more years older than you or less than ten years older than you?	TEN OR MORE YEARS OLDER . . . . . 1 LESS THAN TEN YEARS OLDER . . . 2 OLDER, UNSURE HOW MUCH 3	
622	When was the last time you had sexual intercourse? RECORD 'YEARS AGO' ONLY IF LAST INTERCOURSE WAS ONE OR MORE YEARS AGO. IF 12 MONTHS OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO . . . . . 1 [ ][ ] WEEKS AGO . . . . . 2 [ ][ ] MONTHS AGO . . . . . 3 [ ][ ] YEARS AGO . . . . . 4 [ ][ ]	→ 624 → 636

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?		DAYS AGO . . . . . 1 WEEKS AGO . . . . 2 MONTHS AGO . . . 3
624	The last time you had sexual intercourse (with this other person), was a condom used?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 626)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 626)
625	Did you use a condom every time you had sexual intercourse with this person in the last 12 months?	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
626	What was your relationship to this person with whom you had sexual intercourse? IF BOYFRIEND/GIRLFRIEND: Were you living together as if married? IF YES, CIRCLE '02' IF NO, CIRCLE '03'	SPOUSE . . . . . 01 (SKIP TO 632) LIVE-IN PARTNER . . . . . 02 BOYFRIEND/GIRLFRIEND NOT LIVING WITH RESPONDENT . . . . . 03 CASUAL ACQUAINTANCE . . . . . 04 COMMERCIAL SEX WORKER . . . . . 05 OTHER _____ 96 (SPECIFY)	SPOUSE . . . . . 01 (SKIP TO 632) LIVE-IN PARTNER . . . . . 02 BOYFRIEND/GIRLFRIEND NOT LIVING WITH RESPONDENT . . . . . 03 CASUAL ACQUAINTANCE . . . . . 04 COMMERCIAL SEX WORKER . . . . . 05 OTHER _____ 96 (SPECIFY)
627	For how long (have you had/did you have) a sexual relationship with this person? IF ONLY HAD SEXUAL RELATIONS WITH THIS PERSON ONCE, RECORD '01' DAYS.	DAYS . . . . . 1 MONTHS . . . . . 2 YEARS 3	DAYS . . . . . 1 MONTHS . . . . . 2 YEARS 3
628	CHECK 105:	15 - 24 YEARS OLD 25 - 49 YEARS OLD (SKIP TO 632)	15 - 24 YEARS OLD 25 - 49 YEARS OLD (SKIP TO 632)
629	How old is this person?	AGE OF PARTNER . . . . . . (SKIP TO 632) DON'T KNOW 98	AGE OF PARTNER . . . . . . (SKIP TO 632) DON'T KNOW 98
630	Is this person older than you, younger than you, or about the same age?	OLDER . . . . . 1 YOUNGER . . . . . 2 ABOUT THE SAME AGE . 3 DON'T KNOW . . . . . 8 (SKIP TO 632)	OLDER . . . . . 1 YOUNGER . . . . . 2 ABOUT THE SAME AGE . 3 DON'T KNOW . . . . . 8 (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 YEARS OLDER . . . . . 1 LESS THAN TEN YEARS OLDER . . . . . 2 OLDER, UNSURE HOW MUCH 3	TEN OR MORE YEARS OLDER . . . . . 1 LESS THAN TEN YEARS OLDER . . . . . 2 OLDER, UNSURE HOW MUCH 3

NO.	QUESTIONS AND FILTERS	LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER
632	The last time you had sexual intercourse (with this other person), did you or this person drink alcohol?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 634)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 635)
633	Were you or your partner drunk at that time? IF YES: Who was drunk?	RESPONDENT ONLY . . . . . 1 PARTNER ONLY . . . . . 2 RESPONDENT AND PARTNER BOTH . . . . . 3 NEITHER 4	RESPONDENT ONLY . . . . . 1 PARTNER ONLY . . . . . 2 RESPONDENT AND PARTNER BOTH . . . . . 3 NEITHER 4
634	Apart from this person, have you had sexual intercourse with any other person in the last 12 months?	YES . . . . . 1 (GO BACK TO 623 IN NEXT COLUMN) NO . . . . . 2 (SKIP TO 636)	

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? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.'	NUMBER OF PARTNERS LAST 12 MONTHS . . . . . [ ][ ] DON'T KNOW 98	
636	In total, with how many different people have you had sexual intercourse in your lifetime? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.'	NUMBER OF PARTNERS IN LIFETIME . . . . . [ ][ ] DON'T KNOW 98	
637	Do you know of a place where a person can get condoms?	YES . . . . . 1 NO 2	→ 701
638	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL . . . . . A GOVT. HEALTH CENTER . . . . . B GOVT. HEALTH POST . . . . . C GOVT. HEALTH STATION/CLINIC D CBD . . . . . E OTHER PUBLIC _____ F (SPECIFY) NON GOVT (NGO) NGO HEALTH FACILITY . . . . . G CBD/CBRHA . . . . . H OTHER NGO _____ I (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ DOCTOR . . . . . J PHARMACY . . . . . K OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER SOURCE DRUG VENDOR . . . . . M SHOP . . . . . N FRIEND/RELATIVE . . . . . O OTHER _____ X (SPECIFY)	
639	If you wanted to, could you yourself get a condom?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/UNSURE 8	

SECTION 7. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	CHECK 311/311A: NEITHER STERILIZED OR NOT ASKED ☐ HE OR SHE STERILIZED ☐		→ 713
702	CHECK 226: NOT PREGNANT OR UNSURE ☐ Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children? PREGNANT ☐ Now I have some questions about the future. After the child you are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE (A/ANOTHER) CHILD . . . . . 1 NO MORE/NONE . . . . . 2 SAYS SHE CAN'T GET PREGNANT . 3 UNDECIDED/DON'T KNOW: AND PREGNANT . . . . . 4 AND NOT PREGNANT OR UNSURE 5	 → 704 → 713 → 709 → 708
703	CHECK 226: NOT PREGNANT OR UNSURE ☐ How long would you like to wait from now before the birth of (a/another) child? PREGNANT ☐ After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 SAYS SHE CAN'T GET PREGNANT 994 AFTER MARRIAGE . . . . . 995 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	 → 708 → 713 → 708
704	CHECK 226: NOT PREGNANT OR UNSURE ☐ PREGNANT ☐		→ 709
705	CHECK 310: USING A CONTRACEPTIVE METHOD? NOT ASKED ☐ NOT CURRENTLY USING ☐ CURRENTLY USING ☐		→ 713
706	CHECK 703: NOT ASKED ☐ 24 OR MORE MONTHS OR 02 OR MORE YEARS ☐ 00-23 MONTHS OR 00-01 YEAR ☐		→ 709

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
707	CHECK 702: WANTS TO HAVE A/ANOTHER CHILD You have said that you do not want (a/another) child soon, but you are not using any method to avoid pregnancy. Can you tell me why you are not using a method? Any other reason? WANTS NO MORE/ NONE You have said that you do not want any (more) children, but you are not using any method to avoid pregnancy. Can you tell me why you are not using a method? Any other reason? RECORD ALL REASONS MENTIONED.	NOT MARRIED . . . . . A FERTILITY-RELATED REASONS NOT HAVING SEX . . . . . B INFREQUENT SEX . . . . . C MENOPAUSAL/HYSTERECTOMY . D SUBFECUND/INFECUND . . . . . E POSTPARTUM AMENORRHEIC . . . F BREASTFEEDING . . . . . G FATALISTIC . . . . . H OPPOSITION TO USE RESPONDENT OPPOSED . . . . . I HUSBAND/PARTNER OPPOSED . J OTHERS OPPOSED . . . . . K RELIGIOUS PROHIBITION . . . . . L LACK OF KNOWLEDGE KNOWS NO METHOD . . . . . M KNOWS NO SOURCE . . . . . N METHOD-RELATED REASONS HEALTH CONCERNS . . . . . O FEAR OF SIDE EFFECTS . . . . . P LACK OF ACCESS/TOO FAR . . . . . Q COSTS TOO MUCH . . . . . R INCONVENIENT TO USE . . . . . S INTERFERES WITH BODY'S NORMAL PROCESSES . . . . . T METHOD NOT AVAILABLE . . . . . U OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
708	CHECK 310: USING A CONTRACEPTIVE METHOD? NOT ASKED NO, NOT CURRENTLY USING YES, CURRENTLY USING		713
709	Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	711
710	Which contraceptive method would you prefer to use?	FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 PILL . . . . . 03 IUD . . . . . 04 INJECTABLES . . . . . 05 IMPLANTS . . . . . 06 CONDOM . . . . . 07 DIAPHRAGM/FOAM/JELLY . . . . . 09 STANDARD DAYS METHOD . . . . . 10 LACTATIONAL AMEN. METHOD . . . . . 11 RHYTHM METHOD . . . . . 12 WITHDRAWAL . . . . . 13 OTHER _____ 96 (SPECIFY) UNSURE 98	713

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 . . . . . 11 FERTILITY-RELATED REASONS INFREQUENT SEX/NO SEX . . . 22 MENOPAUSAL/HYSTERECTOMY 23 SUBFECUND/INFECUND . . . . . 24 WANTS AS MANY CHILDREN AS POSSIBLE . . . . . 26 OPPOSITION TO USE RESPONDENT OPPOSED . . . . . 31 HUSBAND/PARTNER OPPOSED 32 OTHERS OPPOSED . . . . . 33 RELIGIOUS PROHIBITION . . . . . 34 LACK OF KNOWLEDGE KNOWS NO METHOD . . . . . 41 KNOWS NO SOURCE . . . . . 42 METHOD-RELATED REASONS HEALTH CONCERNS . . . . . 51 FEAR OF SIDE EFFECTS . . . . . 52 LACK OF ACCESS/TOO FAR . . . 53 COSTS TOO MUCH . . . . . 54 INCONVENIENT TO USE . . . . . 55 INTERFERES WITH BODY'S NORMAL PROCESSES . . . . . 56 METHOD NOT AVAILABLE . . . . . 57 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→ 713
712	Would you ever use a contraceptive method if you were married?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
713	CHECK 216: HAS LIVING CHILDREN ☐ ↓ If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ ↓ If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NONE . . . . . 00 NUMBER . . . . . ☐☐ OTHER _____ 96 (SPECIFY)	→ 715 → 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?	BOYS GIRLS EITHER NUMBER ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	
715	In the last few months have you heard about family planning: On the radio? On the television? In a newspaper or magazine? In a pamphlet/poster/leaflets/booklets? At a community event?	YES NO RADIO . . . . . 1 2 TELEVISION . . . . . 1 2 NEWSPAPER OR MAGAZINE . . . 1 2 PAMPHLET, ETC. . . . . 1 2 COMMUNITY EVENT 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
717	CHECK 601: YES, CURRENTLY MARRIED ☐ ↓ YES, LIVING WITH A MAN ☐ ↓ NO, NOT IN UNION ☐ →		723
718	CHECK 311/311A: NEITHER CODE B, NOR NOR CODE G, NOR CODE L CIRCLED, BUT ANY OTHER CODE(S) CIRCLED ☐ ↓ CODE B, OR G, OR L CIRCLED ☐ →		720
	NO CODE CIRCLED ☐ →		722
719	Does your husband/partner know that you are using a method of family planning?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
720	Would you say that using contraception is mainly your decision, mainly your husband's/partner's decision, or did you both decide together?	MAINLY RESPONDENT . . . . . 1 MAINLY HUSBAND/PARTNER . . . . . 2 JOINT DECISION . . . . . 3 OTHER _____ 6 (SPECIFY)	
721	CHECK 311/311A: NEITHER STERILIZED OR NOT ASKED ☐ ↓ HE OR SHE STERILIZED ☐ →		723
722	Do you think your husband/partner wants the same number of children that you want, or does he want more or fewer than you want?	SAME NUMBER . . . . . 1 MORE CHILDREN . . . . . 2 FEWER CHILDREN . . . . . 3 DON'T KNOW 8	
723	Husbands and wives do not always agree on everything. Please tell me if you think a wife is justified in refusing to have sex with her husband when:	YES NO DK	
	She knows her husband has a disease that can be transmitted through sexual contact?	DISEASE SEXUAL CONTACT 1 2 8	
	She knows her husband has sex with other women?	OTHER WOMEN 1 2 8	
	She is tired or not in the mood?	TIRED/NOT IN MOOD 1 2 8	
723A	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?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
723B	CHECK 601: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ ↓ NOT IN UNION ☐ →		801
723C	Can you say no to your husband/partner if you do not want to have sexual intercourse?	YES . . . . . 1 NO . . . . . 2 DEPENDS/UNSURE 8	
723D	Could you ask your husband/partner to use a condom it you wanted him to?	YES . . . . . 1 NO . . . . . 2 DEPENDS/UNSURE 8	

SECTION 8. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	CHECK 601 AND 602: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ FORMERLY MARRIED/ LIVED WITH A MAN ☐ NEVER MARRIED AND NEVER LIVED WITH A MAN ☐		→ 803 → 807
802	How old was your husband/partner on his last birthday?	AGE IN COMPLETED YEARS ☐☐	
803	Did your (last) husband/partner ever attend school?	YES . . . . . 1 NO 2	→ 806
805	What was the highest grade he completed?	GRADE . . . . . ☐☐ TECH./VOC. CERTIFICATE . . . . . 13 UNIVERSITY/COLLEGE DIPLOMA . . . 14 UNIVERSITY/COLLEGE DEGREE . . . . . 15 DON'T KNOW 98	
806	CHECK 801: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ What is your husband's/partner's occupation? That is, what kind of work does he mainly do? FORMERLY MARRIED/ LIVED WITH A MAN ☐ What was your (last) husband's/ partner's occupation? That is, what kind of work did he mainly do?	_____ ☐☐ _____ _____	
807	Aside from your own housework, have you done any work in the last seven days?	YES . . . . . 1 NO 2	→ 811
808	As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. In the last seven days, have you done any of these things or any other work?	YES . . . . . 1 NO 2	→ 811
809	Although you did not work in the last seven days, do you have any job or business from which you were absent for leave, illness, vacation, maternity leave or any other such reason?	YES . . . . . 1 NO 2	→ 811
810	Have you done any work in the last 12 months?	YES . . . . . 1 NO 2	→ 811
810A	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 _____ 96 (SPECIFY)	→ 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: WORKS IN AGRICULTURE ☐ ↓ DOES NOT WORK IN AGRICULTURE ☐ → 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 . . . . . 1 FAMILY LAND . . . . . 2 RENTED LAND . . . . . 3 SOMEONE ELSE'S LAND . . . . . 4 DOES NOT WORK ON LAND 5	
814	Do you do this work for a member of your family, for someone else, or are you self-employed?	FOR FAMILY MEMBER . . . . . 1 FOR SOMEONE ELSE . . . . . 2 SELF-EMPLOYED 3	
815	Do you usually work at home or away from home?	HOME . . . . . 1 AWAY 2	
816	Do you usually work throughout the year, or do you work seasonally, or only once in a while?	THROUGHOUT THE YEAR . . . . . 1 SEASONALLY/PART OF THE YEAR . 2 ONCE IN A WHILE 3	
817	Are you paid in cash or kind for this work or are you not paid at all?	CASH ONLY . . . . . 1 CASH AND KIND . . . . . 2 IN KIND ONLY . . . . . 3 NOT PAID 4	
818	CHECK 601: CURRENTLY MARRIED/LIVING WITH A MAN ☐ ↓ NOT IN UNION ☐ → 825		
819	CHECK 817: CODE 1 OR 2 CIRCLED ☐ ↓ OTHER/ NOT ASKED ☐ → 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?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 OTHER 6	
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 LESS THAN HIM . . . . . 2 ABOUT THE SAME . . . . . 3 HUSBAND/PARTNER DOESN'T BRING IN ANY MONEY . . . . . 4 → 823 DON'T KNOW 8	

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?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 HUSBAND/PARTNER DOESN'T BRING IN ANY MONEY . . . . . 4 OTHER 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?	RESPONDENT = 1 HUSBAND/PARTNER = 2 RESPONDENT & HUSBAND/PARTNER JOINTLY = 3 SOMEONE ELSE = 4 OTHER = 5 1 2 3 4 5	
	Who usually makes decisions about making major household purchases?	1 2 3 4 5	
	Who usually makes decisions about making purchases for daily household needs?	1 2 3 4 5	
	Who usually makes decisions about visits to your family or relatives?	1 2 3 4 5	
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:	YES NO DK	
	If she goes out without telling him?	GOES OUT 1 2 8	
	If she neglects the children?	NEGL. CHILDREN . . . 1 2 8	
	If she argues with him?	ARGUES 1 2 8	
	If she refuses to have sex with him?	REFUSES SEX 1 2 8	
	If she burns the food?	BURNS FOOD 1 2 8	

SECTION 9. HIV/AIDS 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 . . . . . 1 NO 2	→ 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 . . . . . 2 DON'T KNOW 8	
903	Can people get the AIDS virus from mosquito bites?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
904	Can people reduce their chances of getting the AIDS virus by using a condom every time they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
905	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
906	Can people reduce their chance of getting the AIDS virus by abstaining from sexual intercourse?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
907	Can people get the AIDS virus because of the curse of God or other supernatural means?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
908	Is there anything else a person can do to avoid or reduce the chances of getting the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 910
909	What can a person do? Anything else? RECORD ALL WAYS MENTIONED.	ABSTAIN FROM SEX . . . . . A USE CONDOMS . . . . . B LIMIT SEX TO ONE PARTNER/STAY FAITHFUL TO ONE PARTNER . . . C LIMIT NUMBER OF SEXUAL PARTNERS . . . . . D AVOID SEX WITH PROSTITUTES . . . E AVOID SEX WITH PERSONS WHO HAVE MANY PARTNERS . . . . . F AVOID SEX WITH HOMOSEXUALS . G AVOID SEX WITH PERSONS WHO INJECT DRUGS . H AVOID BLOOD TRANSFUSIONS . . . . . I AVOID INJECTIONS . . . . . J AVOID SHARING RAZORS/BLADES . K AVOID KISSING . . . . . L AVOID MOSQUITO BITES . . . . . M SEEK PROTECTION FROM TRADITIONAL PRACTITIONER . . . N OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
910	Is it possible for a healthy-looking person to have the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
910A	CHECK COVER PAGE:	HOUSEHOLD SELECTED FOR MALE SURVEY ☐ ↓ HOUSEHOLD NOT SELECTED FOR MALE SURVEY ☐ →	911
910B	Can the virus that causes AIDS be transmitted from a mother to her baby: During pregnancy? During delivery? By breastfeeding?	YES NO DK DURING PREG. . . . . 1 2 8 DURING DELIVERY . . . 1 2 8 BREASTFEEDING . . . 1 2 8	
910C	CHECK 910B:	AT LEAST ONE 'YES' ☐ ↓ OTHER ☐ →	910E
910D	Are there any special medications that a doctor or a nurse can give to a woman infected with the AIDS virus to reduce the risk of transmission to the baby?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
910E	Is there any special medication that people infected with the AIDS virus can get from a doctor or a nurse?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
910F	CHECK 215:	NO BIRTHS ☐ → LAST BIRTH SINCE MESKEREM 1995 ☐ ↓ LAST BIRTH BEFORE MESKEREM 1995 ☐ →	910O 910O
910G	CHECK 407: SEE ANYONE FOR ANTENATAL CARE DURING THAT PREGNANCY?	YES, PERSON SEEN ☐ ↓ NO ONE ☐ →	910O
910H	During any of the antenatal visits for that pregnancy, did anyone talk to you about: Babies getting the AIDS virus from their mother? Things that you can do to prevent getting the AIDS virus? Getting tested for the AIDS virus?	YES NO DK AIDS FROM MOTHER 1 2 8 THINGS TO DO . 1 2 8 TESTED FOR AIDS . 1 2 8	
910I	Were you offered a test for the AIDS virus as part of your antenatal care?	YES . . . . . 1 NO 2	
910J	I don't want to know the results, but were you tested for the AIDS virus as part of your antenatal care?	YES . . . . . 1 NO . . . . . 2 →	910O
910K	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
910L	Where was the test done? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE SOURCE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVERNMENT HOSPITAL/CLINIC 11 GOVT. HEALTH CENTER . . . . . 12 VCT CENTER . . . . . 13 GOVT. HEALTH POST . . . . . 14 FAMILY PLANNING CLINIC . . . . . 15 STAND ALONE VCT CENTER . . . . . 16 OTHER PUBLIC _____ 17 (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY 21 STAND ALONE VCT CENTER . . . . . 22 PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ DOCTOR . . . . . 31 STAND ALONE VCT CENTER . . . . . 32 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	
910M	Have you been tested for the AIDS virus since that time you were tested during your pregnancy?	YES . . . . . 1 NO 2	→ 910P
910N	When was the last time you were tested for the AIDS virus?	LESS THAN 12 MONTHS AGO . . . . . 1 12 - 23 MONTHS AGO . . . . . 2 2 OR MORE YEARS AGO 3	→ 912A
910O	I don't want to know the results, but have you ever been tested to see if you have the AIDS virus?	YES . . . . . 1 NO 2	→ 911
910P	When was the last time you were tested?	LESS THAN 12 MONTHS AGO . . . . . 1 12 - 23 MONTHS AGO . . . . . 2 2 OR MORE YEARS AGO 3	
910Q	The last time you had the test, did you yourself ask for the test, was it offered to you and you accepted, or was it required?	ASKED FOR THE TEST . . . . . 1 OFFERED AND ACCEPTED . . . . . 2 REQUIRED 3	
910R	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	
910S	Where was the test done? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVERNMENT HOSPITAL/CLINIC 11 GOVT. HEALTH CENTER . . . . . 12 VCT CENTER . . . . . 13 GOVT. HEALTH POST . . . . . 14 FAMILY PLANNING CLINIC . . . . . 15 STAND ALONE VCT CENTER . . . . . 16 OTHER PUBLIC _____ 17 (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY 21 STAND ALONE VCT CENTER . . . . . 22 PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ DOCTOR . . . . . 31 STAND ALONE VCT CENTER . . . . . 32 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	→ 912A

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 . . . . . 1 NO 2	→ 912A
912	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVERNMENT HOSPITAL/CLINIC A GOVT. HEALTH CENTER . . . . . B VCT CENTER . . . . . C GOVT. HEALTH POST . . . . . D FAMILY PLANNING CLINIC . . . . . E STAND ALONE VCT CENTER . . . F OTHER PUBLIC _____ G (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY H STAND ALONE VCT CENTER . . . . . I PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ DOCTOR . . . . . J STAND ALONE VCT CENTER . . . . K OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER _____ M (SPECIFY)	
912A	In the last few months have you heard or seen the following media messages on HIV/AIDS? Value your life! Stop stigma and discrimination! Harmful traditional practices expose to HIV/AIDS! Live and let live! Care and support people living with HIV/AIDS! I care, do you? Let us take care of each other! Let us fight HIV/AIDS together! Abstain from sex before marriage!	YES NO VALUE YOUR LIFE . . . . . 1 2 STOP STIGMA . . . . . 1 2 HARMFUL TRAD. PRACTICES . . . 1 2 LIVE AND LET LIVE . . . . . 1 2 CARE AND SUPPORT . . . . . 1 2 I CARE DO YOU . . . . . 1 2 LET US TAKE CARE . . . . . 1 2 LET US FIGHT HIV/AIDS . . . . . 1 2 ABSTAIN FROM SEX 1 2	
913	Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
914	If a member of your family got infected with the AIDS virus, would you want it to remain a secret or not?	YES, REMAIN A SECRET . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
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 . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 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 . . . . . 1 SHOULD NOT BE ALLOWED . . . . . 2 DK/NOT SURE/DEPENDS 8	
916A	CHECK COVER PAGE: HOUSEHOLD SELECTED FOR MALE SURVEY ☐ ↓ HOUSEHOLD NOT SELECTED FOR MALE SURVEY ☐ → 917		
916B	Do you personally know someone who is suspected to have the AIDS virus or who has the AIDS virus?	YES . . . . . 1 NO 2	→ 916F
916C	Do you personally know someone who has been denied health services in the last 12 months because he or she is suspected to have the AIDS virus or has the AIDS virus?	YES . . . . . 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
916D	Do you personally know someone who has been denied involvement in social events, religious services, or community events in the last 12 months because he or she is suspected to have the AIDS virus or has the AIDS virus?	YES . . . . . 1 NO 2	
916E	Do you personally know someone who has been verbally abused or teased in the last 12 months because he or she is suspected to have the AIDS virus or has the AIDS virus?	YES . . . . . 1 NO 2	
916F	Do you agree or disagree with the following statement: People with the AIDS virus should be ashamed of themselves.	AGREE . . . . . 1 DISAGREE . . . . . 2 DON'T KNOW/NO OPINION 8	
916G	Do you agree or disagree with the following statement: People with the AIDS virus should be blamed for bringing the disease into the community.	AGREE . . . . . 1 DISAGREE . . . . . 2 DON'T KNOW/NO OPINION 8	
916H	Should children age 12-14 be taught about using a condom to avoid AIDS?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
916I	Should children age 12-14 be taught to wait until they get married to have sexual intercourse in order to avoid AIDS?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
917	CHECK 901: HEARD ABOUT AIDS → Apart from AIDS, have you heard about other infections that can be transmitted through sexual contact? NOT HEARD ABOUT AIDS → Have you heard about infections that can be transmitted through sexual contact?	YES . . . . . 1 NO 2	
918	CHECK 615: HAS HAD SEXUAL INTERCOURSE → HAS NOT HAD SEXUAL INTERCOURSE →		1001
919	CHECK 917: HEARD ABOUT OTHER SEXUALLY TRANSMITTED INFECTIONS? YES → NO →		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 . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
921	Sometimes women experience a bad smelling abnormal genital discharge. During the last 12 months, have you had a bad smelling abnormal genital discharge?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
922	Sometimes women have a genital sore or ulcer. During the last 12 months, have you had a genital sore or ulcer?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
923	CHECK 920, 921, AND 922: HAS HAD AN INFECTION (ANY 'YES') ☐ ↓ HAS NOT HAD AN INFECTION OR DOES NOT KNOW ☐ →		1001
924	The last time you had (PROBLEM FROM 920/921/922), did you seek any kind of advice or treatment?	YES . . . . . 1 NO 2	→ 1001
925	Where did you go? Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVERNMENT HOSPITAL/CLINIC A GOVT. HEALTH CENTER . . . . . B VCT CENTER . . . . . C GOVT. HEALTH POST . . . . . D FAMILY PLANNING CLINIC . . . . . E STAND ALONE VCT CENTER . . . . . F OTHER PUBLIC _____ G (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY H STAND ALONE VCT CENTER . . . . . I PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ DOCTOR . . . . . J STAND ALONE VCT CENTER K PHARMACY . . . . . L OTHER PRIVATE MEDICAL _____ M (SPECIFY) OTHER SOURCE DRUG VENDOR . . . . . N SHOP . . . . . O TRADITIONAL HEALER . . . . . P OTHER _____ X (SPECIFY)	

SECTION 10. HARMFUL TRADITIONAL PRACTICES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1001	Have you ever heard of female circumcision? IF NO PROBE: Have you ever heard of the practice in which a girl may have parts of her genitals cut?	YES . . . . . 1 NO 2	→ 1011
1002	Have you yourself ever been circumcised?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 1004
1003	In some parts of Ethiopia, there is a type of circumcision where the genital area is sewn closed. Was this done to you?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1004	CHECK 214 AND 216: HAS ONE LIVING DAUGHTER ☐ ↓ HAS MORE THAN ONE LIVING DAUGHTER ☐ ↓ HAS NO LIVING DAUGHTER ☐ → 1010		
1005	CHECK 1004: ONE LIVING DAUHTER ☐ ↓ Has your daughter been circumcised? IF YES: RECORD '01' MORE THAN ONE LIVING DAUGHTER ☐ ↓ Have any of your daughters been circumcised? IF YES: How many? RECORD NUMBER	NUMBER CIRCUMCISED . . . ☐☐ NO DAUGHTER CIRCUMCISED 95	→ 1010
1006	To which of your daughters did this happen (most recently)? _____ (DAUGHTER'S NAME) CHECK 212 AND RECORD THE LINE NUMBER FOR THE DAUGHTER.	DAUGHTER'S LINE NUMBER FROM 212 . . . . . ☐☐	
1007	Was (NAME OF DAUGHTER FROM 1006) genital area sewn closed?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1008	How old was (NAME) when this occurred? IF THE RESPONDENT DOES NOT KNOW THE AGE, PROBE TO GET AN ESTIMATE.	AGE IN COMPLETED YEARS . ☐☐ DURING INFANCY . . . . . 95 DON'T KNOW 98	
1009	Who did the circumcision?	TRADITIONAL TRAD. CIRCUMCISER . . . . . 1 TRAD. BIRTH ATTENDANT . . . . . 2 OTHER TRAD. _____ 3 (SPECIFY) HEALTH PROFESSIONAL . . . . . 4 DON'T KNOW 8	
1010	Do you think that this practice should be continued or should it be discontinued?	CONTINUED . . . . . 1 DISCONTINUED . . . . . 2 DEPENDS . . . . . 3 DON'T KNOW 8	
1011	Have you ever heard of uvulectomy/tonsillectomy? IF NO PROBE: Have you ever heard of the practice in which a child may have parts of her or his uvula cut or tonsils scraped?	YES . . . . . 1 NO 2	→ 1016
1012	Have you yourself ever had an uvulectomy or tonsillectomy?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1013	CHECK 216: HAS AT LEAST ONE LIVING CHILD ☐ ↓ HAS NO LIVING CHILD ☐ →		1015
1014	Have any of your children ever had an uvulectomy or tonsillectomy? IF YES: How many?	NUMBER . . . . . ☐☐ NO CHILD 95	
1015	Do you think that this practice should be continued or should it be discontinued?	CONTINUED . . . . . 1 DISCONTINUED . . . . . 2 DEPENDS . . . . . 3 DON'T KNOW 8	
1016	Have you ever heard of marriage by abduction? IF NO PROBE: Have you ever heard of the practice in which a girl is abducted and forced into marriage?	YES . . . . . 1 NO 2	→ 1021
1016A	CHECK 601 AND 602: EVER MARRIED/ EVER IN UNION ☐ ↓ NEVER MARRIED/ NEVER IN UNION ☐ →		1018
1017	Were you yourself married by abduction?	YES . . . . . 1 NO 2	
1018	CHECK 214, 215 AND 216: HAS AT LEAST ONE LIVING DAUGHTER AGE 10 AND ABOVE ☐ ↓ HAS NO LIVING DAUGHTER/ DAUGHTER BELOW AGE 10 ☐ →		1020
1019	Have any of your daughters ever been married by abduction? IF YES: How many?	NUMBER . . . . . ☐☐ NO DAUGHTER 95	
1020	Do you think that this practice should be continued or should it be discontinued?	CONTINUED . . . . . 1 DISCONTINUED . . . . . 2 DEPENDS . . . . . 3 DON'T KNOW 8	
1021	Have you ever heard of obstetric fistula (USE LOCAL TERM)? IF NO PROBE: Have you ever heard of a condition in which a woman continuously leaks urine and/or faeces following childbirth?	YES . . . . . 1 NO 2	→ 1101
1022	Have you yourself experienced obstetric fistula?	YES . . . . . 1 NO 2	→ 1024
1023	Have you ever been treated for obstetric fistula?	YES . . . . . 1 NO 2	
1024	Are there any (other) women in your household who suffer from obstetric fistula?	YES . . . . . 1 NO 2	→ 1101
1025	How many (other) women in your household suffer from obstetric fistula?	NUMBER . . . . . ☐☐ DON'T KNOW 98	

SECTION 11. MATERNAL MORTALITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1101	Now I would like to ask you some questions about your brothers and sisters, that is, all of the children born to your natural mother, including those who are living with you, those living elsewhere and those who have died. How many children did your mother give birth to, including you?	NUMBER OF BIRTHS TO NATURAL MOTHER . . . . . [ ][ ]	
1102	CHECK 1101: TWO OR MORE BIRTHS [ ] ↓ ONLY ONE BIRTH (RESPONDENT ONLY) [ ] →		1114
1103	How many of these births did your mother have before you were born?	NUMBER OF PRECEDING BIRTHS . . . . . [ ][ ]	

1104	What was the name given to your oldest (next oldest) brother or sister?	(1) _____	(2) _____	(3) _____	(4) _____	(5) _____	(6) _____
1105	Is (NAME) male or female?	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2
1106	Is (NAME) still alive?	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (2)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (3)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (4)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (5)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (6)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (7)
1107	How old is (NAME)?	[ ][ ] GO TO (2)	[ ][ ] GO TO (3)	[ ][ ] GO TO (4)	[ ][ ] GO TO (5)	[ ][ ] GO TO (6)	[ ][ ] GO TO (7)
1108	How many years ago did (NAME) die?	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]
1109	How old was (NAME) when he/she died?	[ ][ ] IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (2)	[ ][ ] IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (3)	[ ][ ] IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (4)	[ ][ ] IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (5)	[ ][ ] IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (6)	[ ][ ] IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (7)
1110	Was (NAME) pregnant when she died?	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2
1111	Did (NAME) die during childbirth?	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2
1112	Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2
1113	How many live born children did (NAME) give birth to during her lifetime (before this pregnancy)?	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]

IF NO MORE BROTHERS OR SISTERS, GO TO 1114.

1104	What was the name given to your oldest (next oldest) brother or sister?	(7) _____	(8) _____	(9) _____	(10) _____	(11) _____	(12) _____
1105	Is (NAME) male or female?	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2	MALE 1 FEMALE 2
1106	Is (NAME) still alive?	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (8)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (9)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (10)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (11)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (12)	YES . . . 1 NO . . . 2 GO TO 1108 DK . . . 8 GO TO (13)
1107	How old is (NAME)?	[ ][ ] GO TO (8)	[ ][ ] GO TO (9)	[ ][ ] GO TO (10)	[ ][ ] GO TO (11)	[ ][ ] GO TO (12)	[ ][ ] GO TO (13)
1108	How many years ago did (NAME) die?	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]
1109	How old was (NAME) when he/she died?	[ ][ ] IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO [8]	[ ][ ] IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (9)	[ ][ ] IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (10)	[ ][ ] IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (11)	[ ][ ] IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (12)	[ ][ ] IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (13)
1110	Was (NAME) pregnant when she died?	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2
1111	Did (NAME) die during childbirth?	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2	YES . . . 1 GO TO 1113 NO . . . 2
1112	Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2	YES . . . 1 NO . . . 2
1113	How many live born children did (NAME) give birth to during her lifetime (before this pregnancy)?	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]	[ ][ ]

IF NO MORE BROTHERS OR SISTERS, GO TO 1114.

1114	RECORD THE TIME. MORNING = 1 EVENING = 2	MORNING/EVENING . . . . . [ ] HOUR . . . . . [ ][ ] MINUTES . . . . . [ ][ ]

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF SUPERVISOR: _____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR: _____ DATE: _____

INSTRUCTIONS:
ONLY ONE CODE SHOULD APPEAR IN ANY BOX.
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
- T TERMINATIONS

- 0 NO METHOD
- 1 FEMALE STERILIZATION
- 2 MALE STERILIZATION
- 3 PILL
- 4 IUD
- 5 INJECTABLES
- 6 IMPLANTS
- 7 CONDOM
- 8 DIAPHRAGM/FOAM/JELLY
- 9 STANDARD DAYS METHOD
- J LACTATIONAL AMENORRHEA METHOD
- K RHYTHM METHOD
- L WITHDRAWAL
- X OTHER _____ (SPECIFY)

COL. 2: SOURCE OF CONTRACEPTION

- 1 GOV'T HOSPITAL
- 2 GOV'T HEALTH CENTER
- 3 GOV'T HEALTH POST
- 4 GOV'T HEALTH STATION/CLINIC
- 5 CBD
- 6 OTHER PUBLIC
- 7 NON-GOV'T HEALTH FACILITY
- 8 NON-GOV'T CBD/CBRHA
- 9 OTHER NGO
- A PVT. HOSPITAL/CLINIC/DOCTOR
- B PHARMACY
- C OTHER PRIVATE MEDICAL
- D DRUG VENDOR
- E SHOP
- F FRIENDS/RELATIVES
- X OTHER _____ (SPECIFY)

COL. 3: DISCONTINUATION OF CONTRACEPTIVE USE

- 0 INFREQUENT SEX/HUSBAND AWAY
- 1 BECAME PREGNANT WHILE USING
- 2 WANTED TO BECOME PREGNANT
- 3 HUSBAND/PARTNER DISAPPROVED
- 4 WANTED MORE EFFECTIVE METHOD
- 5 HEALTH CONCERNS
- 6 SIDE EFFECTS
- 7 LACK OF ACCESS/TOO FAR
- 8 COSTS TOO MUCH
- 9 INCONVENIENT TO USE
- M METHOD NOT AVAILABLE
- F FATALISTIC
- A DIFFICULT TO GET PREGNANT/MENOPAUSAL
- D MARITAL DISSOLUTION/SEPARATION
- X OTHER _____ (SPECIFY)
- Z DON'T KNOW

COL. 4:

MARRIAGE/UNION

- X IN UNION (MARRIED OR LIVING TOGETHER)
- 0 NOT IN UNION

				1	2		3	4			
	13	PAG	01						01	PAG	
	12	NEH	02						02	NEH	
	11	HAM	03						03	HAM	
	10	SENE	04						04	SENE	
	09	GEN	05						05	GEN	
1	08	MEI	06						06	MEI	1
9	07	MEG	07						07	MEG	9
9	06	YEK	08						08	YEK	9
7	05	TIRR	09						09	TIRR	7
E.	04	TAH	10						10	TAH	E.
C.	03	HID	11						11	HID	C.
	02	TIK	12						12	TIK	
	01	MES	13						13	MES	
	13	PAG	14						14	PAG	
	12	NEH	15						15	NEH	
	11	HAM	16						16	HAM	
	10	SENE	17						17	SENE	
	09	GEN	18						18	GEN	
1	08	MEI	19						19	MEI	1
9	07	MEG	20						20	MEG	9
9	06	YEK	21						21	YEK	9
6	05	TIRR	22						22	TIRR	6
E.	04	TAH	23						23	TAH	E.
C.	03	HID	24						24	HID	C.
	02	TIK	25						25	TIK	
	01	MES	26						26	MES	
	13	PAG	27						27	PAG	
	12	NEH	28						28	NEH	
	11	HAM	29						29	HAM	
	10	SENE	30						30	SENE	
	09	GEN	31						31	GEN	
1	08	MEI	32						32	MEI	1
9	07	MEG	33						33	MEG	9
9	06	YEK	34						34	YEK	9
5	05	TIRR	35						35	TIRR	5
E.	04	TAH	36						36	TAH	E.
C.	03	HID	37						37	HID	C.
	02	TIK	38						38	TIK	
	01	MES	39						39	MES	
	13	PAG	40						40	PAG	
	12	NEH	41						41	NEH	
	11	HAM	42						42	HAM	
	10	SENE	43						43	SENE	
	09	GEN	44						44	GEN	
1	08	MEI	45						45	MEI	1
9	07	MEG	46						46	MEG	9
9	06	YEK	47						47	YEK	9
4	05	TIRR	48						48	TIRR	4
E.	04	TAH	49						49	TAH	E.
C.	03	HID	50						50	HID	C.
	02	TIK	51						51	TIK	
	01	MES	52						52	MES	
	13	PAG	53						53	PAG	
	12	NEH	54						54	NEH	
	11	HAM	55						55	HAM	
	10	SENE	56						56	SENE	
	09	GEN	57						57	GEN	
1	08	MEI	58						58	MEI	1
9	07	MEG	59						59	MEG	9
9	06	YEK	60						60	YEK	9
3	05	TIRR	61						61	TIRR	3
E.	04	TAH	62						62	TAH	E.
C.	03	HID	63						63	HID	C.
	02	TIK	64						64	TIK	
	01	MES	65						65	MES	
	13	PAG	66						66	PAG	
	12	NEH	67						67	NEH	
	11	HAM	68						68	HAM	
	10	SENE	69						69	SENE	
	09	GEN	70						70	GEN	
1	08	MEI	71						71	MEI	1
9	07	MEG	72						72	MEG	9
9	06	YEK	73						73	YEK	9
2	05	TIRR	74						74	TIRR	2
E.	04	TAH	75						75	TAH	E.
C.	03	HID	76						76	HID	C.
	02	TIK	77						77	TIK	
	01	MES	78						78	MES	

14 APRIL 2005

2005 ETHIOPIA DEMOGRAPHIC AND HEALTH SURVEY
MAN'S QUESTIONNAIRE

IMPLEMENTING ORGANIZATION:
PHCCO

IDENTIFICATION

LOCALITY NAME _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBER . . . . . [ ][ ][ ]

HOUSEHOLD NUMBER . . . . . [ ][ ]

REGION . . . . . [ ][ ]

LARGE CITY/SMALL CITY/TOWN/RURAL
(LARGE CITY=1, SMALL CITY=2, TOWN=3, RURAL=4) . . . . . [ ]

NAME AND LINE NUMBER OF MAN _____ [ ][ ]

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY [ ][ ]
				MONTH [ ][ ]
				YEAR [ ][ ][ ][ ]
INTERVIEWER'S NAME	_____	_____	_____	INT. NUMBER [ ][ ]
RESULT*	_____	_____	_____	RESULT [ ]
NEXT VISIT: DATE	_____	_____		TOTAL NUMBER OF VISITS [ ]
TIME	_____	_____		

*RESULT CODES:

1	COMPLETED	4	REFUSED		
2	NOT AT HOME	5	PARTLY COMPLETED	7	OTHER _____ (SPECIFY)
3	POSTPONED	6	INCAPACITATED		

LANGUAGE OF QUESTIONNAIRE: [ ] LANGUAGE OF INTERVIEW: [ ] LANGUAGE OF RESPONDENT [ ]

LANGUAGE CODES: AMARIGNA = 1, OROMIGNA = 2, TIGRIGNA = 3, OTHER = 6

TRANSLATOR USED: [ ]
(YES = 1, NO = 2)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____	[ ][ ]	[ ][ ]
DATE _____ [ ][ ]	DATE _____ [ ][ ]		

SECTION 1. RESPONDENT'S BACKGROUND AND WORK STATUS

INTRODUCTION

Hello. My name is _____ and I am working with the Population and Housing Census Commission Office (PHCCO). We are conducting a national survey about the health of women, men and children. We would very much appreciate your participation in this survey. I would like to ask you about your health. This information will help the government to plan health services. The survey usually takes about 30 minutes to complete.
Whatever information you provide will be kept strictly confidential and will not be shown to other persons.

At this time, do you want to ask me anything about the survey?
May I begin the interview now?

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME. MORNING = 1 EVENING = 2	MORNING/EVENING . . . . . [ ] HOUR . . . . . [ ][ ] MINUTES . . . . . [ ][ ]	
102	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS . . . . . [ ][ ] ALWAYS . . . . . 95 VISITOR 96	→ 104
103	Just before you moved here, did you live in a city, in a town, or in the countryside?	CITY . . . . . 1 TOWN . . . . . 2 COUNTRYSIDE 3	
104	In what month and year were you born?	MONTH . . . . . [ ][ ] DON'T KNOW MONTH . . . . . 98 YEAR . . . . . [ ][ ][ ][ ] DON'T KNOW YEAR 9998	
105	How old were you at your last birthday? COMPARE AND CORRECT 104 AND/OR 105 IF INCONSISTENT.	AGE IN COMPLETED YEARS [ ][ ]	
106	Have you ever attended school?	YES . . . . . 1 NO 2	→ 110
108	What is the highest grade you completed?	GRADE . . . . . [ ][ ] TECH./VOC. CERTIFICATE . . . . . 13 UNIVERSITY/COLLEGE DIPLOMA . . . 14 UNIVERSITY/COLLEGE DEGREE OR HIGHER 15	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
109	CHECK 108: GRADE 00-06 ☐ ↓ GRADE 07 AND ABOVE ☐ → 113		
110	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT. IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CANNOT READ AT ALL . . . . . 1 ABLE TO READ ONLY PARTS OF SENTENCE . . . . . 2 ABLE TO READ WHOLE SENTENCE . 3 NO CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED 5	
111	Have you ever participated in a Basic Education Program or any other program that involves learning to read or write (not including primary school)?	YES . . . . . 1 NO 2	
112	CHECK 110: CODE '2', '3' OR '4' CIRCLED ☐ ↓ CODE '1' OR '5' CIRCLED ☐ → 114		
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?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
114	Do you listen to the radio almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
115	Do you watch television almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
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 . . . . . ☐☐ NONE 00	→ 118
117	In the last 12 months, have you been away from your home community for more than one month at a time?	YES . . . . . 1 NO 2	
118	What is your religion?	ORTHODOX . . . . . 1 CATHOLIC . . . . . 2 PROTESTANT . . . . . 3 MOSLEM . . . . . 4 TRADITIONAL . . . . . 5 OTHER _____ 6 (SPECIFY)	
119	What is your ethnicity? RECORD THE MAJOR ETHNIC GROUP.	_____ ☐☐	
120	Are you currently working?	YES . . . . . 1 NO 2	→ 123
121	Have you done any work in the last 12 months?	YES . . . . . 1 NO 2	→ 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 _____ 96 (SPECIFY)	→201
123	What is your occupation, that is, what kind of work do you mainly do?	_____ ☐☐ _____ _____	
124	CHECK 123: WORKS IN AGRICULTURE ☐ ↓ DOES NOT WORK IN AGRICULTURE ☐		→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 FAMILY LAND . . . . . 2 RENTED LAND . . . . . 3 SOMEONE ELSE'S LAND . . . . . 4 DOESN'T WORK ON LAND 5	
126	Are you paid in cash or kind for this work or are you not paid at all?	CASH ONLY . . . . . 1 CASH AND KIND . . . . . 2 IN KIND ONLY . . . . . 3 NOT PAID 4	

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 . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 206
202	Do you have any sons or daughters that you have fathered who are now living with you?	YES . . . . . 1 NO 2	→ 204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME . . . . . [ ][ ] DAUGHTERS AT HOME . . . . . [ ][ ]	
204	Do you have any sons or daughters you have fathered who are alive but do not live with you?	YES . . . . . 1 NO 2	→ 206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE . . . . . [ ][ ] DAUGHTERS ELSEWHERE . . . [ ][ ]	
206	Have you ever fathered a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES . . . . . 1 NO 2	→ 208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD . . . . . [ ][ ] GIRLS DEAD . . . . . [ ][ ]	
208	(In addition to the children that you have just told me about), do you have any other living sons or daughters **or** sons or daughters who died who are biologically your children but who are not legally yours or do not have your name? NO ☐ ↓ YES ☐ → PROBE AND CORRECT 201-207 AS NECESSARY.		
209	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL . . . . . [ ][ ]	
210	CHECK 209: HAS HAD ONLY ONE CHILD ☐ → 213 HAS HAD MORE THAN ONE CHILD ☐ ↓ HAS NOT HAD ANY CHILDREN ☐ → 214		
211	Do the children you have fathered all have the same biological mother?	YES . . . . . 1 NO 2	→ 213

212	In all how many women have you fathered children with?	NUMBER OF WOMEN . . . . . [ ][ ]	
213	How old were you when your (first) child was born?	AGE IN YEARS . . . . . [ ][ ]	
214	Are you the primary care giver for any children?	YES . . . . . 1 NO 2	→ 301
215	Are any of these children for whom you are the primary caregiver under the age of 18?	YES . . . . . 1 NO 2	→ 301
216	Now I would like to ask you about the children who are under the age of 18 and for whom you are the primary caregiver. 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 . . . . . 1 NO . . . . . 2 UNSURE 8	

SECTION 3. CONTRACEPTION

301	Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. Which ways or methods have you heard about? FOR METHODS NOT MENTIONED SPONTANEOUSLY, ASK: Have you ever heard of (METHOD)? CIRCLE CODE 1 IN 301 FOR EACH METHOD MENTIONED SPONTANEOUSLY. THEN PROCEED DOWN COLUMN 301, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 1 IF METHOD IS RECOGNIZED, AND CODE 2 IF NOT RECOGNIZED. THEN, FOR EACH METHOD WITH CODE 1 CIRCLED IN 301, ASK 302.		302 Have you ever used (METHOD)?
01	FEMALE STERILIZATION Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
02	MALE STERILIZATION Men can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	Have you ever had an operation to avoid having any more children? YES . . . . . 1 NO 2
03	PILL Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2	
04	IUD Women can have a loop or coil placed inside them by a doctor or a nurse.	YES . . . . . 1 NO 2	
05	INJECTABLES Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES . . . . . 1 NO 2	
06	IMPLANTS (or NORPLANTS) Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for five or more years.	YES . . . . . 1 NO 2	
07	CONDOM Men can put a rubber sheath on their penis before sexual intercourse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
08	DIAPHRAGM/FOAM/JELLY Women can place a sheath and/or a suppository/tablet/jelly/cream in their vagina before intercourse.	YES . . . . . 1 NO 2	
09	STANDARD DAYS METHOD Women can use a cycle of beads to count the days they are most likely to get pregnant and avoid sexual intercourse during those days.	YES . . . . . 1 NO 2	
10	LACTATIONAL AMENORRHEA METHOD (LAM)	YES . . . . . 1 NO 2	
11	RHYTHM METHOD Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
12	WITHDRAWAL Men can be careful and pull out before climax.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
13	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES . . . . . 1 _____ (SPECIFY) _____ (SPECIFY) NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
303	In the last few months, have you discussed the practice of family planning with a health worker or health professional?	YES . . . . . 1 NO 2	
304	Now I would like to ask you about when a woman is most likely to get pregnant. From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant if she has sexual relations?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 306
305	Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods?	JUST BEFORE HER PERIOD BEGINS . . . . . 1 DURING HER PERIOD . . . . . 2 RIGHT AFTER HER PERIOD HAS ENDED . . . . . 3 HALFWAY BETWEEN TWO PERIODS . . . . . 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	
306	Do you think that a woman who is breastfeeding her baby can get pregnant?	YES . . . . . 1 NO . . . . . 2 DEPENDS . . . . . 3 DON'T KNOW 8	
307	I willl now read you some statements about contraception. Please tell me if you agree or disagree with each one.	AGREE / DISAGREE / DK	
	Contraception is women's business and a man should not have to worry about it	1 / 2 / 8	
	Women who use contraception may become promiscuous.	1 / 2 / 8	
	A woman is the one who gets pregnant so she should be the one to get sterilized.	1 / 2 / 8	

SECTION 4. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
401	Are you currently married or living together with a woman as if married?	YES, CURRENTLY MARRIED . . . . . 1 YES, LIVING WITH A WOMAN . . . . . 2 NO, NOT IN UNION 3	 → 404 → 407
402	Do you currently have one wife or more than one wife? IF ONLY ONE WIFE, ENTER '01'. IF MORE THAN ONE, ASK: How many wives do you currently have?	NUMBER OF WIVES . . . . . [ ][ ]	
403	In addition to your wife (wives), are you currently living with any other women as if married?	YES . . . . . 1 NO 2	 → 405
404	Are you living with one woman or more than one woman as if married? IF ONE LIVE-IN PARTNER, ENTER '01'. IF MORE THAN ONE, ASK: How many women are you living with as if you were married?	NUMBER OF LIVE-IN PARTNERS . . . . . [ ][ ]	

405 CHECK Q.402 AND Q.404

SUM OF Q.402 AND Q.404 = 01

Please tell me the name of your wife/partner.

RECORD THE WIFE'S/PARTNER'S NAME AND LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE. IF SHE IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'.

SUM OF Q.402 AND Q.404 > 01

Please tell me the name of each wife/partner that you live with as if married, starting with the one you lived with first.

RECORD EACH WIFE'S/PARTNER'S NAME AND LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE SEPARATELY. IF A WIFE/PARTNER IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'. CIRCLE THE APPROPRIATE CODE FOR WIFE OR PARTNER.

	WIFE/PARTNER NAME	LINE NUMBER IN HHOLD QUEST.	STATUS WIFE=1 PARTNER=2	Q.405A How old was your wife/partner on her last birthday? AGE
1	_____	[ ][ ]	1 2	[ ][ ]
2	_____	[ ][ ]	1 2	[ ][ ]
3	_____	[ ][ ]	1 2	[ ][ ]
4	_____	[ ][ ]	1 2	[ ][ ]
5	_____	[ ][ ]	1 2	[ ][ ]
6	_____	[ ][ ]	1 2	[ ][ ]
7	_____	[ ][ ]	1 2	[ ][ ]

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
406	CHECK 405: ONLY ONE WIFE/PARTNER → Have you ever been married to or lived together as if married with any other woman than your current wife/partner? MORE THAN ONE WIFE/PARTNER → Have you ever been married to or lived together as if married with any other woman in addition to those you have just mentioned?	YES . . . . . 1 NO 2	→ 409 → 410
407	Have you ever been married or lived together with a woman as if married?	YES . . . . . 1 NO 2	 → 412
408	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED . . . . . 1 DIVORCED . . . . . 2 SEPARATED 3	
409	In total, how many women have you been married to or lived together with as if married in your whole life?	NUMBER . . . . . [ ][ ]	
409A	CHECK 405 AND 409: ONLY ONE WIFE/PARTNER TOTAL IN 405 AND 409 → MORE THAN ONE WIFE/PARTNER IN 405 AND/OR 409 →		→ 410A
410	In what month and year did you start living with your wife/partner?	MONTH . . . . . [ ][ ] DON'T KNOW MONTH 98	
410A	Now I would like to ask about when you started living with your first wife/partner. In what month and year was that?	YEAR . . . . . [ ][ ][ ][ ] DON'T KNOW YEAR 9998	→ 412
411	How old were you when you first started living with her?	AGE . . . . . [ ][ ]	
412	Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family life issues. How old were you when you had sexual intercourse for the very first time (if ever)?	NEVER . . . . . 00 AGE IN YEARS . . . . . [ ][ ] FIRST TIME WHEN STARTED LIVING WITH (FIRST) WIFE/PARTNER 95	 → 414 → 414
413	Do you intend to wait until you get married to have sexual intercourse for the first time?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/UNSURE 8	→ 443
414	CHECK 105: 15-24 YEARS OLD → 25-59 YEARS OLD →		→ 419
415	The first time you had sexual intercourse, was a condom used?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/DON'T REMEMBER . . . 8	
419	When was the last time you had sexual intercourse? RECORD 'YEARS AGO' ONLY IF LAST INTERCOURSE WAS ONE OR MORE YEARS AGO. IF 12 MONTHS OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO . . . . . 1 [ ][ ] WEEKS AGO . . . . . 2 [ ][ ] MONTHS AGO . . . . . 3 [ ][ ] YEARS AGO . . . . . 4 [ ][ ]	 → 428

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER
420	The last time you had sexual intercourse with this (second) person, was a condom used?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 422)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 422)
421	Did you use a condom every time you had sexual intercourse with this person in the last 12 months?	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
422	What was your relationship to this person with whom you had sexual intercourse? IF BOYFRIEND/GIRLFRIEND: Were you living together as if married? IF YES, CIRCLE '02' IF NO, CIRCLE '03'	SPOUSE . . . . . 01 (SKIP TO 424) LIVE-IN PARTNER . . . . 02 BOYFRIEND/GIRLFRIEND NOT LIVING WITH RESPONDENT . . . . 03 CASUAL ACQUAINTANCE . . . . 04 COMMERCIAL SEX WORKER . . . . 05 OTHER _____96 (SPECIFY)	SPOUSE . . . . . 01 (SKIP TO 424) LIVE-IN PARTNER . . . . 02 BOYFRIEND/GIRLFRIEND NOT LIVING WITH RESPONDENT . . . . 03 CASUAL ACQUAINTANCE . . . . 04 COMMERCIAL SEX WORKER . . . . 05 OTHER _____96 (SPECIFY)
423	For how long (have you had/did you have) a sexual relationship with this person? IF ONLY HAD SEXUAL RELATIONS WITH THIS PERSON ONCE, RECORD '01' DAYS.	DAYS . . . 1 [ ][ ] MONTHS . 2 [ ][ ] YEARS . . . 3 [ ][ ]	DAYS . . . 1 [ ][ ] MONTHS . 2 [ ][ ] YEARS . . . 3 [ ][ ]
424	The last time you had sexual intercourse with this (second) person, did you or this person drink alcohol?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 426)	YES . . . . . 1 NO . . . . . 2 (SKIP TO 426)
425	Were you or your partner drunk at that time? IF YES: Who was drunk?	RESPONDENT ONLY 1 PARTNER ONLY . . . 2 RESPONDENT AND PARTNER BOTH . 3 NEITHER 4	RESPONDENT ONLY 1 PARTNER ONLY . . . 2 RESPONDENT AND PARTNER BOTH . 3 NEITHER 4
426	Apart from [this person/these two people], have you had sexual intercourse with any other person in the last 12 months?	YES . . . . . 1 (GO BACK TO 420 IN NEXT COLUMN) NO . . . . . 2 (SKIP TO 428)	YES . . . . . 1 (GO TO 427 IN NEXT PAGE) NO . . . . . 2 (SKIP TO 428)

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? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.'	NUMBER OF PARTNERS LAST 12 MONTHS . . . . . [ ][ ] DON'T KNOW 98	
428	In total, with how many different people have you had sexual intercourse in your lifetime? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.'	NUMBER OF PARTNERS IN LIFETIME . . . . . [ ][ ] DON'T KNOW 98	
429	CHECK 422 ALL COLUMNS: AT LEAST ONE PARTNER A COMMERCIAL SEX WORKER [ ] → 431 NO PARTNERS ARE COMMERCIAL SEX WORKERS [ ] ↓ Q. 422 NOT ASKED [ ] → 443		
430	In the last 12 months, did you pay anyone in exchange for sex?	YES . . . . . 1 NO 2	→ 433
431	The last time you paid someone in exchange for sex, was a condom used?	YES . . . . . 1 NO 2	→ 433
432	Was a condom used every time you paid someone in exchange for sex in the last 12 months?	YES . . . . . 1 NO . . . . . 2 DK 8	
433	CHECK 420 COLUMN 1 (CONDOM USE WITH LAST SEXUAL PARTNER) YES [ ] ↓ NO/NOT ASKED [ ] → 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 PARTNER . . . . . 2 SOMEONE ELSE 3	
435	What brand did you use?	BRAND NAME _____ (SPECIFY) [ ][ ] DON'T KNOW 98	
436	How much did you (your partner) pay when getting the condom?	COST . . . . . [ ][ ][ ]. [ ][ ] FREE . . . . . 995 DON'T KNOW 998	
437	How many condoms did you (your partner) get the last time?	NUMBER . . . . . [ ][ ] DON'T KNOW 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
438	From where did you (your partner) obtain the condom the last time? IF SOURCE IS HOSPITAL, HEALTH CENTER OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE(S)) Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL . . . . . A GOVT. HEALTH CENTER . . . . . B GOVT. HEALTH POST . . . . . C GOVT. HEALTH STATION/CLINIC D CBD . . . . . E OTHER PUBLIC _____ F (SPECIFY) NON GOVT (NGO) NGO HEALTH FACILITY . . . . . G CBD/CBRHA . . . . . H OTHER NGO _____ I (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ DOCTOR . . . . . J PHARMACY . . . . . K OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER SOURCE DRUG VENDOR . . . . . M SHOP . . . . . N FRIEND/RELATIVE . . . . . O OTHER _____ X (SPECIFY)	
439	CHECK 302 (02) USING MALE STERILIZATION NO ☐ YES ☐ → 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?	YES . . . . . 1 NO . . . . . 2 DK 8	→ 442
441	What method did you (your partner) use? PROBE: Did you use any other method to prevent pregnancy?	FEMALE STERILIZATION . . . . . A MALE STERILIZATION . . . . . B PILL . . . . . C IUD . . . . . D INJECTABLES . . . . . E IMPLANTS . . . . . F CONDOM . . . . . G DIAPHRAGM/FOAM/JELLY . . . . . H STANDARD DAYS METHOD . . . . . I LACTATIONAL AMEN. METHOD . . . . . J RHYTHM METHOD . . . . . K WITHDRAWAL . . . . . L OTHER _____ X (SPECIFY)	
442	CHECK 420 COLUMN 1 (CONDOM USE WITH LAST SEXUAL PARTNER) NO/NOT ASKED ☐ YES ☐ → 447		
443	CHECK 301 (07) KNOWS MALE CONDOM YES ☐ NO ☐ → 447		
444	Do you know of a place where a person can get condoms?	YES . . . . . 1 NO 2	→ 447

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
445	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL . . . . . A GOVT. HEALTH CENTER . . . . . B GOVT. HEALTH POST . . . . . C GOVT. HEALTH STATION/CLINIC D CBD . . . . . E OTHER PUBLIC _____ F (SPECIFY) NON GOVT (NGO) NGO HEALTH FACILITY . . . . . G CBD/CBRHA . . . . . H OTHER NGO _____ I (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ DOCTOR . . . . . J PHARMACY . . . . . K OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER SOURCE DRUG VENDOR . . . . . M SHOP . . . . . N FRIEND/RELATIVE . . . . . O OTHER _____ X (SPECIFY)	
446	If you wanted to, could you yourself get a condom?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/UNSURE 8	
447	I will now read you some statements about the male condom. Please tell me if you agree or disagree with each statement. Condoms diminish a man's sexual pleasure. Condoms diminish a woman's pleasure. A condom is very inconvenient to use. A condom can be reused. Buying condoms is embarrasing.	YES NO DK DIMINISH MAN'S PLEASUE . 1 2 8 DIMINISH WOMAN'S PLEASURE . . . . . 1 2 8 INCONVENIENT . . . . . 1 2 8 REUSED . . . . . 1 2 8 EMBARRASING TO BUY . . . 1 2 8	
448	Some men are circumcised. Are you circumcised?	YES . . . . . 1 NO 2	

SECTION 5. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	CHECK 401 and 405: IN Q. 405 MARRIED TO OR LIVING WITH ONE WOMAN ↓ IN Q. 405 MARRIED TO AND/OR LIVING WITH MORE THAN ONE WOMAN Q. 401: NOT IN UNION		→ 502A → 505
502 502A	Is your wife/partner currently pregnant? IF MORE THAN ONE WIFE/PARTNER, ASK: Are any of your wives/partners currently pregnant?	YES . . . . . 1 NO . . . . . 2 UNSURE 8	
503	CHECK 502: WIFE NOT PREGNANT OR UNSURE ↓ Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children? WIFE PREGNANT ↓ Now I have some questions about the future. After the child you are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE (A/ANOTHER) CHILD . . . . . 1 NO MORE/NONE . . . . . 2 SAYS WIFE/WIVES CAN'T GET PREGNANT . . . . . 3 UNDECIDED/DON'T KNOW 8	→ 505
504	CHECK 502: WIFE NOT PREGNANT OR UNSURE ↓ How long would you like to wait from now before the birth of (a/another) child? WIFE PREGNANT ↓ After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS . . . . . 1 [ ][ ] YEARS . . . . . 2 [ ][ ] SOON/NOW . . . . . 993 AFTER MARRIAGE . . . . . 995 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	
505	CHECK 202 AND 204: HAS LIVING CHILDREN ↓ If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ↓ If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NONE . . . . . 00 NUMBER . . . . . [ ][ ] OTHER _____ 96 (SPECIFY)	→ 507 → 507
506	How many of these children would you like to be boys, how many would you like to be girls and for how many would the sex not matter?	BOYS GIRLS EITHER NUMBER [ ][ ] [ ][ ] [ ][ ] OTHER _____ 96 (SPECIFY)	
507	In the last few months have you heard about family planning: On the radio? On the television? In a newspaper or magazine? In a pamphlet/poster/leaflets/booklets? At a community event?	YES NO RADIO . . . . . 1 2 TELEVISION . . . . . 1 2 NEWSPAPER OR MAGAZINE . . . 1 2 PAMPHLET, ETC. . . . . 1 2 COMMUNITY EVENT 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
508	CHECK 401 and 405: IN Q. 405 MARRIED TO OR LIVING WITH ONE WOMAN IN Q. 405 MARRIED TO AND/OR LIVING WITH MORE THAN ONE WOMAN Q. 401: NOT IN UNION		509A 514
509 509A	Is your wife/partner currently using a method of family planning? IF MORE THAN ONE WIFE/PARTNER, ASK: Are any of your wives/partners currently using a method of family planning?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	511
510	Would you say that using contraception is mainly your decision, mainly your wife's/partner's decision, or did you both decide together?	MAINLY RESPONDENT . . . . . 1 MAINLY WIFE/PARTNER . . . . . 2 JOINT DECISION . . . . . 3 OTHER _____ 6 (SPECIFY)	
511	Do you think your wife/partner wants the same number of children that you want, or does she want more or fewer than you want?	SAME NUMBER . . . . . 1 MORE CHILDREN . . . . . 2 FEWER CHILDREN . . . . . 3 DON'T KNOW 8	
512	Who decides how the money you earn will be used: mainly you, mainly your wife/partner, or you and your wife/partner jointly?	RESPONDENT . . . . . 1 WIFE/PARTNER . . . . . 2 RESPONDENT AND WIFE/PARTNER JOINTLY . . . . . 3 RESPONDENT DOESN'T BRING IN ANY MONEY . . . . . 4 OTHER 6	
513	Would you say that the money that you bring into the household is more than what your wife/partner brings in, less than what she brings in, or about the same?	MORE THAN HER . . . . . 1 LESS THAN HER . . . . . 2 ABOUT THE SAME . . . . . 3 WIFE/PARTNER DOESN'T BRING IN ANY MONEY . . . . . 4 DON'T KNOW 8	
514	Now I would like to ask you a few questions regarding relationships between men and women. In a couple, who do you think should have the greater say in each of the following decisions: the husband, the wife or both equally:	HUSBAND / WIFE / BOTH EQUALLY / DON'T KNOW, DEPENDS	
	making large household purchases?	1 / 2 / 3 / 8	
	making small daily household purchases?	1 / 2 / 3 / 8	
	deciding when to visit family, friends or relatives?	1 / 2 / 3 / 8	
	deciding what to do with the money she earns for her work?	1 / 2 / 3 / 8	
	deciding how many children to have and when to have them?	1 / 2 / 3 / 8	
515	Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations:	YES / NO / DK	
	If she goes out without telling him?	GOES OUT . . . . . 1 / 2 / 8	
	If she neglects the children?	NEGL. CHILDREN . . . 1 / 2 / 8	
	If she argues with him?	ARGUES . . . . . 1 / 2 / 8	
	If she refuses to have sex with him?	REFUSES SEX . . . . . 1 / 2 / 8	
	If she burns the food?	BURNS FOOD . . . . . 1 / 2 / 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
516	Husbands and wives do not always agree on everything. Please tell me if you think a wife is justified in refusing to have sex with her husband when: She knows her husband has a sexually transmitted disease? She knows her husband has sex with other women? She is tired or not in the mood?	YES NO DK HAS STD . . . . . 1 2 8 OTHER WOMEN . . . . . 1 2 8 TIRED/NOT IN MOOD . . . 1 2 8	
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... Get angry and reprimand her? Refuse to give her money or other means of financial support? Use force and have sex with her even if she doesn't want to? Go and have sex with another woman?	YES NO DON'T KNOW, DEPENDS 1 2 8 1 2 8 1 2 8 1 2 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?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
519	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? IF YES: How many injections have you had? IF NUMBER OF INJECTIONS IS GREATER THAN 90, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . [ ][ ] NONE 00	→ 523
520	Among these injections, how many were administered by a doctor, a nurse, a pharmacist, a dentist, or any other health worker? IF NUMBER OF INJECTIONS IS GREATER THAN 90, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . [ ][ ] NONE 00	→ 523
521	The last time you had an injection given to you by a health worker, where did you go to get the injection?	PUBLIC SECTOR GOVERNMENT HOSPITAL/CLINIC . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. HEALTH POST . . . . . 13 COMM. HEALTH AGENT . . . . . 14 OTHER PUBLIC _____ 16 (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY 21 PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ DOCTOR . . . . . 31 DENTAL CLINIC/OFFICE . . . . . 32 PHARMACY . . . . . 33 OFFICE OR HOME OF NURSE/ HEALTH WORKER . . . . . 34 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER PLACE AT HOME . . . . . 41 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
522	Did the person who gave you that injection take the syringe and needle from a new, unopened package?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
523	Do you currently smoke cigarettes?	YES . . . . . 1 NO 2	→ 525
524	In the last 24 hours, how many cigarettes did you smoke?	CIGARETTES . . . . . [ ][ ]	
525	Do you currently smoke or use any other type of tobacco like gaya, shisha or suret?	YES . . . . . 1 NO 2	→ 527
526	What (other) type of tobacco do you currently smoke or use? RECORD ALL MENTIONED	PIPE . . . . . A CHEWING TOBACCO . . . . . B SNUFF/SURET . . . . . C SHISHA . . . . . D GAYA . . . . . E OTHER _____ X (SPECIFY)	
527	Have you ever heard of an illness called tuberculosis or TB?	YES . . . . . 1 NO 2	→ 601
528	How does tuberculosis spread from one person to another? PROBE: Any other ways? RECORD ALL MENTIONED.	THROUGH THE AIR WHEN COUGHING OR SNEEZING . . . . . A THROUGH SHARING UTENSILS . . . . . B THROUGH TOUCHING A PERSON WITH TB . . . . . C THROUGH FOOD . . . . . D THROUGH SEXUAL CONTACT . . . . . E THROUGH MOSQUITO BITES . . . . . F OTHER _____ X (SPECIFY) DON'T' KNOW . . . . . Z	
529	Can tuberculosis be cured?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
530	If a member of your family got tuberculosis, would you want it to remain a secret or not?	YES, REMAIN A SECRET . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE/ DEPENDS 8	

SECTION 6. HIV/AIDS AND OTHER SEXUALLY TRANSMITTED INFECTIONS

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 . . . . . 1 NO 2	→ 634
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 . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
603	Can people get the AIDS virus from mosquito bites?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
604	Can people reduce their chances of getting the AIDS virus by using a condom every time they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
605	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
606	Can people reduce their chance of getting the AIDS virus by abstaining from sexual intercourse?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
607	Can people get the AIDS virus because of the curse of God or other supernatural means?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
608	Is there anything else a person can do to avoid or reduce the chances of getting the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 610
609	What can a person do? Anything else? RECORD ALL WAYS MENTIONED.	ABSTAIN FROM SEX . . . . . A USE CONDOMS . . . . . B LIMIT SEX TO ONE PARTNER/STAY FAITHFUL TO ONE PARTNER . . . . . C LIMIT NUMBER OF SEXUAL PARTNERS . . . . . D AVOID SEX WITH PROSTITUTES . . . E AVOID SEX WITH PERSONS WHO HAVE MANY PARTNERS . . . . . F AVOID SEX WITH HOMOSEXUALS . . . G AVOID SEX WITH PERSONS WHO INJECT DRUGS . . . . . H AVOID BLOOD TRANSFUSIONS . . . . . I AVOID INJECTIONS . . . . . J AVOID SHARING RAZORS/BLADES . K AVOID KISSING . . . . . L AVOID MOSQUITO BITES . . . . . M SEEK PROTECTION FROM TRADITIONAL PRACTITIONER . . . N OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
610	Is it possible for a healthy-looking person to have the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
611	Can the virus that causes AIDS be transmitted from a mother to her baby: During pregnancy? During delivery? By breastfeeding?	YES NO DK DURING PREG. . . . . 1 2 8 DURING DELIVERY . . . 1 2 8 BREASTFEEDING . . . 1 2 8	
612	CHECK 611: AT LEAST ONE 'YES' ☐ OTHER ☐		→ 614
613	Are there any special medications that a doctor or a nurse can give to a woman infected with the AIDS virus to reduce the risk of transmission to the baby?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
614	Is there any special medication that people infected with the AIDS virus can get from a doctor or a nurse?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
615	I don't want to know the results, but have you ever been tested to see if you have the AIDS virus?	YES . . . . . 1 NO 2	→ 620
616	When was the last time you were tested?	LESS THAN 12 MONTHS AGO . . . . . 1 12 - 23 MONTHS AGO . . . . . 2 2 OR MORE YEARS AGO 3	
617	The last time you had the test, did you yourself ask for the test, was it offered to you and you accepted, or was it required?	ASKED FOR THE TEST . . . . . 1 OFFERED AND ACCEPTED . . . . . 2 REQUIRED 3	
618	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	
619	Where was the test done? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVERNMENT HOSPITAL/CLINIC 11 GOVT. HEALTH CENTER . . . . . 12 VCT CENTER . . . . . 13 GOVT. HEALTH POST . . . . . 14 FAMILY PLANNING CLINIC . . . . . 15 STAND ALONE VCT CENTER 16 OTHER PUBLIC _____ 17 (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY 21 STAND ALONE VCT CENTER . . . . . 22 PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ DOCTOR . . . . . 31 STAND ALONE VCT CENTER . . . . . 32 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	→ 622
620	Do you know of a place where people can go to get tested for the virus that causes AIDS?	YES . . . . . 1 NO 2	→ 622

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
621	Where is that? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE) Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVERNMENT HOSPITAL/CLINIC A GOVT. HEALTH CENTER . . . . . B VCT CENTER . . . . . C GOVT. HEALTH POST . . . . . D FAMILY PLANNING CLINIC . . . . . E STAND ALONE VCT CENTER . . . . . F OTHER PUBLIC _____ G (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY H STAND ALONE VCT CENTER . . . . . I PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ DOCTOR . . . . . J STAND ALONE VCT CENTER . . . . . K OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER _____ M (SPECIFY)	
622	Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
623	If a member of your family got infected with the AIDS virus, would you want it to remain a secret or not?	YES, REMAIN A SECRET . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
624	If a relative of yours became sick with the virus that causes AIDS, would you be willing to care for her or him in your own household?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
625	In your opinion, if a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in the school?	SHOULD BE ALLOWED . . . . . 1 SHOULD NOT BE ALLOWED . . . . . 2 DK/NOT SURE/DEPENDS 8	
626	Do you personally know someone who is suspected to have the AIDS virus or who has the AIDS virus?	YES . . . . . 1 NO 2	→ 630
627	Do you personally know someone who has been denied health services in the last 12 months because he or she is suspected to have the AIDS virus or has the AIDS virus?	YES . . . . . 1 NO 2	
628	Do you personally know someone who has been denied involvement in social events, religious services, or community events in the last 12 months because he or she is suspected to have the AIDS virus or has the AIDS virus?	YES . . . . . 1 NO 2	
629	Do you personally know someone who has been verbally abused or teased in the last 12 months because he or she is suspected to have the AIDS virus or has the AIDS virus?	YES . . . . . 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
630	Do you agree or disagree with the following statement: People with the AIDS virus should be ashamed of themselves.	AGREE . . . . . 1 DISAGREE . . . . . 2 DON'T KNOW/NO OPINION 8	
631	Do you agree or disagree with the following statement: People with the AIDS virus should be blamed for bringing the disease into the community.	AGREE . . . . . 1 DISAGREE . . . . . 2 DON'T KNOW/NO OPINION 8	
632	Should children age 12-14 be taught about using a condom to avoid AIDS?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
633	Should children age 12-14 be taught to wait until they get married to have sexual intercourse in order to avoid AIDS?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
634	CHECK 601: HEARD ABOUT AIDS ☐ → Apart from AIDS, have you heard about other infections that can be transmitted through sexual contact? NOT HEARD ABOUT AIDS ☐ → Have you heard about infections that can be transmitted through sexual contact?	YES . . . . . 1 NO 2	
635	CHECK 412: HAS HAD SEXUAL INTERCOURSE ☐ → HAS NOT HAD SEXUAL INTERCOURSE ☐ →		643
636	CHECK 634: HEARD ABOUT INFECTION TRANSMITTED THROUGH SEXUAL CONTACT ☐ → HAS NOT HEARD ABOUT INFECTION TRANSMITTED THROUGH SEXUAL CONTACT ☐ →		638
637	Now I would like to ask you some questions about your health in the last 12 months. During the last 12 months, have you had a disease which you got through sexual contact?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
638	Sometimes men experience a bad smelling abnormal genital discharge. During the last 12 months, have you had a bad smelling abnormal genital discharge?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
639	Sometimes men have a genital sore or ulcer. During the last 12 months, have you had a genital sore or ulcer?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
640	CHECK 637, 638, AND 639: HAS HAD AN INFECTION (ANY 'YES') ☐ → HAS NOT HAD AN INFECTION OR DOES NOT KNOW ☐ →		643
641	The last time you had (PROBLEM FROM 637/638/639), did you seek any kind of advice or treatment?	YES . . . . . 1 NO 2	→ 643

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
642	Where did you go? Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVERNMENT HOSPITAL/CLINIC . A GOVT. HEALTH CENTER . . . . . B VCT CENTER . . . . . C GOVT. HEALTH POST . . . . . D FAMILY PLANNING CLINIC . . . . . E STAND ALONE VCT CENTER . . . . . F OTHER PUBLIC _____ G (SPECIFY) NON-GOVT. (NGO) HEALTH FACILITY H STAND ALONE VCT CENTER . . . . . I PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ DOCTOR . . . . . J STAND ALONE VCT CENTER . . . . K PHARMACY . . . . . L OTHER PRIVATE MEDICAL _____ M (SPECIFY) OTHER SOURCE DRUG VENDOR . . . . . N SHOP . . . . . O TRADITIONAL HEALER . . . . . P OTHER _____ X (SPECIFY)	
643	RECORD THE TIME. MORNING = 1 EVENING = 2	MORNING/EVENING . . . . . [ ] HOUR . . . . . [ ][ ] MINUTES . . . . . [ ][ ]	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF THE SUPERVISOR: _____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR: _____ DATE: _____