Eritrea

Population and Health Survey 2010

THE STATE OF ERITREA

Eritrea Population and Health Survey 2010

National Statistics Office
Asmara, Eritrea

Fafo Institute For Applied International Studies
Oslo, Norway

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This report summarizes the findings of the 2010 Eritrea Population and Health Survey (EPHS) carried out by the National Statistics Office. Financial support for the survey was provided by the Norwegian Ministry of Foreign Affairs (through NORAD), UNICEF, UNFPA, UNDP, WHO and the Ministry of Health. Fafo AIS and Kenya Medical Research Institute provided technical assistance for the survey. The opinions expressed herein are those of the authors and do not necessarily reflect the views of the funders.

Additional information about the EPHS may be obtained from the National Statistics Office P.O. Box 5838, Asmara, Eritrea (telephone: 291-1128034/7153234; e-mail:ainom.berhane@nso.gov.er).

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MILLENNIUM DEVELOPMENT GOAL INDICATORS

Goal	Indicator	Male	Female	Total
1. Eradicate extreme poverty and hunger	4. Prevalence of underweight children under 5 years of age[1]	38.1	39.4	38.8
2. Achieve universal primary education	6. Net enrolment ratio in primary education[2]	56.6	55.7	56.2
	8. Literacy rate of 15-24 year-olds[3]	89.4	81.5	85.2
3. Promote gender equality and empower women	9. Ratio of girls to boys in primary, middle, and secondary education	na[4]	na	89.2
	9A. Ratio of girls to boys in primary education	na	na	96.4
	9B. Ratio of girls to boys in middle education	na	na	88.1
	9C. Ratio of girls to boys in secondary education	na	na	78.0
	10. Ratio of literate women to men, 15-24 year olds	na	na	91.2
	11. Share of women in wage employment in the non-agricultural sector[5]	na	na	24.0
4. Reduce Child Mortality	13. Under-five mortality rate	75	61	63
	14. Infant mortality rate	50	37	42
	15. Percentage of 1 year-old children immunized against measles	91.6	91.3	91.4
5. Improve maternal health	16. Maternal Mortality Ratio (per 100,000 live births)	na	na	486
	17. Percentage of births attended by skilled health personnel[6]	34.4	33.8	34.1
6. Combat HIV/AIDS, malaria, and other diseases	19. Percentage of current users of contraception who are using condoms (any contraceptive method, currently married women and men age 15-49)	29.2	10.3	18.4
	19A. Condom use at last high-risk sex[7]	91.9	na[8]	na
	19B. Percentage of population aged 15-24 years with comprehensive correct knowledge of HIV/AIDS[9]	33.8	24.7	27.9
	19C. Contraceptive prevalence rate (Currently married women and men age 15-49)	16.3	8.4	10.6
	20. Ratio of school attendances of orphans to school attendance of non-orphans aged 10-14 years	89.5	104.1	95.3
	22A. Percentage of children under five sleeping under Insecticide Treated Net (ITN)[10]	28.4	27.4	27.9
	22A. Percentage of children under five in malaria regions (Anseba, Gash-Barka, Southern and Northern Red Sea)	34.4	33.8	34.1
	22B. Percentage of children under five with fever who are appropriately treated[11] [12]	1.8	1.2	1.5
		Urban	**Rural**	**Total**
7. Ensure environmental sustainability	29. Percentage of population using solid fuels[13]	40.4	95.5	76.3
	30. Percentage of population with sustainable access to an improved water source[14]	72.9	49.9	57.9
	31. Percentage of population with access to improved sanitation[15]	25.8	3.5	11.3

[1] Proportion of children age 0-59 months who are below -2 standard deviation (SD) from the median of the WHO Growth Standards in weight-for-age
[2] EPHS data are based on reported attendance, not enrolment
[3] Refers to respondents who attended middle school or higher or who can read a whole or part of a sentence
[4] na=not applicable
[5] Wage employment includes respondents who received wages in cash or in cash and in kind
[6] Among births in the five years preceding the survey
[7] 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
[8] There are very few females who have experienced high risk sex during the 12 months before the survey and the percentage calculated will be misleading.
[9] 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 Eritrea are that AIDS can be transmitted through mosquito bites and that a person can become infected with the AIDS virus by eating from the same plate as someone who is infected.
[10] The survey was conducted during non-malaria season from first of January to first week of July, 2010
[11] The survey was conducted during non-malaria season from first of January to first week of July, 2010
[12] Malarial treatment is measured here as the percentage of children 0-59 months of age who were ill with fever in the two weeks before the interview who received anti-malarial medication
[13] Solid fuels include: Coal/Lignite, Charcoal, Wood/ Straw/ Shrubs/ Grass, Animal dung
[14] Improves source of drinking water include: Piped water into residence/ yard/ plot, Public/ Private tap, Protected dug well (inside residence/ yard/ plot or public), Bottled water, and Rain water
[15] Improved sanitation include: Flush/ pour flush to piped sewer system, Flush/ pour flush to septic tank, Flush/ pour flush to a pit latrine, Ventilated improved pit (VIP)

PREFACE

The 2010 Eritrea Population and Health Survey (EPHS2010) was designed as a follow-up to the 1995 and 2002 DHS surveys. The major objective of this survey, similar to the previous surveys, was to collect and analyze data on fertility, mortality, family planning, and health. Compared with the 1995 and 2002 EDHS, the present survey is expanded in scope and includes dried blood samples (DBS) collection for HIV testing and information on maternal morbidity and mortality. Thus, the EPHS2010 will not only update the information from the EDHS1995 and EDHS2002, but also will provide findings on some new topics of interest.

The findings of the EPHS2010 presented in this report provide up-to-date and reliable information on a number of key topics of interest to planners, policymakers, program managers, and researchers that will guide the planning, implementation, monitoring, and evaluation of population and health programs in Eritrea. In addition to the estimates at the national level, estimates for key indicators relating to fertility, mortality, and health are provided for all six zobas and for urban and rural areas.

The EPHS2010 results present evidence of a decline in early childhood mortality as well as a substantial increase in the level of child immunization coverage since the EDHS1995 survey. Prevalence of HIV is low, below one percent, and knowledge of HIV/AIDS remains high in Eritrea. The survey findings also indicate a substantial decline in maternal death compared to the EDHS1995. There is, however, still a wide gap between knowledge and use of family planning.

The National Statistics Office (NSO) acknowledges the efforts of a number of organizations and individuals who contributed immensely to the successful completion of the EPHS2010 and the finalization of this report. NSO is particularly thankful to the Norwegian Government, UNFPA, UNICEF, UNDP, WHO, and UNAID for funding the survey and Fafo AIS of Norway for providing technical assistance throughout. The office would like to express its gratitude to the Ministry of Health (MOH) for close cooperation in the whole operation and for their significant technical and logistical inputs through the National Health Laboratory Department for the DBS management and processing.

Special thanks go to KEMRI of Kenya for their contribution in training and setting up of the whole procedure for the DBS component. For continuity and comparison in time the EPHS2010 used the wealth of sound methodologies and procedures used in the previous surveys and hence the office is grateful for the ORC Macro International contribution. We also express our gratitude to the endeavors of government officials at all levels of administration that supported the survey. High appreciation and commendation goes to all the EPHS2010 field personnel for the commitment they showed to delivering high-quality results in difficult working conditions. We acknowledge with gratitude the NSO staff who made the survey successful through commitment and a spirit of team work.

Last but not least, special gratitude goes to all of the respondents who generously gave their valuable time to provide information that forms the basis of this report.

Ainom Berhane
Acting Head
National Statistics Office
September 2013

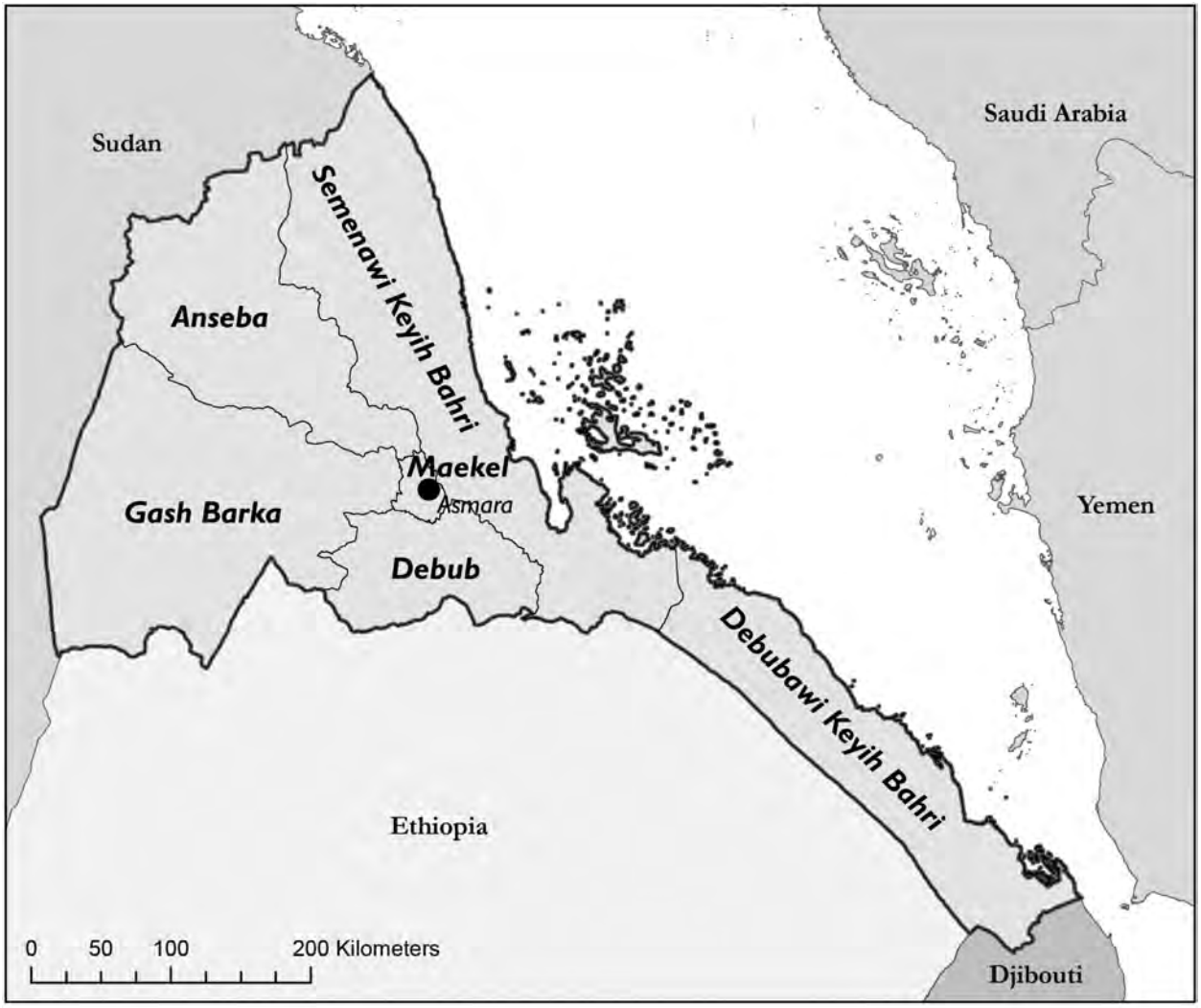
ACRONYMS

1q0	Infant mortality
4q1	Child mortality
5q0	Under-five mortality
ABC	Abstinence, Be faithful, Condom
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Clinics
ANC	Antenatal Care
ANC SSSS	Antenatal Care Sentinel Site Surveillance Survey
ARI	Acute Respiratory Infection
ART	Antiretroviral Therapy
ASFR	Age Specific Fertility Rate
ASAR	Age-Specific Attendance Rates
BCG	Bacille Calmette Guerin
BMI	Body Mass Index
CBR	Crude Birth Rate
CDC	Centre for Disease Control and prevention
CPR	Contraceptive Prevalence Rate
DBS	Dried Blood Sample
DEFT	Design Effect
DHS	Demographic and Health Survey
DK	Don't know
DPT	Diphtheria, Pertussis, Tetanus
EDHS	Eritrea Demographic and Health Survey
ELISA	Enzyme-Linked Immunosorbant Assay
EPHS	Eritrea Population and Health survey
EPI	Expanded Program on Immunization
FGC	Female Genital Cutting
FGM	Female Genital Mutilation
GAR	Gross Attendance Ratio
GBV	Gender-based violence
GFR	General Fertility Rate
GPI	Gender Parity Index
HepB	Hepatitis B
Hib	Haemophilus influenzae vaccines.
HIV	Human Immune Deficiency Virus

HIV-1	Human Immune Deficiency Virus type 1
HIV-2	Human Immune Deficiency Virus type 2
HMIS	Health Information System
HSSP	Health Sector Strategic Plan
ITN	Insecticide Treated Nets
IUD	Intra Uterine Device
IYCF	Infant and Young Child Feeding
KMRI	Kenya Medical Research Institute
LAM	Lactational Amenorrhea Method
LLIN	Long Lasting Insecticidal Nets
LPG	Liquid Petroleum Gas
M&E	Monitoring and Evaluation
MCH	Millennium Development Goal
MDG	Mother and Child Health
MIS	Malaria Indicator Survey
MLWE	Ministry of Land, Water and Environment
MMM	Maternal Morbidity and Mortality
MMR	Maternal Mortality Rate
MND	Ministry of National Development
MoH	Ministry of Health
MOHE	Ministry of Health Eritrea
MTCT	Mother to Child Transmission of HIV
NAR	Net Attendance Ratio
NCHS	National Centre for Health Statistics
NN	Neonatal mortality
NSO	National Statistics Office
ORC	Opinion Research Company
ORT	Oral Rehydration Therapy
PAHO	Pan American Health Organization
PGME	Post Graduate Medical Education
PHC	Primary Health Care
PNN	Post-neonatal mortality
PPM	Part Per Million
PSU	Primary Sampling Unit
RE	Relative Error
RHF	Recommended Home Fluids
RVF	Recto-Vaginal Fistula
SA	Supervision Area

SD	Standard Deviation
SSU	Secondary Sampling Unit
STD	Sexually Transmitted Diseases
STI	Sexually Transmitted Infections
TB	Tuberculosis
TBA	Traditional birth attendants
TFR	Total Fertility Rate
TT	Tetanus toxoid vaccine
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
VAD	Vitamin A Deficiency
VCT	Voluntary Counselling & Testing
VVF	Vesico-Vaginal Fistula
WHO	World Health Organization
WMR	World Malaria Report
Z-Score	Standard Deviation

ERITREA


Sudan
Saudi Arabia
Yemen
Ethiopia
Djibouti
Semenawi Keyih Bahri
Debubawi Keyih Bahri
Anseba
Gash Barka
Debub
Maekel
Asmara
0 50 100 200 Kilometers

INTRODUCTION 1

The 2010 Eritrea Population and Health Survey (EPHS2010) is the third in a series that started in 1995. The main objective of the survey, similar to the previous two surveys (EDHS1995, EDHS2002), has been to collect and provide up-to-date demographic and health data for policy makers, planners, researchers, and program managers to use in the planning, implementation, monitoring, and evaluation of population and health programs in the country. Compared to the previous two surveys, the present survey is expanded in scope. It includes an HIV module, questions on maternal morbidity and mortality, materials on malaria, data on unsafe sex as well as questions on gender issues. Compared to the EDHS2002, this survey also added a questionnaire for men to collect demographic and health data.

The National Statistics Office (NSO), in collaboration with the Ministry of Health (MoH), conducted the survey. Financial assistance was provided by the Norwegian Government, UNFPA, UNICEF, UNDP, UNAIDS, and WHO. Fafo Institute for Applied International Studies (Fafo AIS) and KEMRI (Kenya Medical Research Institute) provided technical assistance to the survey.

1.1 Geography, History, and the Economy

1.1.1 Geography

Eritrea is situated in the Horn of Africa and lies north of the equator between latitudes 12°22′ N and 18°02′ N, and longitudes 36°26′21″ E and 43°13′ E. It has an area of 122,000 square kilometers. To the east, the country is bordered by the Red Sea, extending 1,212 kilometers from Ras Kasar in the north to Dar Elwa in the southeast. Djibouti borders Eritrea in the southeast, Ethiopia in the south, and the Sudan in the north and west. Administratively, the country is divided into six *zobas* (regions): Anseba, Debub, Debubawi Keih Bahri, Gash-Barka, Maekel, and Semenawi Keih Bahri (see map).

Eritrea is a land of contrasts with land rising from below sea level to 3,000 meters above sea level. There are three major physiographic zones: the Western Lowlands, the Central and Northern Highlands, and the Eastern Lowlands (also referred to as the Coastal Plains). Temperature varies with altitude: the mean annual temperature ranges from 16°-18°C in the Highlands to 28°C in the Lowlands to more than 30°C in the Coastal Plains (Ministry of Land, Water and Environment, 1997). Most of the Western Lowlands and Coastal Plains are associated with hot and dry climatic conditions, while the Highlands are relatively cool. The presence of flat land, relatively fertile soil, and a milder climate makes the Central Highlands a center of rain-fed agricultural activity. Several of the major urban centers of Eritrea, including the capital city, Asmara, are located in the Central Highlands zone. In times of good rains, the Western Lowlands have potential for cultivation and agro-pastoralism. The Coastal Plains are the location of the two major port towns of Eritrea, Massawa, and Assab. In general, the Central Highlands are the most densely populated part of the country, while the Lowlands are sparsely populated.

Rainfall in Eritrea ranges from less than 200 mm per annum in the Eastern Lowlands to about 1,000 mm per annum in a small pocket of the Escarpment; the annual rainfall in the Highlands ranges from 450 mm to 600 mm. The southern part of the Western Lowlands receives 600-800 mm per annum, but rainfall decreases substantially as one moves northward. The extremely low rainfall in the Eastern Lowlands and

is a hostile environment for agriculture, grazing, and industry. There are two major periods of precipitation in Eritrea. One, from June to September, covers both the Western Lowlands and the Highlands. The second comes between October and March and covers the Eastern Lowlands.

1.1.2 History

Because of Eritrea's strategic position on the Red Sea, it has fallen victim to many invaders and colonizers. The Ottoman Turks controlled the northern and coastal areas from the middle of the sixteenth century to the second half of the nineteenth century, when Egypt evicted them from their last stronghold, Massawa, in 1872. With the opening of the Suez Canal in 1869, the European colonizers became interested in the Red Sea and Horn of Africa. Italy, after establishing a foothold at Assab through a maritime company, Compagnia Marittima Rubattino, extended its control, and declared Eritrea its first African colony in 1890. In 1941, Italy was defeated by the Allied forces, and Britain took over the administration of Eritrea. In 1952, after 10 years of British colonial rule, Eritrea was federated with Ethiopia by the United Nations against the will of the Eritrean people. A decade later, Ethiopia abrogated the federal arrangement of the United Nations and annexed Eritrea as one of its provinces. This led to the Eritrean struggle for self-determination, which resulted in a protracted liberation war lasting from 1961 to 1991. Two years after the end of the war, a United Nations supervised referendum was held to determine Eritrea's political status; 99.8 percent of the voters chose independence in that referendum. Independence was formally declared in May 1993. Thereafter, Eritrea became a member of the United Nations and many other international and regional organizations.

1.1.3 Economy

The war for liberation destroyed most of Eritrea's infrastructure and devastated its economy and environment. This compelled Eritrea to entirely reconstruct its social, economic, and physical infrastructure. In an effort to place the economy on a path of sustainable development, the government targeted the period 1998-2000 to complete the transitional phase of rehabilitation and reconstruction. But in May 1998, under the pretext of a border dispute, Ethiopia declared war against Eritrea and occupied some parts of Gash-Barka and Debub. The impact of the war on the economy of Eritrea was seen in destruction of much civil infrastructure which had been painfully built in the seven years of peace.

Government development efforts not only concentrated on rebuilding and rehabilitating war damaged and destroyed economic and social infrastructures, but also on formulating numerous national economic and social development strategies and policies. Among these was the Macro Policy of 1994, which mapped out short, medium, and long-term reconstruction and development programs.

Agriculture and pastoralism are the main sources of livelihood for about 80 percent of Eritrea's population. The agricultural sector depends mainly on rain, with less than 10 percent of the arable land currently irrigated. Consequently, productivity is low. The agricultural sector, including livestock and fisheries, accounts for only one-fifth of the gross domestic product (GDP).

Eritrea has abundant natural resources including arable land (26 percent of the total area) of which only about four percent is under cultivation (World Food Programme, 2002). Although surface water is inadequate in Eritrea, there are adequate supplies of ground water, particularly in the Western Lowlands and

in some parts of the Coastal Plains that can be used for both household and industrial purposes. Eritrea also has varied and extensive mineral resources including copper, gold, iron, nickel, silica, sulfur, and potash. Good quality marble and granite also exist in large quantities (Ministry of Land, Water and Environment, 1997). The Red Sea offers opportunities for the fishing industry, for expanding the salt extraction industry, tourism, and possibly extraction of oil and gas.

1.1.4 Population

No population census has ever been carried out in Eritrea. However, based on a population count by the Ministry of Local Government and NSO estimates, the total resident population of Eritrea was about 3.2 million as of 2010 (MND, 2010). The population is essentially rural with about 65 percent of the people living in the countryside. The urban population is characterized by rapid growth, partly as the result of returning refugees from the neighboring and other countries, and partly due to high rural-urban migration. The population of Eritrea is not uniformly distributed throughout the country. About 50-60 percent of the population lives in the Highlands. The age distribution is that of a high fertility regime in which a larger proportion of the population is to be found in the younger age groups than in the older age groups. It is also marked by migration and war in that there are too few adult males and to a somewhat lesser extent too few adult females. Eritrea is a multi-ethnic society with nine different ethnic groups speaking nine different languages and professing two major religions, namely, Christianity and Islam.

Great efforts have been made by the National Statistics Office (NSO) to collect demographic, health, and socioeconomic information through surveys. The NSO in collaboration with Macro International conducted the 1995 and 2002 Eritrea Demographic and Health Surveys. These surveys provide detailed information on fertility, infant and child mortality, health, and nutritional status of women and children, breastfeeding, and contraceptive use, among other topics.

1.2 National Health Policy and Strategic Orientation

The Government of Eritrea accords health a prominent place in its priorities and it is committed to the attainment of its health goals. In particular, the Government fully appreciates and continuously emphasizes the decisive role of the people in development and self-reliance. The Government is therefore determined to create the requisite social and political conditions conducive to their realization.

The principal health sector policy goal is to create a healthy nation and safe environment. Good health will enhance the long term economic growth and development of Eritrea. Higher standards of living as a result of economic growth will also enhance the physical, mental and social well-being of the people of Eritrea.

In order to achieve the general goal of health for all Eritreans, the EPLF prior to independence and the Government of Eritrea since independence has adopted Primary Health Care (PHC), as the principal strategy towards the attainment of the goal. Among the key strategies of the health policy are equity, comprehensiveness of services, community involvement, an intersectorial approach and political commitment. The Ministry of Health guided by the National Macro Policy Frame Work implements the established goals through the development of sector policy and sector development strategic plans.

1.3 Development of Health Care Facilities

Historically, the health care service delivery system in Eritrea can be divided into pre-independence and post-independence eras. Although modern medicine was introduced to Eritrea much earlier than most other African countries, at independence in 1991, one of the major concerns in Eritrea was the poor health infrastructure, attributable to war-related devastation of essential infrastructures and services. Hence, post-independence reconstruction was characterized by the construction, rehabilitation, equipping, and staffing of health facilities, along with development and implementation of program specific policies and guidelines.

Western medicine, also called "modern medicine", was introduced to Eritrea during the Italian occupation (1882-1941). The Italian government opened modern hospitals under the organization and management of Italian doctors. A main hospital and a psychiatric hospital in Asmara and small hospitals in Dekamhare, Keren, and Massawa were established. Health stations also existed in various areas, which were run by Catholic nuns and Italian doctors. During this period, some Eritrean women became "nurses" under the apprenticeship of Catholic nuns.

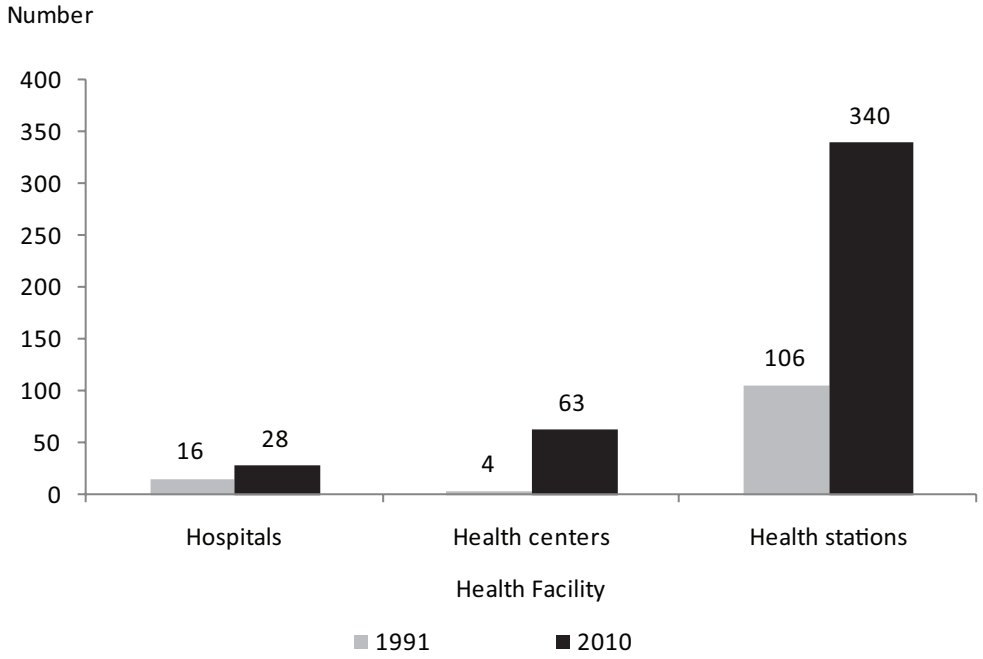
In 1941, after the British defeated the Italian forces, Eritrea was brought under a British Military Administration. However, this didn't improve the health and other social services for Eritreans. The British allowed the Italian administration in Eritrea to continue, enabling the Italians who remained in office to strengthen their land and property holdings. As part of these, many of the Italian health professionals opened private hospitals and clinics again mainly for the service of Italian settlers.

During the federation period and following the annexation of Eritrea by Ethiopia, the regime expanded the main hospital in Asmara in 1957 and constructed five hospitals. During the war for independence the Ethiopian Government increasingly neglected health service related activities for the public, and much-needed public health spending was diverted towards their army. Most facilities were destroyed, medical supplies, and other services were disrupted; trained health personnel fled the country or abandoned their jobs.

In contrast to the Ethiopian regime, the Eritrean People's Liberation Front (EPLF) took all the necessary measures to provide health services throughout the liberated areas. It operated fully equipped hospitals and health centers, most of them placed underground because of the constant threat of bombing.

Since liberation in 1991, the number of government hospitals increased from 16 to 28; the number of health centers (including maternal and child health care centers) increased from 4 to 63; and the number of health stations (including clinics) increased from 106 to 249 (MoH, 2012). Overall, the total number of health facilities increased from 126 in 1991 to 340 in 2010, an increase of 170 percent. Twelve of the hospitals and two of the health centers also provide services to the population in evening sessions after regular working hours, over all the country except in Debubawi Keih Bahri. There are also 30 pharmacies, 34 drug shops, and 226 rural drug vendors spread through the country. As the result of concerted efforts to expand health services by building health facilities and equipping them with the necessary equipment and skilled health personnel, access to health care within 10 km increased from about 40 percent at the time of liberation to about 75 percent at the moment. About 60 percent of the population lives within five km of a health facility.

Figure 1-1 **Number of health facilities in 1991 as compared to 2010**



1.4 Development of Human Resources for Health

Since liberation in 1991, a variety of health training institutions were established. Among them are three zonal associate nursing schools, a college of nursing and health technology, a collage of health sciences, Orotta School of Medicine and Dental Medicine, post graduate programs, etc. The different health schools have trained and/or upgraded a total of 5,404 health professionals. In 2009 the schools graduated 1,353 health professionals in 16 categories of the health professions. The schools' capacities thus increased by more than five-fold since their 250 graduates in 1992 to the 1,350 students in 2009.

The College of Nursing and Health Technology was established in 1998 consisting of three schools. It was then expanded to include the Asmara School of Nursing, Asmara Post Basic Nursing School, Asmara School of Health Technology and Zoba Associate Nursing School in Barentu, Ghindae, and Mendefera. Through these schools, the college has been offering a variety of programs to meet the educational goals of its students and the health care services needs of the country.

In addition to the basic pre-service training, continuing education programs through external fellowships, internal scholarships, and distance education, in-service and on the job training has also been provided to strengthen the human resources capacity. A total of 1,140 health professionals were beneficiaries of the different continuing education programs organized and facilitated by the Ministry of Health Department of Research and Human Resources Development. Out of the total, 140 (12 percent) were enrolled in 6 months to a seven year fellowship program, 72 (6 percent) in internal scholarships at Asmara University, 500 (44 percent) in computer applications, 300 (26 percent) in English language, 20 (2 percent) physicians in life saving surgery, and 118 (10 percent) operation theatre technicians from different hospitals were trained.

In December 2002, the Government of Eritrea charted a strategic plan in establishing a selected tertiary educational system administered by a Board of Higher Education. Accordingly, the Orotta School of Medicine and the College of Health Sciences were established in 2003 and 2005, respectively. The Orotta School of Medicine began its educational program with its first intake of 32 medical students in 2004.

The Post Graduate Medical Education (PGME) system was launched in October of 2007 and started its training program in January 2008, with training in pediatrics, gynecology and obstetrics, and surgery. The first eight pediatric specialty graduates of the school graduated in 2009 with the first gradates of Orotta School of Medicine while the first six surgeons graduated in 2010.

Preliminary preparations have been made to start postgraduate training programs in the fields of anesthesia, orthopedics, neuropsychiatry, pathology, and emergency medicine among others.

1.5 Objectives of the Survey

The major aim of the EPHS2010 was to provide up-to-date information on fertility and childhood mortality levels, fertility preferences, awareness and use of family planning methods, use of maternal and child health services, breastfeeding practices, nutritional status of mothers and young children, and awareness and behavior regarding HIV/AIDS and other sexually transmitted infections. It was designed as a follow-up to the EDHS2002 survey. However, compared with the 2002 survey, the EPHS2010 is significantly expanded in scope and coverage. More specifically, the EPHS2010 survey was designed to:

1. Collect data at the national level that allow the calculation of demographic rates, particularly fertility and childhood mortality rates.
2. Assess the health status of mothers and children under age five in Eritrea, including nutritional status, use of antenatal and maternity services, treatment of recent episodes of childhood illness, use of immunization services, and malaria prevention activities.
3. Measure the levels and patterns of knowledge and behavior of women about sexually transmitted infections, HIV/AIDS, and female circumcision.
4. Provide information on changes in fertility and contraceptive prevalence and the factors that have contributed to these changes, such as marriage patterns, desire for children, availability of contraception, breastfeeding practices, and other important socioeconomic factors.
5. Assess gender issues.

1.6 Organization and Methodology of the Survey

1.6.1 Design and implementation

Similar to the EDHS1995 and EDHS2002 surveys, the sample of the EPHS2010 was designed to allow separate estimates at the national level, by urban and rural areas. Moreover, it was also designed to provide estimates for each of the six zobas (regions). A representative probability sample of 34,423 households was selected for the EPHS2010 survey. Of this, 11,665 households were sampled for the core survey and 22,758 households were selected to collect more information on maternal morbidity and mortality (MMM).

The sample for the EPHS2010 survey was selected in two stages. In the first stage, 900 clusters were selected among the list of clusters (Enumeration Areas in urban centers and villages in rural areas) in the country. Of these, 525 clusters were in rural areas and the remaining 375 were from urban areas. The selection of clusters was carried out through the linear systematic random sampling procedure with probability of selection proportionate to the number of households in each cluster. A complete household listing operation was carried out in the selected clusters to provide a frame for the final linear systematic random selection of households during the second stage of sampling. Forty households were selected from each cluster. Of these 40 households, 13 households were selected for the core study and 27 households for the maternal morbidity and mortality study in all zobas except Debubawi Keih Bahri where 20 households each were selected for the core and MMM survey. All women age 15-49 and men age 15-59 who were either permanent residents of the households in the EPHS2010 sample or visitors present in the household on the night before the survey were eligible to be interviewed.

The sample for the EPHS2010 is self-weighted in each of the six zobas in the country but the total sample of 900 clusters is not proportionally distributed among the zobas. Consequently, with the exception of **Error! Reference source not found.**, results in all other tables in this report are based on weighted number of cases. A detailed sample design description is presented in Appendix A.

1.6.2 Questionnaires

Five questionnaires were used for the EPHS2010, namely, the core Household Questionnaire, the core Women's Questionnaire, the core Men's Questionnaire, MMM Household Questionnaire, and MMM Women's questionnaire. The MMM household and women questionnaires are extracts from the core household and women questionnaires. The core questionnaires were administered in the households sampled for the core study while the MMM questionnaires were administered in the households selected for MMM. The contents of these questionnaires were based on the model questionnaires for the MEASURE DHS program. In consultation with the Ministry of Health and other line ministries, NSO adapted these questionnaires to reflect population and health issues relevant in Eritrea. The revised questionnaires were translated from English into seven local languages: Tigrigna, Tigre, Bilen, Kunama, Nara, Saho, and Afar. The questionnaires were pretested prior to their finalization.

The core Household Questionnaire was used to list all the usual members and visitors in the selected core households. The main purpose of the core Household Questionnaires was to identify women and men who were eligible for the individual interview and Dried Blood Specimen (DBS) sample collection as well as to identify children under five years of age for weight and height measurements. Some basic information was collected on the characteristics of each person listed, including age, sex, education, relationship to the head of the household, marital status, disability status, and occupation if employed. For children under age 15, survival status of the parents was determined. The Household Questionnaire also collected information on characteristics of the household's dwelling unit such as the source of drinking water; type of toilet facilities; materials used for the floor, roof, and wall of the house; ownership of various durable goods; and ownership and use of mosquito nets. A test was also conducted by the interviewers to assess whether the household used salt fortified with iodine for cooking.

The core Women's Questionnaire was used to collect information from all women age 15-49. These women were asked questions on the following topics:

1. Background characteristics (education, residential history, media exposure, etc.)
2. Birth history and childhood mortality

3. Knowledge and use of family planning methods
4. Fertility preferences
5. Antenatal, postnatal, and childbirth care
6. Breastfeeding and infant feeding practices
7. Vaccinations and childhood illnesses
8. Marriage and sexual activity
9. Woman's work and husband's background characteristics
10. Awareness and behavior regarding AIDS and other sexually transmitted infections (STIs)
11. Awareness and behavior regarding Tuberculosis
12. Fistula problem
13. Female circumcision
14. Maternal mortality

The MMM household questionnaire collected much of the same information found in the core Household questionnaire from those households selected for MMM study but was shorter as it contains very few variables important to determine the demographic and socio-economic status of the households. The MMM women's questionnaire collected information on background characteristics of respondents; reproductive history; antenatal, delivery, and postnatal care; fistula problems; and maternal mortality from eligible women found in the households selected for the MMM.

The Men's Questionnaire was administered to all men aged 15-59 in the EPHS2010 sample. The Men's Questionnaire collected much of the same information found in the core Women's Questionnaire, but was shorter because it did not contain a detailed reproductive history or questions on maternal and child health, nutrition, and maternal morbidity and mortality.

1.6.3 HIV testing

All women age 15-49 and all men age 15-59 living in the selected households were eligible for the HIV testing component of the EPHS2010.

The standard DHS HIV testing protocol was used for the EPHS2010. The protocol ensures informed, anonymous, and voluntary testing of women and men in the reproductive ages. Eligible women and men in the sample of households selected for the survey were asked to voluntarily provide a few drops of blood for HIV testing. 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 were obtained from a finger prick and was collected on a filter paper (Dry Blood Sample) to which a bar code label was affixed 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.

The collected sample was transported to a National Health Laboratory for testing. The laboratory protocol included an initial ELISA test, and then retesting of all positive tests and 10 percent of the negative tests with a second ELISA. For those tests with discordant results on the two ELISA tests, a third ELISA test was performed.

1.6.4 Training and fieldwork

The recruitment of field staff was conducted in the six zobas taking into account language of the specific areas, educational qualification, and experience. Training of the field staff took place in Asmara University over a period of five weeks from the first week of December, 2009 to the first week of January, 2010. A total of 286 field staff (226 females and 60 males) and 46 laboratory technicians were trained.

The training was conducted following the standard DHS training procedures. It includes lectures, presentations, practical demonstrations, and practice interviewing in small groups in class, as well as regular field practice following the completion of sections. Trainees also received training and did practice on anthropometric measurements. The laboratory technicians received training on Dried Blood Specimen (DBS) sample collection, storage, and transportation procedures. The questionnaire related training was provided by senior experts from NSO, guest lecturers from the Ministry of Health (MoH), and experts from Fafo-Norway, while the training on biomarker was offered by experts from Kenya Medical Research Institute (KMRI).

Fieldwork was successfully completed in 861 of the 900 sampled clusters, with 39 clusters not covered primarily due to reasons of inaccessibility. Complete coverage was obtained in Maekel and Debub. All of the clusters not covered were from rural areas of the remaining four zobas, with the majority belonging to Anseba. Forty-two teams, each comprised of one male interviewer and supervisor, three female interviewers, one female editor, and one laboratory technician were responsible for data collection that took place from the second week of January to the first week of July, 2010.

1.6.5 Data processing

The processing of the EPHS2010 data began soon after the start of fieldwork. Completed questionnaires were returned periodically from the field to the NSO data processing center and data processing consisted of manual office editing, coding of open ended questions, data entry, and secondary editing. The task force responsible for data processing included eight manual editors and coders, six data entry supervisors, 42 data entry operators, two questionnaire administrators, six secondary editors, three senior data processing experts from NSO and one data processing expert from Fafo. Each questionnaire was entered twice by different data entry clerks and any differences reconciled. Data processing was completed between the 27th of January and the 26th of July, 2010. A substantial number of post entry edit checks were also performed.

1.6.6 Response rate

Table 1-1 shows household and individual response rates for the EPHS2010. A total of 11,665 core households were selected for the sample, of which 10,830 were found to be occupied during data collection. Of these existing households, 10,588 were successfully interviewed, giving a household response rate of 97.8 percent. The main reason for not completing household interviews was that no competent respondent was at home (1.9 percent). In the households, 10,805 women were identified as eligible for the individual interview. Interviews were completed for 10,243 women, yielding a response rate of 94.8 percent. Of the

6,436 eligible men identified in the selected households, 78 percent were successfully interviewed. The main reason for lower individual interview response rate, particularly for males, was that the eligible individuals were not at home on more than one occasion when attempts were made to contact them. Response rates were slightly higher in rural than urban areas. Similar household and individual response rates were also obtained from the MMM households.

Table 1-1 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence, Eritrea 2010

	Questionnaire type									
	Core					MMM				
Result	Total urban	Asmara	Other towns	Rural	Total	Total urban	Asmara	Other towns	Rural	Total
Selected households										
Completed	92.3	91.9	92.6	89.9	90.8	92.1	93.3	91.2	89.7	90.6
Households present but no competent respondent at home	2.2	2.7	1.8	1.7	1.9	1.6	1.5	1.6	1.9	1.8
Refused	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Dwelling not found	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Household absent	3.9	3.0	4.4	6.3	5.4	4.1	2.4	5.4	6.5	5.6
Dwelling vacant	1.1	1.4	0.9	1.6	1.4	1.3	1.5	1.1	1.4	1.3
Dwelling destroyed	0.3	0.7	0.0	0.2	0.3	0.5	0.9	0.3	0.2	0.4
Other	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	4,361	1,773	2,588	7,304	11,665	8,641	3,666	4,975	14,117	22,758
Household response rate	97.5	96.8	98.0	97.9	97.8	98.1	98.2	98.1	97.8	97.9
Eligible women 15-49										
Completed	94.1	91.3	96.2	95.3	94.8	95.6	95.0	96.0	95.9	95.7
Not at home	4.1	5.9	2.8	3.2	3.6	3.5	3.8	3.1	3.0	3.2
Postponed	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Refused	0.5	1.0	0.2	0.2	0.3	0.1	0.1	0.1	0.0	0.0
Partly completed	0.2	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Incapacitated	1.0	1.4	0.8	1.2	1.1	0.8	0.9	0.7	1.1	1.0
Other	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	4,597	1,993	2,604	6,208	10,805	9,059	4,038	5,021	11,837	20,896
Eligible women response rate	94.0	91.3	96.2	95.3	94.8	95.4	94.8	95.9	95.8	95.6
Eligible men 15-59										
Completed	77.8	73.1	81.7	78.4	78.2	0.0	0.0	0.0	0.0	0.0
Not at home	18.2	21.6	15.3	18.6	18.4	0.0	0.0	0.0	0.0	0.0
Postponed	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Refused	1.2	2.1	0.5	0.2	0.6	0.0	0.0	0.0	0.0	0.0
Partly completed	0.2	0.5	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0
Incapacitated	2.3	2.3	2.3	2.7	2.5	0.0	0.0	0.0	0.0	0.0
Other	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0
Number of men	2,816	1,275	1,541	3,620	6,436	0	0	0	0	0
Eligible men response rate	77.7	73.0	81.6	78.3	78.0	-	-	-	-	-

HOUSEHOLD POPULATION AND HOUSING CHARACTERISTICS 2

Key Findings

- Nearly half of the population of Eritrea is under 15 years of age with a median age of 18 years.
- Forty-seven percent of the households are female headed with the proportion higher in urban areas (53 percent) than in rural areas (44 percent).
- Seven percent of children under age 15 are orphans.
- More than one-third (37 percent) of households have access to electricity.
- Overall, six in ten of the households have access to improved water source (73 percent of households in urban and half of households in rural areas).

This chapter provides an overview of demographic and socioeconomic characteristics of the household population of the sampled households. These characteristics include age, sex, place of residence, educational status, marital status, household economic status, and children's living arrangements and orphanhood. The chapter also discusses household facilities and housing characteristics such as source of drinking water, electricity, and sanitation facilities. These data serve as a basis for understanding the socio-economic status of households and it provides a complete picture of the household population in a wider perspective for interpreting the survey findings in subsequent chapters.

2.1 Household Population by Age, Sex, and Residence

For the purpose of the EPHS2010 survey, a household is defined as a person or a group of related or unrelated persons who usually live in the same dwelling unit and acknowledge one adult member as the head of the household, and who have common cooking and eating arrangements. A member of the household is any person who usually lives in the household and a visitor is someone who is not a member of the household, but who stayed in the household the night preceding the interview.

The Household Questionnaire in the survey collected information from all usual residents of the selected household (de-jure population) and visitors who stayed in the selected household the night before the interview. The de-facto population includes all persons who stayed in the household the night before the interview. The inclusion of both populations in the household survey allows the analysis of either the de-jure or the de-facto population.

The percent distribution of the de facto household population by five-year age groups, according to sex and residence, is shown in Table 2-1 Household population by age, sex and residence. Of the total household population, 65 percent were living in rural areas and 35 percent in urban areas. Forty-five percent of the household population was male and 55 percent were female. The proportion in each five-year age group generally decreased with increasing age. The result also depicts Eritrea as a

young population, with a large proportion of the population in the younger age groups. The population under age 15 constitutes 47 percent of the total population and the older population age 65 and above accounts for only seven percent. The proportion of children in the age group 0-4 is slightly lower than the age 5-9 and 10-14 indicating that fertility remained almost constant for the last 15 years (Table 2-1 and Figure 2-1). The distribution of the male and female household population presented in Figure 2-2 shows noticeable heaping at ages ending with 0 and 5 for both sexes. Ages ending with 1 and 9 are underreported.

Figure 2-1 shows the age and sex structure of the household population more clearly in a population pyramid. The pyramid is broad at the base with the next adjacent bar slightly wider. This is a pattern of a youthful population.

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, Eritrea 2010

	Residence								
	Urban			Rural			Total		
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total
<5	15.6	11.6	13.3	18.3	14.8	16.4	17.4	13.6	15.3
5-9	16.7	11.8	13.9	19.2	15.7	17.4	18.4	14.3	16.1
10-14	16.8	13.3	14.8	18.4	14.6	16.4	17.9	14.2	15.8
15-19	11.9	10.6	11.2	10.8	9.5	10.1	11.2	9.9	10.5
20-24	5.4	8.3	7.1	4.0	6.5	5.4	4.5	7.2	6.0
25-29	4.2	8.1	6.4	2.7	6.5	4.8	3.2	7.1	5.3
30-34	3.5	5.8	4.8	2.5	5.0	3.8	2.8	5.3	4.2
35-39	3.8	6.8	5.5	2.7	5.5	4.2	3.1	6.0	4.7
40-44	3.2	4.2	3.7	2.6	3.7	3.2	2.8	3.9	3.4
45-49	3.2	4.0	3.6	2.7	4.0	3.4	2.9	4.0	3.5
50-54	2.9	3.5	3.2	2.5	2.7	2.6	2.6	3.0	2.8
55-59	2.6	3.4	3.0	2.7	3.1	2.9	2.6	3.2	3.0
60-64	2.9	2.6	2.7	2.7	2.4	2.5	2.8	2.5	2.6
65-69	2.5	2.0	2.2	2.6	2.0	2.3	2.6	2.0	2.3
70-74	1.9	1.7	1.8	2.1	1.7	1.9	2.0	1.7	1.8
75-79	1.2	1.1	1.1	1.5	1.0	1.2	1.4	1.0	1.2
80 +	1.5	1.3	1.4	2.0	1.2	1.6	1.8	1.2	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	20,533	26,802	47,338	39,787	46,262	86,049	60,320	73,065	133,387

Note: Table is based on both CORE and MMM questionnaires. Total includes 59 persons whose age or sex not known.

Figure 2-1 Population Pyramid

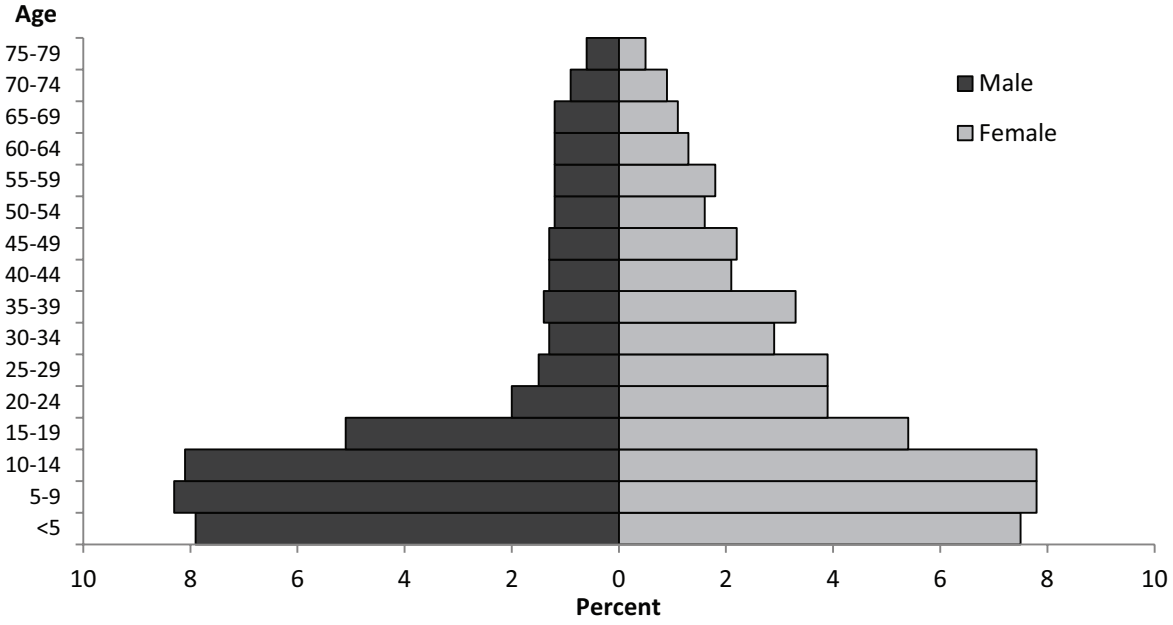
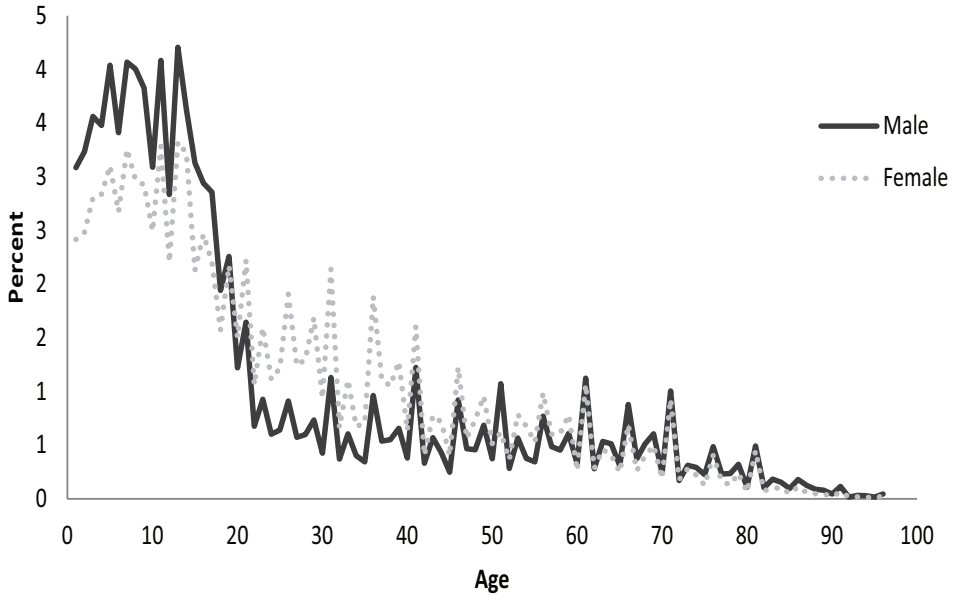


Figure 2-2 Distribution of de-facto household population by single year of age and sex



2.2 Household Composition

Distribution of households by sex of heads of households, number of household members, and mean household size is presented in Table 2-2. These characteristics are important because they are associated with household socio-economic differences. Households headed by males make up 53 percent, a lower proportion than was observed in the EDHS1995 (69 percent), but similar to 2002 (53 percent). All zobas except Debub and Maekel have predominantly male-headed households. In Eritrea, current average household size is 4.8 persons, the same as in 2002 and slightly higher than in 1995 (4.4 persons). Urban households have on average a slightly smaller household size (4.7 persons) than rural households (4.9 persons). Forty-one percent of households have 2-4 members. Large households (9 or more members) account for 15 percent of all households and single-person households account for nine percent. The proportion of single person households is similar in both urban and rural areas (9 and 8 percent, respectively).

Table 2-2 Household composition

Percent distribution of households by sex of head of household and by household size; mean size of household, and percentage of households with orphans and foster children under 15, according to residence and zoba, Eritrea 2010

	Residence		Zoba						
Characteristic	Urban	Rural	Debubawi Keih Bahri	Maekel	Semenawi Keih Bahri	Anseba	Gash-Barka	Debub	Total
Household head									
Male	47.0	56.0	50.9	47.4	62.3	57.4	62.0	43.2	52.8
Female	53.0	44.0	49.1	52.6	37.7	42.6	38.0	56.8	47.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of usual members									
1	9.1	7.7	9.3	9.4	6.5	6.9	8.2	8.3	8.2
2	11.8	11.1	16.0	11.6	11.3	11.7	11.6	10.5	11.4
3	13.6	14.2	14.4	14.4	14.1	13.5	13.7	14.1	14.0
4	15.5	15.3	15.5	15.6	14.4	15.1	15.8	15.4	15.4
5	14.8	13.6	14.0	14.3	13.6	14.2	14.7	13.4	14.1
6	12.6	11.7	10.7	12.3	13.6	10.5	12.3	11.8	12.0
7	9.5	10.0	8.0	9.0	10.1	10.1	9.5	10.6	9.8
8	6.2	7.7	5.3	6.2	7.4	8.3	6.7	7.7	7.1
9+	7.0	8.7	6.8	7.2	9.0	9.6	7.5	8.2	8.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean size of households	4.7	4.9	4.5	4.7	5.0	5.0	4.8	4.9	4.8
Number of households	11,199	20,015	512	6,969	3,339	4,487	7,350	8,556	31,214

2.2.1 Disability status of household members

EPHS2010 collected information on disability status of household members. Generally persons with physical disabilities are disadvantaged but with some help they can be competitive and productive. Table 2-2 shows that five percent of the overall household population to have a person with a disability. Of all the disabilities listed the highest recorded was blindness of one eyes (0.8 percent), followed by those who cannot speak (0.5 percent) and other motion impairments (0.5 percent). The proportion of household members with other specific types of disabilities account for less than 0.5 percent.

Table 2-3 Disability status

Percent distribution of households population by disability status, according to residence and zoba, Eritrea 2010

	Residence		Zoba						
Type of disability	Urban	Rural	Debubawi Keih Bahri	Maekel	Semenawi Keih Bahri	Anseba	Gash-Barka	Debub	Total
No disability	95.2	95.3	97.0	94.8	95.9	95.7	96.3	94.3	95.3
Blindness of both eyes	0.2	0.4	0.2	0.2	0.3	0.3	0.4	0.4	0.3
Blindness of one eye	0.6	0.9	0.5	0.6	0.6	0.7	0.8	1.2	0.8
Total deafness	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Partial deafness one/two ears	0.5	0.5	0.3	0.5	0.3	0.4	0.4	0.7	0.5
Dumbness (cannot speak)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
One or both legs amputated	0.2	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.1
One or both legs paralysis	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2
Short leg	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1
Leg deformity	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.2
Elephantiasis	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Other related motion impairments	0.6	0.5	0.4	0.7	0.6	0.3	0.3	0.6	0.5
One or both hands amputated	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0
One or both hands paralyzed	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1
Hand deformities/ paralysis of any kind	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Other hand impairments	0.2	0.3	0.2	0.2	0.4	0.4	0.2	0.3	0.3
Insanity	0.4	0.3	0.2	0.5	0.3	0.3	0.2	0.4	0.3
Mental retardation	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.1
Epilepsy	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Other mental impairments	0.2	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.2
Leprosy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Multiple disabilities (Specify)	0.3	0.2	0.1	0.3	0.1	0.2	0.2	0.3	0.2
Other disability (Specify)	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.3	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
De-jure population	52,356	96,748	2,253	32,377	16,287	22,009	34,561	41,416	149,103

2.3 Children's Living Arrangements and Orphanhood

EPHS2010 collected information on the presence of foster children and orphans in households. Foster children are children under age 15 living in households with neither their mother nor their father present. Orphans are children with one (single orphans) or both parents (double orphans) dead. Information is presented in two ways: proportion of households with foster children and orphans under 15 (Table 2-3) and proportion of children under 15 who are foster children and orphans (Table 2-5).

Overall, seven percent of the households accommodate foster children, eight percent contain children with a single deceased parent and less than one percent of the households have double orphaned children. Households that accommodate foster children and/or orphans account for 13 percent of the total households. Orphanhood is the highest in Gash-Barka and Debub and the lowest in Debubawi Keih Bahri. Anseba and Debub have higher percentages of foster children than the other zobas.

The proportion of children under age 15 living with both parents is 78 percent and decreases with age, that is, younger children are more likely than older children to live with both natural parents (Table 2-5). By residence, rural children are more likely to live with both parents than urban children (82 versus 68 percent). Percentage of children who live with both parents is lowest in Asmara city (67 percent) and, among the zobas, Maekel has the least (71 percent) (Table 2-5).

Among children with both parents alive, 12 percent of children live with only one parent with 11 percent living with their mothers, and one percent with their fathers. Seven percent of children under age 15 have lost either of their natural parents, and one percent has lost both of their natural parents. Among children under age 15 with at least one parent alive, urban children are more likely not to live with either parent than rural children (5 percent versus 3 percent). This proportion is higher among older children (10-14), children in Maekel, and those with higher wealth quintiles.

Table 2-4 Children's living arrangements and orphanhood: Households

Percentage distribution of households with orphans and foster children under 15, according to residence and zoba, Eritrea 2010

	Residence		Zoba						
Living Arrangements	Urban	Rural	Debubawi Keih Bahri	Maekel	Semenawi Keih Bahri	Anseba	Gash-Barka	Debub	Total
Foster children[1]	7.8	6.4	4.8	6.6	6.2	7.9	5.5	8.3	6.9
Double orphans	0.8	0.8	0.6	0.6	1.0	0.8	0.9	0.9	0.8
Single orphans	7.6	8.5	5.4	5.9	8.4	8.0	9.3	9.2	8.2
Foster and/or orphan children	13.3	12.9	8.4	10.9	12.4	13.7	12.5	15.3	13.0
Number	3,816	6,772	176	2,365	1,137	1,522	2,500	2,888	10,588

Note: Table is based on de-jure household members, i.e., usual residents in both CORE and MMM questionnaires.
Table on orphans and foster children are made from CORE households.
[1]Foster children are those under age 15 living in households with neither their mother nor their father present.

Table 2-5 Children's living arrangements and orphanhood

Percent distribution of de-jure children under age 15 by living arrangements and survival status of parents, the percentage of children not living with a biological parent, and the percentage of children with one or both parents dead, according to background characteristics, Eritrea 2010

Background characteristic	Living with both parents	Living with mother but not with father		Living with father but not with mother		Not living with either parent					Total	Percentage not living with a biological parent	Percentage with one or both parents dead	Number of children
		Father alive	Father dead	Mother alive	Mother dead	Both alive	Only father alive	Only mother alive	Both dead	Missing information on father/ mother				
Age														
0-4	83.9	12.9	1.0	0.3	0.3	1.0	0.3	0.1	0.1	0.1	100.0	1.4	1.7	7,030
<2	84.2	14.6	0.6	0.0	0.2	0.1	0.2	0.0	0.0	0.0	100.0	0.3	1.0	2,600
2-4	83.8	11.9	1.3	0.5	0.3	1.5	0.4	0.1	0.1	0.2	100.0	2.1	2.2	4,429
5-9	78.3	11.5	3.9	1.0	0.9	2.5	0.9	0.4	0.4	0.3	100.0	4.2	6.4	7,617
10-14	71.2	9.8	8.9	1.2	1.7	3.5	1.2	0.7	1.1	0.7	100.0	6.6	13.6	7,679
Sex														
Male	77.8	10.9	4.7	1.1	1.0	2.3	0.7	0.4	0.7	0.4	100.0	4.1	7.5	11,552
Female	77.4	11.9	4.7	0.6	0.9	2.4	0.9	0.4	0.4	0.4	100.0	4.1	7.3	10,772
Residence														
Total urban	68.4	18.4	4.8	1.3	0.9	3.6	0.9	0.6	0.5	0.5	100.0	5.6	7.7	6,840
Asmara	66.8	20.5	3.6	1.2	0.6	4.4	1.1	0.4	0.5	0.9	100.0	6.4	6.2	2,367
Other Town	69.3	17.3	5.5	1.4	1.1	3.2	0.8	0.7	0.5	0.3	100.0	5.1	8.5	4,473
Rural	81.7	8.3	4.7	0.6	1.0	1.8	0.8	0.3	0.6	0.3	100.0	3.5	7.3	15,486
Zoba														
Debubawi Keih Bahri	80.6	11.1	3.1	0.6	0.8	1.8	0.8	0.2	0.6	0.3	100.0	3.5	5.5	342
Maekel	70.7	17.5	4.2	1.2	0.5	3.6	0.9	0.3	0.4	0.7	100.0	5.3	6.2	3,625
Semenawi Keih Bahri	80.4	9.4	4.9	1.1	0.9	1.6	0.7	0.4	0.5	0.1	100.0	3.2	7.4	2,689
Anseba	83.2	6.6	4.2	0.4	1.1	2.8	1.0	0.2	0.4	0.2	100.0	4.3	6.8	3,465
Gash-Barka	79.1	9.9	4.9	1.0	1.5	1.3	0.9	0.3	0.8	0.3	100.0	3.3	8.4	5,835
Debub	75.8	12.7	5.2	0.7	0.7	2.8	0.6	0.7	0.5	0.4	100.0	4.5	7.7	6,370
Wealth quintile														
Lowest	85.2	5.2	4.0	0.4	1.7	1.6	1.1	0.3	0.3	0.2	100.0	3.3	7.4	5,317
Second	79.7	8.9	5.7	1.2	1.0	1.4	0.8	0.4	0.7	0.3	100.0	3.3	8.5	4,619
Middle	78.8	11.3	4.2	0.7	0.7	2.2	0.7	0.3	0.6	0.4	100.0	3.9	6.6	4,552
Fourth	71.8	15.5	6.1	0.8	0.6	3.5	0.5	0.3	0.5	0.4	100.0	4.8	8.0	4,313
Highest	69.0	19.0	3.6	1.3	0.7	3.7	0.9	0.7	0.6	0.6	100.0	5.9	6.4	3,524
Total <15	77.6	11.4	4.7	0.9	1.0	2.4	0.8	0.4	0.5	0.4	100.0	4.1	7.4	22,326

Note: Table is based on de-jure members, i.e., usual residents in the CORE questionnaires.

2.4 Education Levels of the Household Population

Educational attainment is important in that it contributes to improved living conditions for the individuals, households, and for the society at large. It also influences reproductive behavior, fertility, childhood mortality and morbidity, and the use of contraceptives, attitudes and awareness related to family health and hygiene, and school attendance of household members.

2.4.1 Educational attainment of the female household population

In the EPHS2010, information on educational attainment was collected for every member of the household aged six years and above. Primary education in Eritrea starts at seven years of age and continues until age 11; it is followed by two years of middle school, and an additional four years for secondary education. Educational attainment in each age group is higher for males than for females (Table 2-6 and Table 2-7). Forty-six percent of female household members have never attended school, compared with 35 percent of males. The median number of years completed is two for males and 0.3 for females because the majority of women have never attended school.

Rapid increases in educational attainment for both sexes can be seen from the declining proportion without any formal education in successively younger age groups. For example, the proportion of women with no education decreases from 95 percent at age 65 and above to 21 percent at age 10-14. The higher proportions of uneducated among those age 6-9 years for both sexes (54 percent for females and 53 percent for males) are mostly due to the inclusion of children age six in the age group who have not yet attended school. As mentioned above, in Eritrea the minimum age for attending school is years.

Educational attainment is much higher among the urban population than among the rural population. For example, in urban areas, 25 percent of females and 15 percent of males have no education, compared with 58 percent of females and 46 percent of males in rural areas. Among the zobas, the proportion of females and males with no education is highest in Debubawi Keih Bahri (72 and 51 percent, respectively) and lowest in Maekel (21 and 10 percent, respectively).

To determine the literacy level in Eritrea, each person age six and above was asked if they could read and write in any language without difficulty. Accordingly, 57 percent of the population is literate with a significant difference in literacy level by sex (64 percent males and 52 percent females). There are marked differentials in the literacy level by residence in which 84 percent males and 73 percent females in urban areas are literate, compared with 53 percent of males and 39 percent of females in rural areas. There is also increased literacy since 2002 (81 percent males and 66 percent females in urban; and 47 percent of males and 29 percent of females in rural).

Table 2-6 Educational attainment of the female household population

Percent distribution of the de-facto female household populations age six and over by highest level of schooling attended or completed and median grade completed, according to background characteristics, Eritrea 2010

Background characteristic	No education	Some primary[1]	Completed primary	Some middle	Completed middle	Some secondary[2]	Completed secondary	More than secondary	Don't know/ missing	Total	Number	Median years completed	Literacy rate
Age													
6-9	53.6	45.8	0.2	0.1	0.0	0.0	0.0	0.0	0.2	100.0	2,957	0.0	35.6
10-14	21.4	45.3	5.5	24.6	1.2	1.8	0.0	0.0	0.1	100.0	3,449	2.9	75.1
15-19	16.2	14.1	6.1	28.1	5.1	28.3	1.0	1.0	0.1	100.0	2,425	6.0	83.1
20-24	22.3	13.2	5.8	19.1	5.4	21.1	6.2	6.6	0.1	100.0	1,815	5.8	77.9
25-29	33.7	15.3	6.2	16.9	4.8	15.3	4.3	3.3	0.3	100.0	1,755	4.1	65.5
30-34	46.6	19.5	3.5	9.4	3.1	11.1	4.5	1.9	0.3	100.0	1,334	1.1	53.2
35-39	53.7	18.6	3.9	7.6	1.5	7.5	4.5	2.1	0.5	100.0	1,485	0.0	46.3
40-44	63.0	15.2	4.5	5.0	1.9	4.7	3.4	2.0	0.2	100.0	978	0.0	36.5
45-49	70.8	14.6	2.4	3.7	1.3	2.8	2.8	1.8	0.0	100.0	988	0.0	30.5
50-54	72.0	13.9	2.2	5.1	0.8	2.0	1.2	2.1	0.6	100.0	723	0.0	27.8
55-59	80.4	10.1	1.7	2.9	0.8	0.8	1.4	0.9	1.1	100.0	767	0.0	18.1
60-64	87.8	7.8	0.7	1.9	0.5	0.5	0.2	0.2	0.5	100.0	599	0.0	11.3
65+	94.5	3.4	0.4	0.6	0.1	0.3	0.1	0.0	0.7	100.0	1,439	0.0	4.7
Residence													
Total urban	25.4	23.9	4.2	17.6	3.8	16.4	4.9	3.6	0.2	100.0	7,790	0.0	73.0
Asmara	18.2	18.2	3.3	17.3	4.6	23.0	8.8	6.4	0.3	100.0	3,444	6.0	80.8
Other Town	31.1	28.4	4.9	17.7	3.2	11.3	1.8	1.3	0.2	100.0	4,346	2.8	66.8
Rural	57.9	23.3	3.4	9.4	1.3	3.7	0.3	0.3	0.3	100.0	12,925	0.0	39.2
Zoba													
Debubawi Keih Bahri	71.7	13.7	2.9	5.4	1.1	3.1	1.0	0.8	0.3	100.0	314	0.0	25.6
Maekel	20.5	20.3	3.4	18.3	4.6	20.5	6.9	5.1	0.4	100.0	4,803	5.3	77.7
Semenawi Keih Bahri	60.3	21.9	3.3	8.1	1.1	3.8	0.7	0.6	0.2	100.0	2,237	0.0	38.2
Anseba	46.2	29.9	4.3	11.8	1.9	4.7	0.6	0.5	0.1	100.0	2,964	0.0	49.7
Gash-Barka	67.5	17.7	3.5	7.0	1.2	2.4	0.2	0.2	0.5	100.0	4,660	0.0	29.9
Debub	41.8	28.8	4.1	14.5	1.7	7.5	0.8	0.7	0.2	100.0	5,737	1.1	56.1
Wealth quintile													
Lowest	71.6	19.4	2.4	5.0	0.4	0.8	0.1	0.0	0.3	100.0	3,964	0.0	25.8
Second	65.1	21.6	3.0	7.2	0.7	1.8	0.1	0.1	0.4	100.0	3,847	0.0	32.2
Middle	52.1	26.6	4.5	11.1	1.5	3.6	0.1	0.2	0.3	100.0	4,040	0.0	45.7
Fourth	29.3	28.9	5.1	18.7	3.2	12.1	1.2	1.2	0.3	100.0	4,270	2.9	67.3
Highest	16.8	21.0	3.5	18.7	4.8	21.6	7.7	5.5	0.3	100.0	4,593	5.7	82.1
Total	45.7	23.5	3.7	12.5	2.2	8.5	2.0	1.6	0.3	100.0	20,715	0.3	51.9

Note: Table is based on de-facto household members, i.e., members who lived in the household the night before the survey in the CORE questionnaires.

[1] Completed X grade at the primary level.

[2] Completed Y grade at the secondary level.

Table 2-7 Educational attainment of the male household population

Percent distribution of the de-facto male household populations age six and over by highest level of schooling attended or completed and median grade completed, according to background characteristics, Eritrea 2010

Background characteristic	No education	Some primary[1]	Completed primary	Some middle	Completed middle	Some secondary[2]	Completed secondary	More than secondary	Don't know/ missing	Total	Number	Median years completed	Literacy rate
Age													
6-9	52.8	46.4	0.1	0.3	0.0	0.0	0.0	0.0	0.3	100.0	3,210	0.0	35.0
10-14	17.7	47.1	5.8	26.0	1.1	2.1	0.0	0.0	0.1	100.0	3,895	3.0	78.9
15-19	8.5	12.7	3.6	35.8	4.8	32.1	1.1	1.3	0.0	100.0	1,988	6.4	90.9
20-24	9.5	6.3	2.3	17.5	5.3	33.3	12.0	13.6	0.3	100.0	784	8.4	89.9
25-29	15.3	7.6	5.1	17.1	4.1	22.5	10.7	17.3	0.3	100.0	559	7.8	85.9
30-34	21.5	8.5	6.3	15.3	5.5	18.6	11.3	12.1	0.8	100.0	542	6.7	80.0
35-39	23.7	9.2	6.5	15.4	5.3	15.3	13.2	10.6	0.8	100.0	595	6.2	81.1
40-44	36.2	14.7	5.3	10.1	4.5	11.8	7.9	8.8	0.8	100.0	481	3.7	71.4
45-49	41.5	19.5	7.8	7.4	3.4	7.1	6.8	5.9	0.6	100.0	546	2.5	63.8
50-54	48.6	15.1	3.8	12.4	1.9	6.2	4.6	6.7	0.6	100.0	454	0.7	55.7
55-59	55.7	12.3	3.9	7.6	1.9	6.4	4.0	6.5	1.6	100.0	494	0.0	51.1
60-64	62.4	11.4	4.2	7.0	2.2	4.1	2.5	5.3	0.8	100.0	561	0.0	44.1
65+	78.8	9.7	2.9	2.9	1.2	1.9	0.5	1.6	0.5	100.0	1,664	0.0	30.1
Residence													
Total urban	14.7	27.3	3.9	19.0	3.4	16.8	6.3	8.2	0.4	100.0	5,533	0.0	83.5
Asmara	7.0	21.7	3.1	18.7	4.4	21.0	9.9	13.7	0.5	100.0	2,392	6.9	92.8
Other Town	20.6	31.6	4.5	19.2	2.7	13.6	3.6	3.9	0.3	100.0	3,141	3.7	76.5
Rural	46.1	27.2	3.8	13.3	1.6	5.7	1.0	1.0	0.4	100.0	10,244	0.0	53.0
Zoba													
Debubawi Keih Bahri	51.1	23.2	2.8	9.1	1.1	7.6	2.1	2.8	0.2	100.0	221	0.0	48.1
Maekel	10.0	24.3	3.3	19.7	4.1	19.6	8.0	10.5	0.5	100.0	3,416	6.0	89.3
Semenawi Keih Bahri	44.0	26.7	3.4	13.2	1.6	7.3	1.5	2.0	0.4	100.0	1,790	0.4	56.5
Anseba	37.5	31.7	4.7	14.4	2.1	6.0	1.9	1.2	0.5	100.0	2,272	1.3	59.0
Gash-Barka	58.0	21.5	4.2	8.9	1.6	3.8	0.9	0.7	0.4	100.0	3,804	0.0	41.5
Debub	28.8	32.9	3.6	19.1	1.8	9.7	1.7	2.2	0.2	100.0	4,274	2.5	69.4
Wealth quintile													
Lowest	60.3	22.7	3.4	9.0	1.1	2.4	0.4	0.4	0.4	100.0	3,487	0.0	39.8
Second	52.5	26.6	3.8	11.0	1.0	3.4	0.6	0.6	0.5	100.0	3,022	0.0	46.2
Middle	35.8	31.2	4.1	16.5	2.5	8.3	0.8	0.6	0.3	100.0	2,922	1.7	62.9
Fourth	18.2	33.6	4.7	21.6	2.8	13.1	2.9	2.8	0.3	100.0	3,106	3.8	78.8
Highest	7.2	23.2	3.1	19.0	4.1	20.7	9.5	12.8	0.4	100.0	3,241	6.7	92.1
Total	35.1	27.3	3.8	15.3	2.3	9.6	2.9	3.5	0.4	100.0	15,777	2.0	63.7

Note: Table is based on de-facto household members, i.e., members who lived in the household the night before the survey in the CORE questionnaires.

[1] Completed X grade at the primary level.

[2] Completed Y grade at the secondary level.

2.4.2 Reasons for not currently attending school

Generally, 38 percent of females and only two percent of males do not currently attend school because of marriage (Table 2-8) By residence, the proportion of persons not attending school because of marriage is slightly higher in rural than urban areas (30 and 25 percent, respectively). The next important cited reason for not attending school is "helping family at home" with similar percentage of males (17 percent) and females (16 percent). Disability or health problem was cited by eight percent of females and a nearly double proportion of males (15 percent) as a reason for not attending school. Eleven percent of persons in rural areas and nine percent in urban areas have a disability or health problem hindering them from currently attending school.

Table 2-8 Reason for not currently attending school

Percentage distribution of the de-facto household population age 4-29 years who are not currently attending school by reason for not attending by sex and residences, Eritrea 2010

	Sex			Residence		
Reason for not attending school	Male	Female	Total urban	Asmara	Other Town	Rural
No school in the area	0.4	0.6	0.4	0.3	0.5	0.6
School very far from the area	2.9	2.9	0.8	0.7	0.9	4.5
Disability/health problem	15.0	7.9	9.1	9.1	9.1	10.8
Help family at home	17.4	15.9	12.1	10.8	13.5	19.6
Help family on farm/business	9.3	1.7	1.6	0.9	2.3	5.9
Needed to earn money (employment)	2.4	1.9	2.5	2.9	2.0	1.7
Dismissed for academic reason	5.1	1.5	3.5	4.4	2.6	1.8
Did not pass entrance exam	9.4	4.3	9.2	10.2	8.0	3.1
Graduated/had enough schooling	13.9	7.5	16.4	21.0	10.9	4.0
Disliked going to school	11.6	4.2	6.7	7.6	5.7	6.1
Not accepted by school because of age	3.0	8.6	5.8	1.6	10.7	7.8
Because of marriage	2.2	38.4	25.1	21.4	29.4	29.7
Other	5.4	3.1	4.7	6.6	2.5	3.0
Missing	2.0	1.6	2.2	2.5	1.7	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	1,426	3,390	2,112	1,144	968	2,704

Note: Table is based on de-facto household members, i.e., members who lived in the household the night before the survey age 4-29 who ever attended school but are not currently attending school in the CORE questionnaires.

2.4.3 School attendance ratios

The Net Attendance Ratio (NAR) for the primary level is the percentage of the primary school-age population (age 7-11) attending primary school. Similarly, the NAR for middle and secondary level is the percentage of middle and secondary school age population (12-14 and 15-18 years, respectively) attending middle and secondary school. The Gross Attendance Ratio (GAR) measures attendance irrespective of the official age at each level. The GAR for primary, middle, and secondary school is the total number of primary, middle, and secondary school students (age 6-18), expressed as a percentage of the official primary, middle, and secondary school-age population. The GAR for a given level is nearly always higher than the NAR, because the GAR includes participation by those who may be older or younger than the official age range. A NAR of 100 percent would indicate that all those in the official age group for the level are attending at that level. GAR can exceed 100 percent if there is significant overage or underage participation at a given level of schooling. The Gender Parity Index for a given level of schooling is the ratio of GAR for females to the GAR for males.

The Net Attendance Ratios, Gross Attendance Ratios, and Gender Parity Index by level of education and sex, according to residence and zoba are presented in Table 2-9. The NAR for the primary school age children currently attending primary school is 57 percent; and for middle and secondary schools 41 and 31 percent, respectively. Urban areas have higher NAR than rural areas at all levels of schooling and urban-rural difference is more pronounced at middle and secondary levels. By zoba, lower NAR attendance ratios are observed in Debubawi Keih Bahri, Semenawi Keih Bahri, and Gash-Barka at all the three levels. NAR increases with an increase in the level of wealth quintile at all of the three levels and by gender.

The Gender Parity Index assesses sex-related differences in school attendance rates and is calculated by dividing the GAR for females by the GAR for males. A GPI less than one indicates a gender disparity in favor of males (i.e., a higher proportion of males than females attend that level of schooling). A GPI greater than one indicates a gender disparity in favor of females. A GPI of one indicates parity or equality between the rates of participation for males and females.

The GPI is 0.96, 0.90, and 0.75 for primary, middle, and secondary schools, respectively, implying that females have almost same level of attendances as do males at primary and middle levels of schooling and lower level of attendances at secondary level. The lower GPI for secondary school could be explained partly due to young women getting married and dropping out of school, especially in rural areas. At all levels of education, GPI is found to be the higher in urban than rural areas. By zobas, Maekel has the highest GPI and Debubawi Keih Bahri has the lowest GPI at all levels. The GAR is estimated at 85, 75, and 47 for primary, middle, and secondary levels, respectively. These show that there is a difference between the NAR and GAR at all three levels of education, indicating that substantial numbers of persons younger or older than the official age range for the levels are attending schools.

There is remarkable improvement in school attendance by both males and females at middle and secondary levels since EDHS2002. The middle school NAR has increased from 21 percent in EDHS2002 to 41 percent in EPHS2010 and the secondary school attendance NAR from 24 percent to 31 percent. The primary school NAR, however, declined from 61 percent in 2002 to 57 percent in 2010. During those eight years, with the exception of Debubawi Keih Bahri, middle and secondary school attendance have increased in all zobas. The improvement in attendance at middle and secondary school was highest in Gash-Barka and lowest in Maekel. Rural areas have also shown significant improvement in middle and secondary school attendance during the same period. The gender breach in school attendance also narrowed during those eight years, especially at the primary level.

Table 2-9 School attendance ratios

Net attendance ratios (NAR) and gross attendance ratios (GAR) for the de-facto household population by sex and level of schooling; and the gender parity index (GPI), according to background characteristics, Eritrea 2010

Background characteristic	Net attendance ratio[1]			Gross attendance ratio[2]			Gender Parity Index[3]
	Male	Female	Total	Male	Female	Total	
			PRIMARY SCHOOL				
Residence							
Total urban	78.0	79.2	78.6	105.8	110.0	107.7	1.04
Asmara	82.7	77.3	80.2	108.6	104.9	106.9	0.97
Other Town	75.8	80.0	77.8	104.4	112.3	108.2	1.08
Rural	48.2	45.8	47.1	77.2	70.8	74.2	0.92
Zoba							
Debubawi Keih Bahri	42.3	33.0	37.8	74.2	51.8	63.2	0.70
Maekel	83.7	78.3	81.2	112.7	107.5	110.3	0.95
Semenawi Keih Bahri	53.5	51.3	52.5	79.3	83.2	81.0	1.05
Anseba	60.2	58.6	59.4	95.9	94.3	95.1	0.98
Gash-Barka	33.7	32.7	33.2	52.2	48.8	50.6	0.93
Debub	67.5	67.6	67.5	103.3	96.4	99.9	0.93
Wealth quintile							
Lowest	32.9	29.6	31.3	56.6	49.6	53.2	0.88
Second	41.9	40.9	41.4	67.8	63.0	65.6	0.93
Middle	61.8	59.4	60.7	96.9	91.5	94.3	0.94
Fourth	83.1	84.5	83.7	120.6	119.9	120.3	0.99
Highest	83.4	83.7	83.6	105.1	111.6	108.2	1.06
Total	57.3	55.9	56.7	86.0	82.7	84.4	0.96
			MIDDLE SCHOOL				
Residence							
Total urban	60.0	58.3	59.2	106.0	100.0	103.1	0.94
Asmara	70.0	68.3	69.2	116.9	113.7	115.3	0.97
Other Town	54.5	53.1	53.8	100.0	92.9	96.6	0.93
Rural	33.6	29.1	31.5	65.6	55.9	61.1	0.85
Zoba							
Debubawi Keih Bahri	26.3	20.7	23.5	57.9	34.2	46.1	0.59
Maekel	68.3	67.5	67.9	118.3	118.7	118.5	1.00
Semenawi Keih Bahri	32.2	23.0	27.5	76.6	39.4	57.6	0.51
Anseba	35.6	34.5	35.1	73.0	72.8	72.9	1.00
Gash-Barka	26.1	20.8	23.7	48.0	39.4	44.2	0.82
Debub	48.9	46.4	47.7	87.2	81.3	84.4	0.93
Wealth quintile							
Lowest	22.5	14.6	18.8	45.4	31.7	38.9	0.70
Second	29.7	24.1	26.9	61.6	45.7	53.8	0.74
Middle	38.8	35.3	37.3	75.3	71.6	73.7	0.95
Fourth	57.4	58.4	57.9	109.3	101.8	105.8	0.93
Highest	69.1	69.1	69.1	111.2	114.4	112.8	1.03
Total	42.3	39.2	40.9	78.9	71.2	75.3	0.90

Continued

Table 2-9 (*Continued*)

Net attendance ratios (NAR) and gross attendance ratios (GAR) for the de-facto household population by sex and level of schooling; and the gender parity index (GPI), according to background characteristics, Eritrea 2010

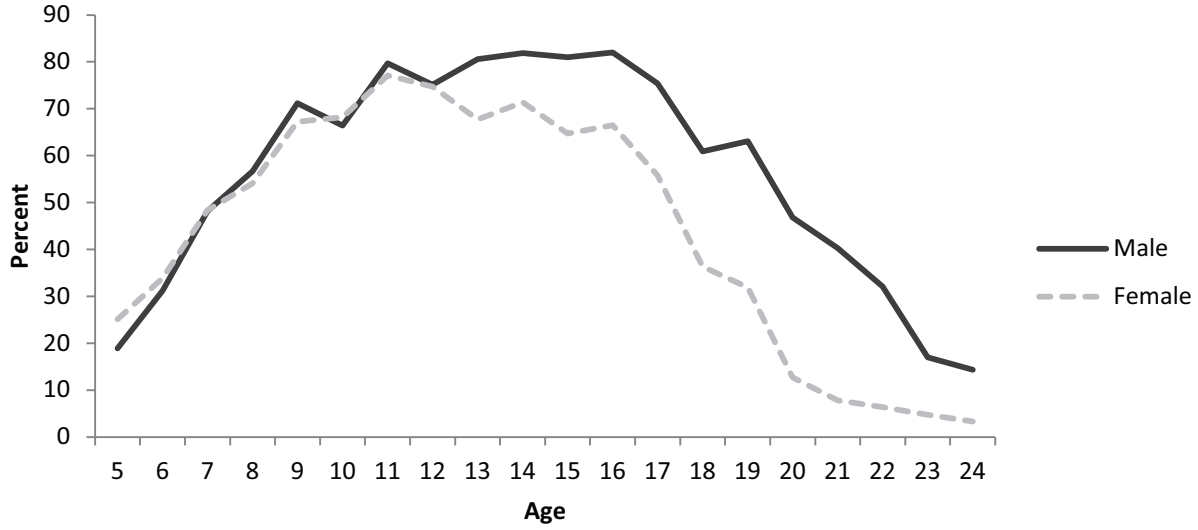
Background characteristic	Net attendance ratio[1]			Gross attendance ratio[2]			Gender Parity Index[3]
	Male	Female	Total	Male	Female	Total	
	SECONDARY SCHOOL						
Residence							
Total urban	54.4	47.2	50.4	84.1	70.7	76.8	0.84
Asmara	66.3	61.1	63.4	98.3	88.0	92.6	0.89
Other Town	45.9	37.3	41.2	74.1	58.4	65.5	0.79
Rural	21.2	15.8	18.4	36.9	21.8	28.9	0.59
Zoba							
Debubawi Keih Bahri	19.3	6.2	12.0	47.1	10.5	26.7	0.22
Maekel	56.7	52.9	54.7	87.1	77.2	81.9	0.89
Semenawi Keih Bahri	27.1	12.1	20.1	42.1	24.2	33.7	0.58
Anseba	21.6	20.4	21.0	41.9	28.3	34.5	0.68
Gash-Barka	18.7	9.6	13.6	31.2	16.3	22.8	0.52
Debub	33.2	30.2	31.6	54.3	41.3	47.2	0.76
Wealth quintile							
Lowest	10.0	4.3	7.0	19.3	6.5	12.5	0.34
Second	18.2	11.7	14.8	28.4	18.2	23.0	0.64
Middle	32.5	15.7	23.2	57.5	21.5	37.7	0.37
Fourth	35.7	40.6	38.2	60.6	59.3	59.9	0.98
Highest	68.8	57.3	62.2	102.5	83.3	91.5	0.81
Total	33.8	28.1	30.7	54.8	40.9	47.4	0.75

Note: Table is based on de-facto household members, i.e., members who lived in the household the night before the survey in the CORE questionnaires.
[1] The NAR for primary school is the percentage of the primary-school age (7-11 years) population that is attending primary school. The NAR for middle school is the percentage of the middle-school age (12-14 years) population that is attending middle school. The NAR for secondary school is the percentage of the secondary-school age (15-18 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 middle school is the total number of middle school students, expressed as a percentage of the official middle-school-age population. The GAR for secondary school is the total number of secondary school students, expressed as a percentage of the official secondary-school-age population. If there are significant numbers of overage and underage students at a given level of schooling, the GAR can exceed 100 percent.
[3] The Gender Parity Index for primary school is the ratio of the primary school NAR (GAR) for females to the NAR (GAR) for males. The Gender Parity Index for middle school is the ratio of the middle school NAR (GAR) for females to the NAR (GAR) for males. The Gender Parity Index for secondary school is the ratio of the secondary school NAR (GAR) for females to the NAR (GAR) for males.

The GPI was 0.89, 0.77, and 0.71 for primary, middle, and secondary levels, respectively, in EDHS2002, compared with 0.96, 0.88, and 0.77 in EPHS2010. The substantial decline of primary school GAR from 100.5 percent in 2002 to 84.5 percent in 2010 could imply that families are sending their children to school at the appropriate age of seven years.

The age-specific attendance rates (ASARs) for the population age 5-24 by single year and sex are shown in Figure 2-3. The ASAR indicates school attendance at any level, from primary to higher levels of education. Although the minimum age for schooling in Eritrea is 7 years, there are some children attending school at younger ages. A majority of children are not attending school at age 7. The peak attendance is at age 13-16 for males when 81-83 percent of boys are currently attending school and at age 11 for females when 77 percent of girls are currently attending school. The male-female disparity in attending school is small at younger ages (in favor of males). Differentials by sex in school attendance become wider beginning at age 12. For example, six in ten males age 19 are attending school, compared with only 32 percent of females.

Figure 2-3 **Age-specific attendance rates by sex**



2.5 Marital Status of the De-facto Household Population

Information on marital status of all household members age 15 and above is included in EPHS2010. Table 2-10 shows the current marital status of the de-facto household population by age, sex, and residence. In this report, ‘‘marriage’’ refers to both formal and informal unions. An informal union is one in which the man and woman live together for some time, intending to have a lasting relationship, but have not had a formal civil, cultural or religious marriage ceremony.

Among females age 15 and above, 56 percent are currently married and 23 percent have never been married. The proportion of never married is much higher among males (38 percent) than females (23 percent), and is higher in urban areas (46 percent for males and 31 percent for females) than in rural areas (33 percent for males and 17 percent for females).

Percentages of currently divorced and separated are generally small, regardless of age, sex, and place of residence; nearly one in eight women age 15 and above in urban and rural areas are currently widowed. By age group, the percentage of women widowed is small except at older ages (40 and above). For example, among women age 50 and above nearly the same percentage (37 percent) of women are widowed in both urban and rural areas. The higher percentage of older woman than older men who are widowed reflects sex differentials in age at marriage, longevity, and remarriage rates. The marital status distribution of the de-facto household population age 15 and above can also be clearly observed in the population pyramid presented in Figure 2-4 below.

Table 2-10 Marital status of the de-facto household population

Percent distribution of the de-facto household population aged 15 and above by marital status, according to age, residence and sex, Eritrea 2010

	Current marital status								
	Never married	Married	Living together	Widowed	Divorced	Not living together	Missing	Total	Number
				URBAN					
Male									
15-19	98.7	1.0	0.0	0.0	0.0	0.0	0.3	100.0	768
20-24	94.8	4.8	0.0	0.0	0.0	0.0	0.3	100.0	358
25-29	79.1	17.6	1.2	0.0	1.3	0.4	0.4	100.0	257
30-34	49.4	45.3	2.8	0.1	1.4	0.3	0.7	100.0	234
35-39	26.9	66.6	2.2	0.3	3.6	0.0	0.4	100.0	250
40-44	9.5	83.6	0.9	1.4	3.1	1.5	0.0	100.0	194
45-49	5.4	89.2	2.4	0.7	2.4	0.0	0.0	100.0	202
50+	1.6	88.7	1.7	4.4	3.1	0.2	0.4	100.0	1,049
Total	46.2	48.8	1.2	1.6	1.8	0.2	0.3	100.0	3,311
Female									
15-19	91.7	7.1	0.0	0.1	0.5	0.3	0.3	100.0	961
20-24	58.4	36.9	1.2	0.2	2.1	0.9	0.3	100.0	771
25-29	29.3	57.8	2.7	1.5	7.0	1.6	0.2	100.0	739
30-34	17.3	63.3	4.1	4.8	9.3	1.0	0.1	100.0	554
35-39	10.1	64.9	1.7	7.7	13.1	2.0	0.5	100.0	599
40-44	6.9	63.1	2.9	11.3	13.0	2.8	0.0	100.0	389
45-49	2.8	68.3	1.6	15.1	10.4	1.2	0.5	100.0	339
50+	2.6	47.0	1.0	36.7	10.3	1.4	0.9	100.0	1,412
Total	30.8	46.2	1.6	12.1	7.5	1.3	0.4	100.0	5,764
				RURAL					
Male									
15-19	98.4	1.3	0.0	0.0	0.1	0.0	0.2	100.0	1,220
20-24	79.9	18.9	0.0	0.0	1.1	0.0	0.0	100.0	426
25-29	40.9	56.2	0.9	0.9	1.2	0.0	0.0	100.0	303
30-34	18.3	76.6	1.1	0.3	3.7	0.0	0.0	100.0	309
35-39	8.0	88.4	1.4	0.3	1.9	0.0	0.0	100.0	345
40-44	2.3	95.1	0.0	0.3	2.3	0.0	0.0	100.0	287
45-49	1.3	94.4	1.5	1.6	0.4	0.7	0.0	100.0	344
50+	1.1	87.2	0.4	7.5	2.4	0.2	1.2	100.0	2,128
Total	33.3	60.8	0.5	3.2	1.6	0.1	0.5	100.0	5,361
Female									
15-19	73.5	24.6	0.0	0.2	1.4	0.1	0.4	100.0	1,464
20-24	21.3	71.8	0.4	0.5	5.1	0.4	0.4	100.0	1,044
25-29	7.4	81.1	1.2	1.3	8.6	0.4	0.1	100.0	1,016
30-34	3.6	82.5	0.3	6.0	6.7	0.3	0.6	100.0	780
35-39	3.6	79.7	1.0	5.4	9.3	1.1	0.0	100.0	886
40-44	2.5	83.4	0.8	6.8	5.1	0.8	0.7	100.0	588
45-49	1.4	75.8	0.5	13.2	6.6	2.1	0.3	100.0	649
50+	1.2	53.7	0.3	37.5	5.4	0.7	1.1	100.0	2,117
Total	17.4	63.2	0.5	12.1	5.6	0.6	0.5	100.0	8,545

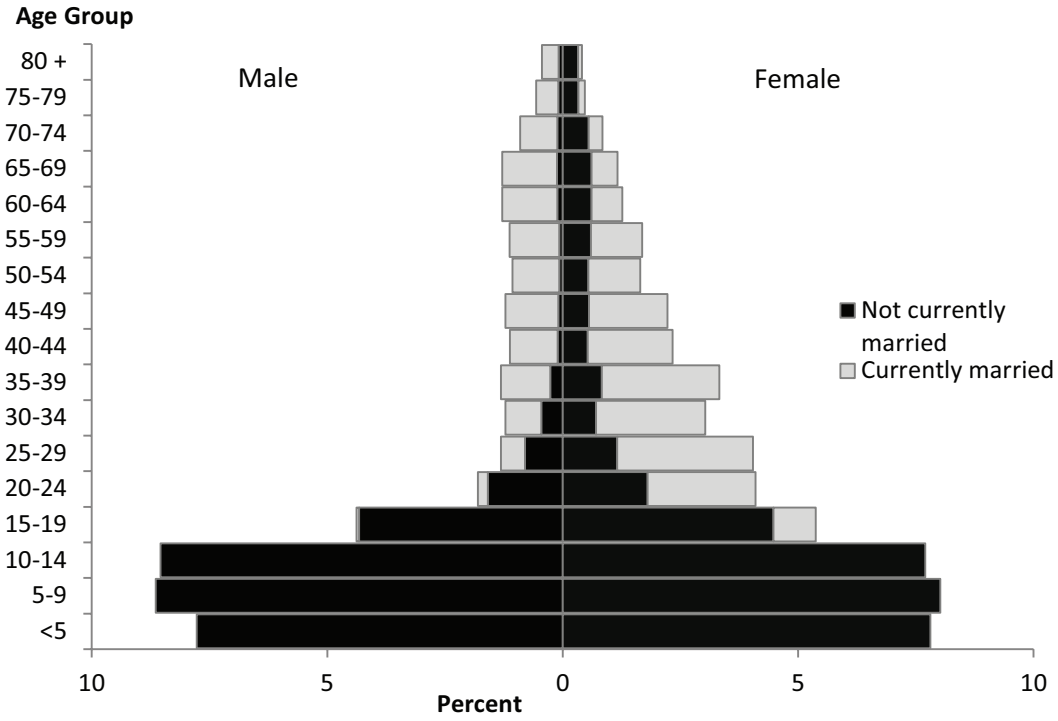
Table 2-10 (*Continued*)

Percent distribution of the de-facto; household population aged 15 and above by marital status, according to age, residence and sex, Eritrea 2010

	Current marital status								
	Never married	Married	Living together	Widowed	Divorced	Not living together	Missing	Total	Number
				TOTAL					
Male									
15-19	98.5	1.2	0.0	0.0	0.1	0.0	0.2	100.0	1,988
20-24	86.7	12.5	0.0	0.0	0.6	0.0	0.1	100.0	784
25-29	58.4	38.4	1.0	0.5	1.2	0.2	0.2	100.0	559
30-34	31.7	63.1	1.8	0.2	2.7	0.1	0.3	100.0	542
35-39	15.9	79.2	1.7	0.3	2.6	0.0	0.2	100.0	595
40-44	5.2	90.5	0.4	0.8	2.6	0.6	0.0	100.0	481
45-49	2.8	92.5	1.9	1.3	1.1	0.5	0.0	100.0	546
50+	1.3	87.7	0.8	6.5	2.6	0.2	0.9	100.0	3,177
Total	38.2	56.2	0.7	2.6	1.7	0.2	0.5	100.0	8,672
Female									
15-19	80.7	17.6	0.0	0.1	1.0	0.2	0.3	100.0	2,425
20-24	37.1	57.0	0.7	0.4	3.9	0.6	0.3	100.0	1,815
25-29	16.6	71.3	1.8	1.4	7.9	0.9	0.1	100.0	1,755
30-34	9.3	74.5	1.9	5.5	7.8	0.6	0.4	100.0	1,334
35-39	6.2	73.7	1.3	6.3	10.8	1.5	0.2	100.0	1,485
40-44	4.2	75.3	1.7	8.6	8.2	1.6	0.4	100.0	978
45-49	1.9	73.2	0.9	13.9	7.9	1.8	0.4	100.0	988
50+	1.8	51.0	0.6	37.2	7.4	1.0	1.0	100.0	3,529
Total	22.8	56.4	0.9	12.1	6.4	0.9	0.5	100.0	14,309

Note: Table is based on de-facto household members, i.e., members who lived in the household the night before the survey in the CORE questionnaires.

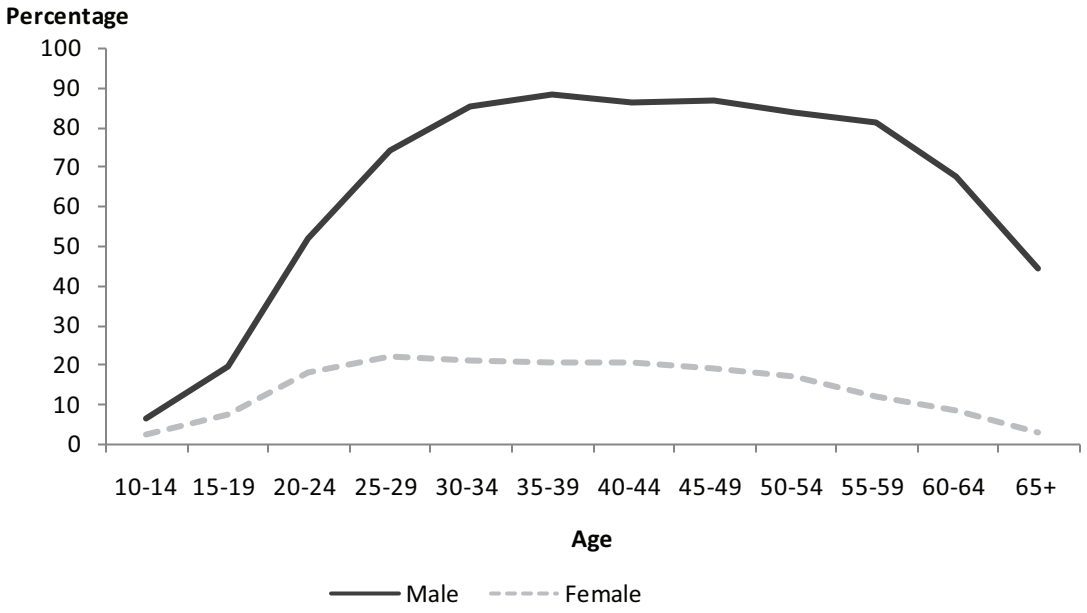
Figure 2-4 Marital status of the de-facto household population by age group and sex



2.6 Employment Status of the Female De-jure Household Population

Sixty-one percent of males and 15 percent of females age 15 and above were employed in the month before the survey and are considered currently employed (Table 2-11). The proportions of males and females age 15-64 who are currently employed are 61 and 15 percent, respectively. The proportion currently employed peaks at age 35-39 for males (88 percent) and at age 25-29 for females (22 percent) (Table 2-11 and Figure 2-5). For both sexes, there is a moderate decline in employment at age 60 and above. However, remarkably, almost half of males age 65 and above were employed the month before the survey. Seventy percent of boys and girls age 10-14 attend school, and only small proportions were employed in the month before the survey. Children's employment varies by sex; boys are more likely to be employed than girls (6 percent versus 2 percent). Among age 10-14 employed children, 67 percent of males and 39 percent of females are not paid for their work.

Figure 2-5 Employment by sex and five year age group



Differentials in employment status by residence and zoba are examined for persons age 15-64, the age considered economically active in Eritrea. There is a slight difference in the level of current employment for males by urban-rural residence, with rural males more likely to be employed than urban males (Table 2-11). However, rural males and males living in Asmara city have the same level of employment (49 percent). In contrast, females are almost three times as likely to be employed in urban areas as in rural areas (20 versus 8 percent). Females are also most likely to be employed in Asmara city compared to other areas.

By zoba, the highest level of male employment is in Gash-Barka (51 percent) and the highest level of female employment is in Maekel (22 percent). The differentials by zoba in male employment are small; at least 45 percent of males are employed in all zobas. The differentials in female employment are marked: about one-fourth of females in Maekel are currently employed, compared with only seven percent in Semenawi Keih Bahri. A substantial majority of employed females and males age 15-64 reported that they earn only cash (82 and 74 percent, respectively), and two percent of females and three percent of males reported that they receive cash plus some payment in kind.

Table 2-11 Employment status

Percent distribution of de-jure household population age 10 and over by employment status and type of earnings, according to background characteristics, Eritrea 2010

Background characteristic	Employment status						Form of earnings						
	Not employed, in school	Not employed last month	Employed last month	Missing	Total	Number	Cash	Kind	Both	Not paid	Missing	Total	Total employed
						MALE							
Age													
10-14	69.7	19.6	6.2	4.6	100.0	4,118	26.8	2.1	2.0	67.0	2.1	100.0	254
15-19	64.5	15.5	19.6	0.5	100.0	2,637	49.8	2.4	3.1	43.7	1.1	100.0	516
20-24	28.7	18.8	52.0	0.5	100.0	1,545	81.2	2.9	1.5	13.4	1.1	100.0	804
25-29	8.0	17.4	74.2	0.3	100.0	1,240	88.0	2.0	0.6	8.6	0.7	100.0	920
30-34	0.0	14.5	85.3	0.1	100.0	1,170	88.5	2.7	0.9	7.6	0.4	100.0	999
35-39	0.0	11.7	88.2	0.2	100.0	1,133	85.2	2.2	1.3	10.2	1.0	100.0	999
40-44	0.0	13.9	86.1	0.0	100.0	946	81.2	3.1	1.7	12.7	1.3	100.0	814
45-49	0.0	13.0	86.6	0.5	100.0	864	74.5	5.0	2.9	17.2	0.3	100.0	748
50-54	0.0	16.4	83.4	0.2	100.0	692	65.6	8.3	4.4	20.6	1.1	100.0	577
55-59	0.0	18.6	81.3	0.0	100.0	672	60.5	7.8	5.1	25.9	0.6	100.0	547
60-64	0.0	31.5	67.6	0.9	100.0	714	60.1	12.5	3.3	22.5	1.7	100.0	482
65+	0.0	55.3	44.1	0.6	100.0	1,888	47.1	15.9	7.8	28.4	0.9	100.0	833
Missing	0.0	100.0	0.0	0.0	100.0	11	na	na	na	na	na	na	0
Residence													
Total urban	34.6	17.3	46.8	1.2	100.0	6,123	91.5	1.4	0.5	6.0	0.7	100.0	2,864
Asmara	30.9	19.0	49.1	1.1	100.0	2,737	96.5	0.1	0.0	2.8	0.6	100.0	1,343
Other Town	37.7	16.0	44.9	1.4	100.0	3,386	87.1	2.5	0.9	8.8	0.8	100.0	1,521
Rural	26.0	23.7	48.9	1.4	100.0	11,507	62.4	7.4	3.9	25.3	1.0	100.0	5,629
Zoba													
Debubawi Keih Bahri	28.6	27.8	43.0	0.6	100.0	271	79.8	0.2	0.7	18.6	0.7	100.0	116
Maekel	31.5	18.4	49.1	1.0	100.0	3,967	92.8	1.8	0.1	4.9	0.4	100.0	1,947
Semenawi Keih Bahri	27.5	23.7	47.6	1.2	100.0	1,942	59.1	8.7	1.6	29.8	0.9	100.0	924
Anseba	30.0	20.6	48.4	1.0	100.0	2,652	67.7	9.8	9.3	11.7	1.5	100.0	1,285
Gash-Barka	18.8	28.0	51.2	2.0	100.0	4,061	59.6	1.9	0.9	36.6	1.0	100.0	2,078
Debub	35.7	17.7	45.2	1.3	100.0	4,736	73.8	8.1	3.5	13.7	1.0	100.0	2,143
Age													
Population age 10+	29.0	21.5	48.2	1.3	100.0	17,630	72.2	5.4	2.7	18.8	0.9	100.0	8,493
Population age 15+	16.6	22.1	61.0	0.4	100.0	13,512	73.6	5.5	2.7	17.3	0.9	100.0	8,239
Population age 10-64	29.0	21.4	48.2	1.3	100.0	17,618	72.2	5.4	2.7	18.8	0.9	100.0	8,493
Population age 15-64	16.6	22.0	61.0	0.4	100.0	13,500	73.6	5.5	2.7	17.3	0.9	100.0	8,239

Table 2-11 *(Continued)*

Percent distribution of de-jure household population age 10 and over by employment status and type of earnings, according to background characteristics, Eritrea 2010

Background characteristic	Employment status						Form of earnings						
	Not employed, in school	Not employed last month	Employed last month	Missing	Total	Number	Cash	Kind	Both	Not paid	Missing	Total	Total employed
						FEMALE							
Age													
10-14	67.2	25.7	2.3	4.8	100.0	3,560	58.2	1.5	0.0	38.9	1.4	100.0	82
15-19	52.5	39.4	7.6	0.5	100.0	2,742	77.1	2.2	0.8	17.7	2.2	100.0	208
20-24	11.0	70.4	18.0	0.5	100.0	1,985	90.9	1.9	0.2	5.8	1.2	100.0	358
25-29	2.4	75.2	22.1	0.3	100.0	1,842	88.9	3.3	0.6	6.0	1.2	100.0	407
30-34	0.0	78.7	21.0	0.4	100.0	1,387	81.6	2.2	3.4	11.3	1.4	100.0	291
35-39	0.0	79.4	20.6	0.0	100.0	1,548	83.3	5.1	1.9	9.3	0.5	100.0	319
40-44	0.0	78.9	20.7	0.4	100.0	1,044	80.7	4.7	2.9	11.1	0.6	100.0	216
45-49	0.0	80.4	19.2	0.4	100.0	1,053	77.5	3.3	1.9	16.3	1.0	100.0	202
50-54	0.0	82.2	16.8	1.0	100.0	799	78.7	5.5	1.1	14.1	0.6	100.0	135
55-59	0.0	87.1	11.7	1.1	100.0	810	76.0	8.5	2.4	13.1	0.0	100.0	95
60-64	0.0	90.9	8.6	0.5	100.0	631	69.6	8.3	3.6	18.5	0.0	100.0	54
65+	0.0	96.0	3.0	1.1	100.0	1,499	47.9	22.0	8.4	21.7	0.0	100.0	45
Missing	0.0	100.0	0.0	0.0	100.0	2	na	na	na	na	na	na	0
Residence													
Total urban	26.5	52.7	19.6	1.2	100.0	7,323	90.0	1.2	1.1	6.6	1.1	100.0	1,438
Asmara	23.0	51.0	24.6	1.4	100.0	3,387	91.9	1.1	0.9	5.0	1.1	100.0	834
Other Town	29.6	54.1	15.3	1.0	100.0	3,936	87.4	1.5	1.3	8.7	1.1	100.0	603
Rural	18.6	71.6	8.4	1.4	100.0	11,581	69.1	7.9	2.6	19.5	0.9	100.0	975
Zoba													
Debubawi Keih Bahri	9.7	77.1	12.2	1.0	100.0	283	71.9	0.0	0.7	26.9	0.6	100.0	34
Maekel	23.8	53.3	21.5	1.3	100.0	4,634	89.5	3.1	0.9	5.3	1.2	100.0	998
Semenawi Keih Bahri	17.6	74.1	7.3	1.0	100.0	1,975	82.5	1.8	0.5	12.8	2.3	100.0	144
Anseba	25.7	65.9	7.7	0.8	100.0	2,704	85.9	3.6	2.8	6.0	1.7	100.0	208
Gash-Barka	12.6	74.2	11.5	1.7	100.0	4,034	81.4	1.0	1.3	15.7	0.6	100.0	464
Debub	26.8	61.0	10.7	1.5	100.0	5,273	66.4	8.8	3.2	21.1	0.6	100.0	563
Age													
Population age 10+	21.6	64.3	12.8	1.3	100.0	18,903	81.6	4.0	1.7	11.8	1.0	100.0	2,412
Population age 15+	11.1	73.2	15.2	0.5	100.0	15,343	82.4	4.0	1.7	10.8	1.0	100.0	2,330
Population age 10-64	21.7	64.3	12.8	1.3	100.0	18,901	81.6	4.0	1.7	11.8	1.0	100.0	2,412
Population age 15-64	11.1	73.2	15.2	0.5	100.0	15,341	82.4	4.0	1.7	10.8	1.0	100.0	2,330

Note: Table is based on de jure members, i.e., usual residents in the CORE questionnaires.
na= Not applicable

2.7 Household Drinking Water

Increasing access to improved drinking water is one of the Millennium Development Goals (MDGs) that Eritrea along with other nations worldwide has adopted (United Nations General Assembly, 2002). In the Household Questionnaire, respondents were asked about characteristics of their households, including access to electricity, source of drinking water, time to water source, time at water source, type of toilet facilities, fuel used for cooking, main flooring material, and number of rooms used for sleeping. Table 2-12 summarizes this information by residence.

Information on a household's source of drinking water is important because potentially fatal diseases including typhoid, cholera, and dysentery are prevalent in unprotected water sources. Sources that are likely to provide water suitable for drinking are identified as improved sources. These include a piped source within the dwelling, yard, or plot; a public tap/stand pipe, or borehole; protected well; spring water and rainwater (WHO and UNICEF Joint Monitoring Program for Water Supply and Sanitation, 2010).

Piped water is mainly accessible in urban areas; more than eight in ten (84 percent) households in Asmara, more than six in ten (64 percent) in other towns and 36 percent (all from public taps) in rural areas use piped water. Twenty-sex percent of households in urban areas, one-third (33 percent) in other towns and 16 percent in Asmara city, depend on tanker trucks to deliver water. The rural piped public tap usage has doubled since EDHS2002. More than one-third of households in rural areas have access to public wells (protected 13 percent and unprotected 22 percent) and 23 percent use surface water. Overall, nearly six in ten of the households in Eritrea have access to improved water source with the corresponding figures for urban and rural areas of 73 and 50 percent, respectively. Accessibility to water is reflected by the time required to get to the water source. Overall, 34 percent of Eritrean households have a water source on their premises (76 percent urban and 11 percent rural). Adult females age 15 and above are mainly the ones who fetch water for the households (36 percent) with nearly half in rural areas and 15 percent in urban areas. Female children under age 15 account for 16 percent of the members who fetch water.

Access to improved water source has increased significantly from 23 percent in 1995 to 55 percent in 2002 and slightly again to 58 percent in 2010 (Figure 2-6).

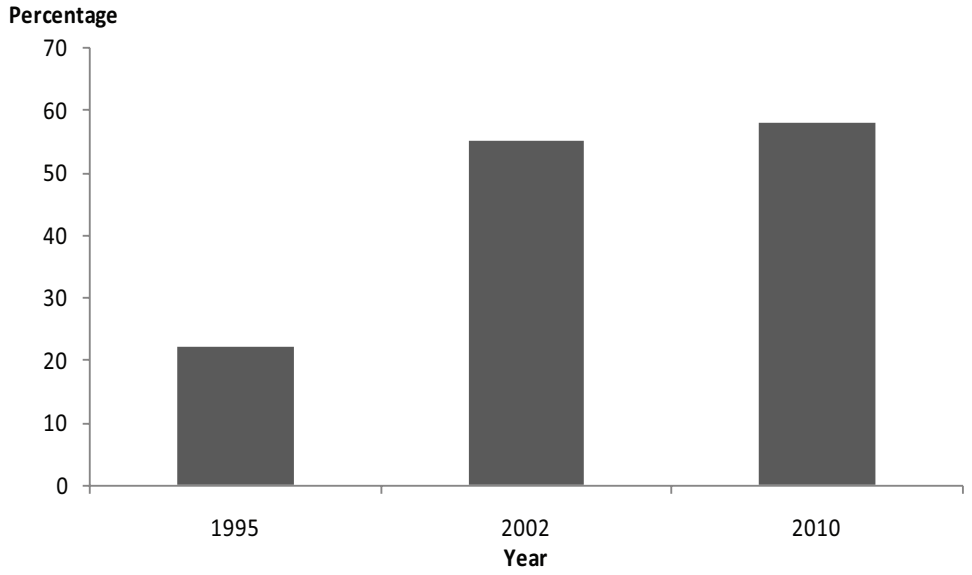
Table 2-12 Household drinking water

Percent distribution of households and de jure population by source, time to collect, and person who usually collects drinking water; and percentage of households and the de jure population by treatment of drinking water, according to residence, Eritrea 2010

	Households					Population				
Characteristic	Total urban	Asmara	Other Town	Rural	Total	Total urban	Asmara	Other Town	Rural	Total
Source of drinking water										
Improved source	72.9	84.1	64.2	50.0	58.2	72.9	83.9	64.6	49.9	57.9
Piped into residence/ yard/ plot	38.7	56.3	25.0	0.3	14.1	38.9	56.9	25.4	0.4	13.8
Public tap	17.9	5.0	27.9	35.6	29.2	18.6	5.3	28.6	35.6	29.7
Private tap	11.6	17.3	7.2	0.3	4.4	11.1	17.0	6.7	0.3	4.1
Protected well in residence/ yard/ plot	0.5	0.5	0.4	0.3	0.3	0.6	0.8	0.4	0.3	0.4
Protected public well	1.6	0.4	2.5	13.3	9.1	1.8	0.4	2.8	13.2	9.2
Bottled water	2.5	4.5	1.0	0.1	1.0	2.0	3.6	0.7	0.0	0.7
Rain water	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1
Non-improved source	27.1	15.9	35.7	49.5	41.4	27.1	16.1	35.3	49.6	41.7
Unprotected well in residence/ yard/ plot	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2
Unprotected public well	0.9	0.0	1.6	22.3	14.6	0.9	0.0	1.5	22.3	14.8
Surface water	0.4	0.0	0.8	23.3	15.1	0.5	0.0	0.8	23.8	15.7
Tanker Truck	25.6	15.8	33.2	3.8	11.6	25.6	15.9	32.9	3.4	11.1
Other	0.0	0.0	0.1	0.5	0.3	0.0	0.0	0.1	0.5	0.4
Missing	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Time to obtain drinking water (round trip)										
Water on premises	75.8	88.4	66.1	11.0	34.4	75.5	87.9	66.2	10.6	33.2
Less than 30 minutes	10.9	6.7	14.2	15.3	13.7	10.9	7.2	13.6	15.4	13.8
30 minutes or longer	12.1	4.2	18.3	70.8	49.6	12.6	4.2	19.0	71.8	51.2
Don't know/missing	1.1	0.7	1.4	2.9	2.3	1.0	0.8	1.2	2.1	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Person who usually collects drinking water										
Adult female 15+	14.7	8.6	19.3	47.9	35.9	14.4	8.8	18.6	45.6	34.8
Adult male 15+	3.9	1.2	6.0	11.5	8.8	4.0	1.3	6.1	10.9	8.5
Female child under age 15	2.6	0.4	4.3	15.8	11.1	3.1	0.5	5.1	19.9	14.1
Male child under age 15	1.6	0.5	2.5	9.1	6.4	1.9	0.6	3.0	10.5	7.5
Other	0.9	0.6	1.0	4.5	3.2	0.5	0.5	0.5	2.2	1.6
Water on premises	75.8	88.4	66.1	11.0	34.4	75.5	87.9	66.2	10.6	33.2
Missing	0.5	0.3	0.7	0.2	0.3	0.5	0.4	0.5	0.2	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of CORE	3,816	1,666	2,150	6,772	10,588	17,824	7,660	10,164	33,357	51,181

Note: Table is based on the CORE questionnaires.

Figure 2-6 **Trends in access to improved water source, 1995, 2002, 2010**



2.8 Household Sanitation Facilities

Ensuring adequate sanitation facilities is another of the Millennium Development Goals (MDGs) which Eritrea shares with other countries. Access to adequate sanitation facilities is an important determinant of health conditions. Proper sanitation facilities lead to improved hygiene practices, and ultimately improved health conditions. Seventy percent of households in Eritrea (35 percent of the urban households and 90 percent of rural households) are without toilet facility as compared to 74 percent of the households (39 percent in urban and 96 percent in rural) without toilet facility in 2002 (Table 2-13). Neither do 47 percent of the households in other towns and 20 percent of households in Asmara city have any toilet facility while 50 percent of households in other towns and 27 percent in Asmara city were without toilet facility in 2002; a very slight improvement by 2010.

Regarding solid waste disposal, 45 percent of households in urban areas and 0.5 percent of households in rural areas dispose their solid waste in closed public containers while 35 percent of households in urban areas and 99 percent in rural areas dumped their solid waste and garbage anywhere convenient to them (Table 2-13).

Table 2-13 Household sanitation facilities

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

	Households					De-jure Population				
Sanitation facility	Total urban	Asmara	Other Town	Rural	Total	Total urban	Asmara	Other Town	Rural	Total
Toilet facility										
Improved, not shared facility	24.0	31.7	18.1	3.3	10.7	25.8	33.5	20.0	3.5	11.3
Flush to piped sewer system	10.3	21.7	1.5	0.0	3.7	10.1	21.7	1.3	0.0	3.5
Flush to septic tank	10.2	9.4	10.8	1.1	4.4	11.7	11.0	12.2	1.1	4.8
Flush to pit latrine	1.9	0.6	2.9	0.5	1.0	2.1	0.7	3.1	0.6	1.1
Ventilated improved pit Latrine	1.7	0.0	2.9	1.7	1.7	1.9	0.0	3.4	1.8	1.8
Non-improved facility	75.8	68.0	81.7	96.7	89.2	74.0	66.2	79.9	96.5	88.7
Any facility shared with other households	33.4	47.9	22.2	3.1	14.0	31.4	46.2	20.3	2.6	12.6
Traditional pit toilet	7.1	0.2	12.5	3.3	4.7	8.4	0.4	14.4	3.7	5.3
No facility/ bush/ field	35.2	19.9	47.1	90.3	70.4	34.2	19.6	45.2	90.2	70.7
Other	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Missing	0.2	0.2	0.2	0.0	0.1	0.1	0.2	0.1	0.0	0.0
Solid waste and garbage										
Collected by public vehicle	19.1	33.4	8.0	0.0	6.9	18.8	33.3	7.9	0.0	6.5
Public container (closed)	44.5	58.8	33.4	0.5	16.4	44.2	58.8	33.2	0.5	15.7
Public container (open)	1.1	0.8	1.4	0.2	0.5	1.1	0.6	1.4	0.2	0.5
Dumped anywhere	35.3	6.9	57.2	99.3	76.2	35.9	7.3	57.5	99.3	77.2
Missing	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	3,816	1,666	2,150	6,772	10,588	17,824	7,660	10,164	33,357	51,181

Note: Table is based on the CORE questionnaires.

2.9 Housing Characteristics

Information on a number of household dwelling characteristics including access of households to electricity, type of fuel used for cooking and others is presented in Table 2.14. These characteristics reflect the household's socio-economic situation. They may also influence environmental conditions that have a direct bearing on household members' health and welfare. Overall, 37 percent of the households in Eritrea have electricity which has increased slightly from EDHS2002 (32 percent) but has more substantially increased since EDHS1995 (23 percent). On the other hand, there is a marked increase of households with electricity in rural areas (13 percent) which was only three percent in 2002. Regarding urban areas, 81 percent of households have electricity as compared to 78 percent in 2002.

Several types of fuel are used for cooking in Eritrea. Sixty-eight percent of households use firewood, straw, and sawdust for cooking and 17 percent use kerosene. Regarding urban-rural variation, wood or straw is more commonly used for cooking in rural areas (90 percent) than in urban areas (27 percent). In Asmara, most households use either kerosene (61 percent) or gas (34 percent) as fuel for cooking. Thirty-nine percent of urban households and 95 percent of rural households use some type of solid fuel.

The type of material used for flooring is an indicator of the economic standing of the household as well as the potential exposure of household members to disease-causing agents. Fifty-eight percent of households live in structures with floors made of earth/sand, 21 percent have floors made of concrete/ cement, and 13 percent have ceramic tile floors.

Table 2-14 Housing characteristics

Percent distribution of households and de-jure population by housing characteristics and percentage using solid fuel for cooking; and among those using solid fuels, percent distribution by type of fire/stove, according to residence, Eritrea 2010

	Households					De-jure Population				
Housing characteristic	Total urban	Asmara	Other Town	Rural	Total	Total urban	Asmara	Other Town	Rural	Total
Electricity										
Yes	81.3	97.4	68.8	12.5	37.2	81.6	97.8	69.5	12.4	36.6
No	18.7	2.6	31.2	87.5	62.8	18.4	2.2	30.5	87.6	63.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Flooring material										
Earth/sand	28.9	7.8	45.2	74.8	58.4	28.3	6.3	44.8	74.6	58.4
Dung	1.4	0.2	2.3	9.4	6.5	1.3	0.1	2.2	9.3	6.5
Wood planks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Palm/bamboo/reeds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Parquet or polished wood	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Vinyl or asphalt strips	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1
Ceramic tiles	32.5	54.3	15.6	2.5	13.2	32.7	55.5	15.6	2.2	12.9
Concrete/cement	36.4	36.6	36.2	13.1	21.4	36.9	37.0	36.8	13.6	21.8
Carpet/plastic	0.6	0.6	0.5	0.1	0.2	0.5	0.6	0.5	0.1	0.2
Other	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1
Main wall material										
No walls	0.2	0.1	0.2	0.5	0.4	0.2	0.1	0.2	0.4	0.3
Cane/palm/trunks	0.4	0.0	0.6	1.8	1.3	0.3	0.0	0.6	1.7	1.2
Tent/garment	1.4	0.0	2.4	13.0	8.9	1.2	0.0	2.1	12.4	8.5
Bamboo with mud	9.0	1.3	14.9	11.4	10.5	9.2	1.3	15.1	11.4	10.6
Stone with mud	10.4	10.7	10.2	41.6	30.4	10.0	9.9	10.1	42.4	31.0
Plywood	1.9	0.3	3.2	0.4	1.0	1.7	0.3	2.8	0.5	0.9
Wood planks/shingles	1.2	0.0	2.2	6.5	4.6	1.1	0.0	2.0	6.2	4.4
Cement	5.6	9.3	2.8	0.7	2.5	5.5	9.0	2.9	0.7	2.4
Stone with lime/cement	10.8	10.4	11.2	8.9	9.6	11.1	10.7	11.3	9.4	10.0
Bricks	21.8	42.2	5.9	1.4	8.7	21.7	42.8	6.0	1.4	8.6
Cement blocks	35.6	24.6	44.1	11.7	20.3	36.4	25.0	44.9	11.5	20.2
Other	1.7	1.0	2.2	2.0	1.9	1.5	0.9	2.0	1.9	1.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Main roof material										
Grass/thatch	7.6	0.0	13.5	30.7	22.4	7.8	0.0	13.6	30.5	22.5
Wood/dung/mud	1.4	0.3	2.2	22.4	14.9	1.4	0.4	2.1	22.2	14.9
Palm leaves and trees	4.2	0.0	7.5	7.5	6.3	4.3	0.0	7.5	7.4	6.3
Tent/garment	2.3	0.3	3.9	7.8	5.8	2.1	0.2	3.5	7.4	5.6
Tin cans	0.2	0.3	0.1	0.0	0.1	0.1	0.2	0.1	0.0	0.1
Corrugated iron	73.7	81.8	67.5	30.9	46.2	73.9	81.5	68.2	31.7	46.5
Asbestos sheet	2.2	1.7	2.7	0.2	0.9	2.2	1.8	2.5	0.2	0.9
Vinyl or asphalt strips	0.8	1.7	0.1	0.0	0.3	0.9	1.9	0.1	0.0	0.3
Cement/ steel/ concrete	7.1	13.0	2.5	0.5	2.9	6.9	13.0	2.3	0.5	2.7
Roof tiles	0.4	0.7	0.1	0.0	0.1	0.4	0.8	0.1	0.0	0.1
Other	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 2-14 (Continued)

Percent distribution of households and de-jure population by housing characteristics and percentage using solid fuel for cooking; and among those using solid fuels, percent distribution by type of fire/stove, according to residence, Eritrea 2010

	Households					De-jure Population				
Housing characteristic	Total urban	Asmara	Other Town	Rural	Total	Total urban	Asmara	Other Town	Rural	Total
Rooms used for sleeping										
One	70.6	66.9	73.4	86.3	80.6	64.1	61.4	66.1	82.7	76.2
Two	23.1	24.5	22.0	12.7	16.4	27.4	27.6	27.2	15.7	19.8
Three or more	6.3	8.6	4.6	1.0	2.9	8.5	11.0	6.7	1.5	4.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Persons per sleeping room										
<3	34.8	39.0	31.5	23.9	27.8	21.1	25.2	18.1	10.7	14.3
3-4	33.2	31.5	34.6	32.8	33.0	33.9	32.6	34.8	28.7	30.5
5-6	20.1	18.7	21.2	22.9	21.9	24.9	23.3	26.1	26.8	26.1
7+	11.8	10.8	12.7	20.3	17.3	20.1	18.9	21.0	33.8	29.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean number of persons per sleeping room	3.8	3.6	3.9	4.4	4.2	0.0	0.0	0.0	0.0	0.0
Persons per room										
<3	44.6	50.3	40.2	28.8	34.4	32.2	38.4	27.7	15.3	21.3
3-4	29.5	26.6	31.8	32.8	31.7	31.4	28.6	33.5	30.8	31.0
5-6	16.5	14.8	17.8	20.8	19.2	20.5	18.5	21.9	24.7	23.2
7+	9.4	8.3	10.3	17.6	14.6	15.9	14.6	16.9	29.1	24.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean number of persons per room	3.4	3.2	3.5	4.2	3.9	0.0	0.0	0.0	0.0	0.0
Separate or independent room for kitchen										
Yes	61.9	59.3	63.9	51.6	55.3	65.8	62.4	68.3	55.4	59.0
No	38.1	40.6	36.1	48.4	44.7	34.2	37.5	31.7	44.6	41.0
Missing	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Cooking fuel										
Electricity	0.2	0.2	0.2	0.0	0.1	0.1	0.1	0.1	0.0	0.1
LPG, natural gas	17.7	33.6	5.4	0.9	6.9	18.3	35.6	5.4	0.9	7.0
Biogas	2.0	3.6	0.8	0.1	0.8	2.2	4.0	0.9	0.1	0.8
Kerosene	40.4	60.5	24.8	3.9	17.0	38.3	58.5	23.2	3.3	15.6
Coal, lignite	0.2	0.1	0.3	0.0	0.1	0.2	0.1	0.3	0.0	0.1
Charcoal	12.0	1.1	20.4	2.5	5.9	11.9	0.9	20.1	2.4	5.7
Firewood, straw, sawdust	26.8	0.4	47.2	90.4	67.6	28.4	0.3	49.4	91.4	69.3
Animal dung manure	0.4	0.3	0.5	1.9	1.4	0.5	0.4	0.5	1.8	1.4
No food cooked in household	0.3	0.2	0.4	0.2	0.2	0.1	0.0	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percentage using solid fuel for cooking [1]	39.3	1.9	68.4	94.9	75.0	41.0	1.7	70.3	95.6	76.5
Number of house-holds/ population using solid fuel	11,199	4,894	6,305	20,015	31,214	52,636	22,534	30,101	97,661	150,297

Note: Table is based on both CORE and MMM questionnaires.
LPG = Liquid petroleum gas.
[1] Includes coal/lignite, charcoal, wood/straw/shrubs/grass, agricultural crops, and animal dung.

The flooring material differs considerably by place of residence. Rural houses have poorer quality floors than urban houses (84 percent of rural households have earth/sand or dung floors, while 69 percent of urban houses have concrete/cement or ceramic tiles floors). In Asmara, more than half (54 percent) of the households' floors are made of ceramic tiles and 37 percent have cement floors. The proportion of households with floors made of ceramic tiles remained almost the same since 2002. Walls of dwellings (31 percent) are most often made of stone with mud, followed by those with walling made from cement or blocks (20 percent). Regarding roofing material of the dwelling units, 47 percent is made from corrugated iron sheet and 23 percent from grass or thatch (Table 2-14).

Information on the total number of rooms (excluding toilets and kitchens) and sleeping rooms were collected to measure household crowding. Overall, 29 percent of households have less than three persons per room and around one third (33 percent) of households have three to four persons per room. Crowding is more common in rural areas than urban areas. For example, 12 percent of the households in urban areas have seven or more persons per room, compared with 20 percent in rural areas. The mean number of persons per room and per sleeping room in rural areas is 4.2 and 4.4, respectively; in urban areas, it is 3.4 and 3.8, respectively.

2.10 Household Possessions

Information on household possession of durable goods and means of transportation is presented in Table 2-15. Combined with other indicators, information on ownership of durable goods can be used to generate a wealth index that acts as a proxy estimate for the socio-economic status of a household. Ownership of a radio or television is a measure of access to mass media; telephone ownership measures access to efficient communications; refrigerator ownership indicates a capacity for more hygienic storage. Bicycle, motorcycle, car, and donkey cart ownership reflects access to means of transportation. In general, ownership of these items has a bearing on the households' access to health information and services.

Three in ten households in Eritrea own a radio (36 percent of urban households and 27 percent of rural households). The difference between urban and rural areas is much larger when it comes to ownership of television: 54 percent households in urban areas (80 percent in Asmara) and only four percent in rural areas. Overall in Eritrea, two in ten (22 percent) households own a television.

One in four households has a telephone (19 percent mobile and 7 percent non-mobile). Urban households are more likely than rural households to own modern conveniences powered by electricity like refrigerators (23 percent), receiver (27 percent) and washing machine (12 percent) are almost exclusively owned in urban areas with only about three percent of each type in rural areas.

Regarding ownership of any means of transportation, 84 percent of the households do not own any means of transportation. Bicycles are the most common means of transportation; one in ten (11 percent) households owns a bicycle. Only three percent of the households own a car or a truck, the same as reported in EDHS2002.

Respondents to the Household Questionnaire were also asked whether they owned the house they lived in, whether they owned livestock and cropland, and whether they grew cash crops. Nearly three-fourths of households own a house, (44 percent in urban and 88 in rural); 48 percent own livestock, (15 percent in urban and 67 in rural) and nearly three in ten households own horses, mules, or donkeys (five percent in urban and 38 percent in rural). Six in ten of the households own agricultural lands. As expected, ownership of agricultural land is much lower among urban than rural households (19 percent versus 82 percent).

Table 2-15 Household durable goods

Percentage of households and de-jure population possessing various household effects, means of transportation, agricultural land and livestock/farm animals by residence, Eritrea 2010

	Households					Population				
Possession	Total urban	Asmara	Other Town	Rural	Total	Total urban	Asmara	Other Town	Rural	Total
Durable Assets										
Radio	35.7	36.9	34.7	26.6	29.8	36.7	37.7	1p1.03	28.8	31.6
Television	54.3	79.8	34.5	4.1	22.1	58.8	85.7	38.7	4.6	23.6
Mobile telephone	43.0	58.0	31.4	5.3	18.8	47.3	63.7	34.9	6.1	20.5
Non-mobile telephone	17.6	29.1	8.6	0.3	6.5	18.9	31.1	9.8	0.4	6.9
Refrigerator	23.2	38.2	11.5	0.7	8.8	24.4	40.5	12.3	0.7	9.0
Cassette player	51.5	69.9	37.2	11.9	26.1	53.6	73.2	39.0	13.2	27.4
Receiver	26.8	38.7	17.6	1.0	10.3	30.3	43.4	20.4	1.2	11.4
Personal computer	2.2	4.2	0.7	0.2	0.9	2.5	4.9	0.7	0.2	1.0
Washing basin	97.0	98.2	96.1	83.5	88.3	97.8	98.7	97.0	85.3	89.7
Washing machine	11.7	22.8	3.2	0.9	4.8	12.6	24.8	3.5	0.9	5.0
Sofa	58.9	85.6	38.2	8.2	26.4	62.4	90.5	41.4	8.6	27.4
Yoke beam	4.6	1.6	6.9	45.6	30.9	5.5	1.8	8.2	51.5	35.4
Bicycle	22.1	32.8	13.8	5.2	11.3	27.2	41.0	16.9	6.4	13.7
Animal drawn cart	2.9	1.0	4.4	1.2	1.8	3.8	1.3	5.7	1.5	2.3
Motorcycle/scooter	0.3	0.5	0.2	0.0	0.1	0.3	0.6	0.2	0.0	0.1
Car/truck	7.4	13.7	2.6	0.4	2.9	8.8	16.0	3.4	0.5	3.4
Boat with a motor	0.1	0.0	0.2	0.1	0.1	0.2	0.0	0.3	0.1	0.2
Local cattle (indigenous)	1.5	0.2	2.5	13.2	9.0	1.8	0.3	2.9	14.7	10.2
Exotic/ cross cattle	0.1	0.0	0.2	0.5	0.4	0.1	0.0	0.3	0.6	0.5
Horse, donkeys or mules	5.0	0.5	8.5	38.4	26.4	6.4	0.8	10.5	44.0	30.8
Goats	1.2	0.0	2.1	2.8	2.2	1.5	0.1	2.5	2.9	2.4
Sheep	0.6	0.0	1.0	2.1	1.5	0.7	0.0	1.2	2.4	1.8
Chicken	1.1	0.3	1.8	5.1	3.7	1.4	0.3	2.1	5.7	4.2
Camels	0.4	0.0	0.7	6.7	4.4	0.5	0.0	1.0	7.7	5.2
Tenure status										
Owns	44.0	30.8	54.2	88.4	72.5	46.8	31.4	58.3	89.8	74.7
Pays rent/lease	43.1	53.0	35.5	4.4	18.3	41.0	52.8	32.1	3.8	16.8
Free	12.7	15.7	10.4	7.2	9.1	12.1	15.3	9.6	6.3	8.3
Ownership of agricultural land	19.1	3.1	31.5	81.7	59.2	20.7	3.6	33.4	83.9	61.8
Size of agricultural land (hect)										
<1 hectare	9.6	1.6	15.8	42.4	30.7	10.0	1.9	16.0	42.4	31.0
1-1.4 hectares	3.5	0.2	6.1	21.4	15.0	3.9	0.3	6.6	22.6	16.0
1.5-2 hectares	3.2	0.2	5.6	12.2	8.9	3.6	0.2	6.2	13.0	9.7
>2 hectares	1.7	0.4	2.7	4.1	3.3	2.0	0.6	3.2	4.4	3.6
Missing	1.1	0.8	1.4	1.7	1.5	1.2	0.8	1.4	1.6	1.4
No agricultural land	80.8	96.8	68.4	18.2	40.7	79.3	96.3	66.5	16.0	38.2
Number	11,199	4,894	6,305	20,015	31,214	52,636	22,534	30,101	97,661	150,297

Note: Table is based on both CORE and MMM questionnaires.

2.11 Wealth Quintiles

Information on household assets was used to create an index that is used throughout this report to represent the wealth of the households interviewed in the EPHS2010. The wealth index was 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 has been shown to be consistent with expenditure and income measures (Rutstein, 1999). The wealth index is constructed using household asset data, including ownership 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 flooring material.

The resulting wealth index has a mean of zero and a standard deviation of one. Once the index is computed, national-level wealth quintiles (from lowest to highest) are formed by assigning the household score to each de-jure household member, ranking each person in the population by that score, and then dividing the ranking into five equal categories, each comprising 20 percent of the population.

Throughout this report, wealth quintiles are expressed in terms of quintiles of individuals in the overall population rather than quintiles of individuals at risk for any one health or population indicator. For example, quintile rates for infant mortality refer to infant mortality rates per 1,000 live births among all people in the population wealth quintile concerned, as distinct from quintiles of live births or newly born infants, who constitute the only members of the population at risk of mortality during infancy. Urban population is represented in the fourth and highest quintiles (86 percent), while about 6 in 10 households in rural areas are in the lowest and second wealth quintiles. The wealth quintile distribution among zobas also shows large variations. The three zobas with lowest wealth quintiles are Anseba 33 percent, Gash-Barka 31 percent and Semenawi Keih Bahri 26 percent. In contrast, Maekel has the largest proportions in the highest wealth quintile, 64 percent (Table 2-16).

Table 2-16 Wealth quintiles

Percent distribution of the de- jure population by wealth quintiles according to residence and zoba, Eritrea 2010

	Wealth quintile						
Residence/Zoba	Lowest	Second	Middle	Fourth	Highest	Total	Population
Residence							
Total urban	0.9	2.4	11.0	32.1	53.7	100.0	52,636
Asmara	0.0	0.0	0.1	15.1	84.7	100.0	22,534
Other Town	1.5	4.2	19.1	44.8	30.4	100.0	30,101
Rural	30.3	29.5	24.9	13.5	1.8	100.0	97,661
Zoba							
Debubawi Keih Bahri	1.3	36.2	33.6	15.9	12.9	100.0	2,282
Maekel	1.0	2.6	5.8	26.6	64.0	100.0	32,527
Semenawi Keih Bahri	25.7	21.7	26.2	18.5	8.0	100.0	16,583
Anseba	33.4	21.6	18.2	17.2	9.6	100.0	22,307
Gash-Barka	31.3	31.0	24.8	10.8	2.1	100.0	34,953
Debub	16.9	21.9	24.8	24.9	11.5	100.0	41,644
Tota	20.0	20.0	20.0	20.0	20.0	100.0	150,297

Note: Table is based on both CORE and MMM questionnaires.

CHARACTERISTICS OF RESPONDENTS 3

Key Findings

- More women and men in Eritrea of age 15-49 (60 percent of women and 81 percent of men) have formal education than those who do not. The proportion for women has increased since 2002, when 50 percent of women had formal education.
- The main reasons for not attending school for 69 percent of women and 39 percent of men age 15-29 who ever attended school are marriage (51 percent) for women and family needed help on farm/business (27 percent) for men.
- Men of age 15-59 are more likely to be exposed to at least one form of mass media compared to women of age 15-49 (68 and 47 percent respectively).
- Only twenty-three percent of women were employed in the 12 months preceding the survey. The largest group of these women (23 percent) worked in the sales and services occupation.

This chapter provides a demographic and socioeconomic profile of women age 15-49 and men age 15-59 interviewed in the EPHS2010. Such background information is essential to interpreting the findings and understanding the results presented later in this report. Basic characteristics collected include age, level of education, marital status, religion, ethnicity, and wealth status. The survey also examined literacy status and exposure to mass media and collected detailed information on employment status, occupation, and earnings. In addition, this chapter includes knowledge and attitudes concerning tuberculosis and discussion of tobacco use.

3.1 Characteristics of Survey Respondents

This survey used two types of questionnaire to collect information on women: the core women questionnaire which is detailed and the maternal mortally questionnaire which is a shorter version mainly focused on maternal mortality. About six in every ten women and men age 15-49 (56 percent and 61 percent, respectively) 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 Eritrea. For women, the percentages range from 23 percent for the age group 15-19 to 9 percent for the age group 45-49. For men, the percentages range from 36 percent for age group 15-19 to 10 percent for age group 45-49 (Table 3-1). The different proportions between men and women within the age groups stem from differential migration of the sexes. Other proportions, such as religious groups, are also affected by migration in similar ways.

About six in every ten respondents (56 percent of the women, 60 percent men) are Orthodox Christians, and about four in every ten (40 percent of women, 34 percent of men) are Muslims. Catholics account for 4 percent of women and 5 percent of men, while Protestant men and women account for 1 percent.

Table 3-1 Background characteristics of respondents

Percent distribution of women and men age 15-49 [59] by selected background characteristics, Eritrea 2010

	Women CORE			Women ALL			Men		
Background characteristic	Weighted percent	Weighted	Unweighted	Weighted percent	Weighted	Unweighted	Weighted percent	Weighted	Unweighted
Age									
15-19	22.5	2,301	2,179	22.7	6,864	6,614	35.9	1,544	1,476
20-24	17.0	1,744	1,706	16.8	5,080	5,034	14.8	635	640
25-29	16.1	1,646	1,677	16.2	4,882	4,949	10.4	449	463
30-34	12.0	1,228	1,268	12.0	3,633	3,694	9.1	390	378
35-39	14.0	1,429	1,453	13.8	4,186	4,261	11.4	490	483
40-44	9.2	940	990	9.1	2,750	2,835	8.7	376	379
45-49	9.3	951	965	9.4	2,830	2,837	9.7	417	429
Religion									
Orthodox	55.4	5,671	5,147	55.8	16,851	15,768	60.0	2,581	2,336
Catholic	4.3	445	423	4.2	1,264	1,254	4.7	200	193
Protestant	0.8	85	83	0.8	238	243	1.0	43	42
Muslim	39.1	4,005	4,556	39.0	11,795	12,886	33.9	1,458	1,662
Traditional believer	0.3	29	27	0.2	69	65	0.2	7	7
Ethnicity									
Afar	2.1	211	923	2.1	631	1,916	1.8	79	342
Bilen	3.1	316	278	3.2	953	887	2.8	118	105
Hedarib	1.0	107	85	1.0	315	258	0.8	33	27
Kunama	1.2	122	105	1.3	392	353	0.9	41	36
Nara	3.6	364	270	3.4	1,021	788	2.4	103	77
Rashaida	0.1	12	27	0.1	32	70	0.1	2	6
Saho	4.6	466	448	4.4	1,318	1,286	4.7	201	191
Tigre	23.2	2,376	2,370	23.2	7,004	7,176	19.6	843	839
Tigrigna	61.0	6,244	5,689	61.2	18,494	17,380	66.8	2,872	2,616
Other	0.2	19	43	0.2	61	109	0.2	7	9
Marital status									
Never married	28.1	2,878	2,817	0.0	0	0	58.2	2,504	2,444
Married	57.1	5,841	5,970	0.0	0	0	38.5	1,656	1,621
Living together	3.3	342	316	0.0	0	0	1.4	59	105
Divorced/separated	7.7	791	766	0.0	0	0	1.5	63	62
Widowed	3.8	386	369	0.0	0	0	0.4	15	14
Missing	0.0	0	0	0.0	0	0	0.1	2	2
Residence									
Total urban	40.3	4,125	4,323	40.4	12,222	12,965	40.9	1,757	1,910
Asmara	18.3	1,870	1,819	18.2	5,494	5,648	19.9	855	828
Other Towns	22.0	2,255	2,504	22.3	6,728	7,317	21.0	902	1,082
Rural	59.7	6,113	5,915	59.6	18,002	17,259	59.1	2,542	2,338
Zoba									
Debubawi Keih Bahri	1.6	163	1,041	1.6	479	2,028	1.6	67	424
Maekel	24.8	2,535	2,271	24.8	7,486	7,069	27.8	1,196	1,052
Semenawi Keih Bahri	11.0	1,122	1,423	10.8	3,263	4,254	10.9	470	580
Anseba	14.0	1,436	1,387	14.0	4,243	4,243	13.7	588	556
Gash-Barka	22.0	2,255	1,836	22.3	6,727	5,699	18.1	778	643
Debub	26.6	2,727	2,280	26.6	8,026	6,931	27.9	1,200	993
Education									
No education	37.9	3,882	4,185	37.9	11,452	11,917	13.9	599	662
Primary	21.1	2,162	2,055	21.4	6,478	6,252	15.3	659	637
Middle	19.0	1,946	1,827	18.8	5,694	5,475	27.6	1,188	1,117
Secondary or above	21.9	2,246	2,170	21.8	6,595	6,575	43.1	1,853	1,831
Missing	0.0	1	1	0.0	6	5	0.0	0	1
Wealth quintile									
Lowest	17.1	1,746	1,594	16.6	5,027	4,714	17.2	739	656
Second	17.3	1,769	1,892	18.1	5,473	5,572	16.3	699	702
Middle	19.7	2,014	2,084	19.7	5,944	6,018	17.5	753	773
Fourth	21.7	2,223	2,135	21.5	6,504	6,340	22.3	960	937
Highest	24.3	2,485	2,533	24.1	7,277	7,580	26.7	1,148	1,180
Total 15-49	100.0	10,238	10,238	100.0	30,224	30,224	100.0	4,299	4,248
50-59	na	na	na	na	na	na	na	722	773
Total men 15-59	na	na	na	na	na	na	na	5,021	5,021

Note: Table is based on both CORE and MMM questionnaires.
Education categories refer to the highest level of education attended, whether or not that level was completed.
na = Not applicable

Sixty-one percent of women and sixty-seven percent of men belong to the Tigrigna ethnic group. The Tigre ethnic group accounts for two in every ten respondents (23 percent of women, 20 percent of men). The other ethnic groups in Eritrea (Afar, Bilen, Hedarib, Kunama, Nara and Saho) have almost the same composition of respondents for both men and women, while the Rashaida ethnic group constitute the smallest percent for both men and women (0.1 percent) (Table 3-1).

The proportion of married or co-habiting women is higher than that of men with almost six in every ten women (60 percent) compared to four in every ten men. A much lower percentage of women (28 percent) than men (58 percent) have never married. Women are more likely than men to be divorced, separated, or widowed (12 percent versus 2 percent)

Six in every ten of women age 15-49 and men age 15-59 live in rural areas (60 percent of women and 59 percent of men). Similarly, distribution of respondents by residence shows no significant disparities between men and women.

More than seven respondents in every ten (74 percent in both women and men) live in three major populous zobas: Debub, Maekel, and Gash-Barka. Respondents in Anseba (14 percent), Semenawi Keih Bahri (11 percent), and Debubawi Keih Bahri (2 percent) constitute lower proportions of the survey respondents for both women and men.

The proportion of women with no education is significantly higher than that of men (38 percent versus 14 percent). Similarly, the proportion of women with secondary education or above is almost half of men (22 percent of women, 43 percent of men). However the gap between men and women is not very wide at the primary and middle levels.

3.2 Educational Attainment

The proportion of women who completed primary education or attained some primary education is significantly higher than that of men: (21 percent of women, 17 percent of men), whereas at the secondary level, the proportions are 19 percent for women and 31 percent for men. Women are less likely to have attained higher levels of education than men (Table 3-2 and Table 3-3).

The data by age shows that the proportions of men and women with no education have decreased significantly in the younger generation. For men, the proportion with no education is 40 percent in the age group 45-49 but only 5 percent in the age group 15-24. For women, the proportions for these age groups are 68 percent and 19 percent, respectively. The gap between men and women has narrowed significantly in the young generations: Among women and men age 45- 49, the gap is about 29 percent, while for the age 15-19, the gap is about 12 percent. In addition, in the age group of 15-24, the proportion of women who have attended or completed primary school is significantly higher than of boys (21 percent versus 12 percent). Furthermore, 29 percent of young women age 15-19 have attended or completed secondary school compared with 39 percent of young men (Table 3-2 and Table 3-3).

The proportions of women and men with no education are higher in rural areas (53 percent for women, 22 percent for men) than in urban areas (15 percent for women, 5 percent for men). Urban areas also have the highest proportions of men and women at every level of education except primary (Table 3-2 and Table 3-3).

Table 3-2 Educational attainment: Women

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

Background characteristic	Highest level of schooling									Total	Median years completed	Number of women
	No education	Some primary	Completed primary[1]	Some middle	Completed middle[2]	Some secondary	Completed secondary[3]	More than secondary	Missing			
Age												
15-24	18.9	14.2	6.3	23.9	5.1	25.2	2.8	3.6	0.0	100.0	5.9	11,944
15-19	17.2	13.8	6.0	28.3	5.2	27.5	1.1	0.9	0.0	100.0	6.0	6,864
20-24	21.2	14.8	6.8	17.9	5.1	22.0	5.0	7.1	0.0	100.0	5.7	5,080
25-29	33.8	17.5	5.9	16.2	3.6	17.0	2.8	3.1	0.0	100.0	3.7	4,882
30-34	47.7	19.4	3.8	9.8	2.5	11.3	3.9	1.6	0.0	100.0	0.9	3,633
35-39	51.2	18.7	3.5	8.8	2.6	8.3	4.5	2.4	0.0	100.0	-	4,186
40-44	63.0	17.0	3.4	5.3	1.7	4.0	3.8	1.9	0.0	100.0	-	2,750
45-49	68.4	16.9	2.5	3.9	1.1	2.6	2.9	1.7	0.0	100.0	-	2,830
Residence												
Total urban	15.2	13.4	4.9	19.1	5.5	28.9	7.2	5.9	0.0	100.0	6.8	12,222
Asmara	5.2	8.5	2.9	16.1	6.5	38.9	12.3	9.7	0.0	100.0	8.7	5,494
Other Town	23.4	17.3	6.5	21.5	4.7	20.7	3.1	2.7	0.0	100.0	5.1	6,728
Rural	53.3	18.6	5.0	12.8	2.2	7.0	0.6	0.6	0.0	100.0	-	18,002
Zoba												
Debubawi Keih Bahri	71.8	8.6	4.0	5.7	1.2	5.9	2.2	0.6	0.0	100.0	-	479
Maekel	7.0	11.0	3.4	18.4	6.5	35.7	10.0	8.0	0.0	100.0	7.9	7,486
Semenawi Keih Bahri	58.9	14.2	5.7	10.2	2.1	6.8	1.2	0.9	0.0	100.0	-	3,263
Anseba	39.5	24.5	6.2	16.1	2.9	8.8	1.1	1.0	0.0	100.0	2.1	4,243
Gash-Barka	63.6	15.3	4.1	9.9	2.0	4.2	0.5	0.3	0.0	100.0	-	6,727
Debub	33.8	19.8	6.1	19.2	3.0	15.0	1.3	1.7	0.0	100.0	3.4	8,026
Wealth quintile												
Lowest	70.3	15.8	3.7	7.1	0.7	2.1	0.2	0.2	0.0	100.0	-	5,027
Second	63.8	18.2	4.5	8.8	1.2	3.2	0.1	0.2	0.0	100.0	-	5,473
Middle	46.1	21.6	6.5	16.2	2.3	6.7	0.3	0.2	0.0	100.0	1.1	5,944
Fourth	19.6	19.2	6.7	23.6	5.7	20.8	2.4	2.1	0.0	100.0	5.2	6,504
Highest	5.6	9.2	3.3	17.8	6.3	37.8	10.9	9.1	0.0	100.0	8.4	7,277
Total	37.9	16.5	4.9	15.3	3.5	15.8	3.2	2.8	0.0	100.0	3.1	30,224

Note: Table is based on both CORE and MMM questionnaires.
[1] Completed 5th grade at the primary level.
[2] Completed 8th grade at the middle level.
[3] Completed 12th grade at the secondary level.

Table 3-3 Educational attainment: Men

Percent distribution of men age 15-49 [59] by highest level of schooling attended or completed, and median years completed according to background characteristics, Eritrea 2010

Background characteristic	Highest level of schooling									Total	Median years completed	Number of men
	No education	Some primary	Completed primary[1]	Some middle	Completed middle[2]	Some secondary	Completed secondary[3]	More than secondary	Missing			
Age												
15-24	5.3	9.6	2.1	32.0	3.9	37.6	4.2	5.2	0.0	100.0	7.1	2,179
15-19	4.8	11.5	2.0	37.9	3.8	38.3	0.9	0.8	0.0	100.0	6.6	1,544
20-24	6.7	5.1	2.4	17.5	4.2	35.9	12.2	16.0	0.0	100.0	8.9	635
25-29	13.2	8.0	4.0	17.1	2.0	26.3	11.3	18.1	0.0	100.0	8.7	449
30-34	17.7	8.1	7.5	16.7	5.6	22.2	7.4	14.8	0.0	100.0	7.0	390
35-39	17.6	8.5	7.9	18.1	6.4	17.4	11.1	13.0	0.0	100.0	6.7	490
40-44	27.6	17.3	7.6	14.2	2.7	10.9	9.9	9.7	0.0	100.0	4.5	376
45-49	39.5	19.7	7.8	8.9	3.3	8.3	6.1	6.5	0.0	100.0	2.6	417
Residence												
Total urban	2.8	4.2	2.2	18.2	4.2	39.6	12.1	16.8	0.0	100.0	9.1	1,757
Asmara	0.7	0.9	1.3	12.9	3.8	41.2	16.5	22.6	0.0	100.0	10.1	855
Other Town	4.8	7.3	3.0	23.2	4.6	38.0	7.8	11.3	0.0	100.0	7.9	902
Rural	21.6	15.5	6.1	27.4	3.8	19.2	3.0	3.3	0.0	100.0	5.2	2,542
Zoba												
Debubawi Keih Bahri	34.5	10.9	4.3	13.3	2.6	20.6	4.2	9.2	0.3	100.0	4.6	67
Maekel	1.3	3.5	1.4	17.1	4.1	40.8	13.5	18.4	0.0	100.0	9.4	1,196
Semenawi Keih Bahri	24.4	12.2	6.2	20.2	3.0	23.0	4.8	6.1	0.0	100.0	5.5	470
Anseba	16.9	16.4	6.6	28.8	3.4	18.9	4.1	4.9	0.0	100.0	5.7	588
Gash-Barka	35.2	13.9	6.7	17.0	5.4	15.6	3.0	3.1	0.0	100.0	4.1	778
Debub	6.0	12.9	4.4	34.0	3.7	28.5	4.6	6.0	0.0	100.0	6.5	1,200
Wealth quintile												
Lowest	36.5	17.9	6.7	23.1	3.7	9.8	0.9	1.4	0.0	100.0	3.3	739
Second	28.3	18.2	7.7	22.7	3.3	15.4	2.6	1.8	0.0	100.0	4.3	699
Middle	11.3	14.1	6.1	33.9	3.8	24.9	3.2	2.7	0.0	100.0	6.0	753
Fourth	4.3	9.1	2.6	30.6	4.4	34.9	6.1	8.1	0.0	100.0	7.3	960
Highest	0.4	1.2	1.6	12.1	4.3	42.0	15.8	22.6	0.0	100.0	9.9	1,148
Total 15-49	13.9	10.8	4.5	23.7	4.0	27.5	6.7	8.8	0.0	100.0	6.7	4,299
50-59	47.6	17.8	5.1	9.8	2.8	5.4	4.5	7.0	0.0	100.0	0.7	722
Total men 15-59	18.8	11.9	4.6	21.7	3.8	24.4	6.4	8.6	0.0	100.0	6.3	5,021

Note: Table is based on both CORE and MMM questionnaires.
[1] Completed 5th grade at the primary level.
[2] Completed 8th grade at the middle level.
[3] Completed 12th grade at the secondary level.

The highest proportion of women and men with no education are in Debubawi Keih Bahri (72 percent of women, 35 percent of men) and Gash-Barka (64 percent of women, 35 percent of men), and the lowest is in Maekel (7 percent of women, 1 percent of men; Table 3-2 and Table 3-3).

Seven women in every ten in the lowest wealth quintile (70 percent) have no education, compared with just six percent in the highest wealth quintile. Furthermore, women in the highest wealth quintile have had substantially more opportunity to move beyond the primary level of education than other women. Almost half of women in the highest wealth quintile (49 percent) have attended or completed secondary or higher levels of education, compared with two percent of women in the lower four wealth quintiles. The pattern of educational attainment among men is similar to that of women in relation to wealth quintiles.

3.2.1 Reason for not attending school

Close to seven in every ten women and four in every ten men age 15-29 (69 percent of women, 39 percent of men) who ever attended school are not currently attending school. The main reason for women not attend school is marriage (51 percent) followed by family needed help on farm/business (13 percent) while for men it is family needed help on farm/business (27 percent) followed by other reasons (16 percent), graduate/ had enough schooling (15 percent) and did not pass entrance exam (13 percent) (Table 3-4 and Table 3-5).

Table 3-4 Reason for not attending school by zoba: Women

Percent distribution of women age 15-29 who have ever attended school but not currently attending school by reason for leaving school, according to zoba, Eritrea 2010

Background characteristic	Zoba						Total
	Debubawi Keih Bahri	Maekel	Semenawi Keih Bahri	Anseba	Gash-Barka	Debub	
Reason for not attending school							
Got pregnant	3.2	1.7	1.5	1.0	3.1	1.7	1.8
Got married	24.4	35.0	50.6	52.0	53.7	67.5	50.7
Care for younger children	3.5	2.5	2.9	2.1	5.1	1.6	2.7
Family needed help	17.3	10.1	13.0	17.8	14.4	11.9	12.6
Could not pay school fees	0.0	0.8	0.6	0.3	1.3	0.3	0.6
Needed to earn money	3.7	2.0	0.7	0.7	1.5	0.4	1.2
Finished schooling	6.2	13.5	4.5	2.5	1.0	3.4	6.4
Did not pass entrance exam	2.1	11.8	0.6	2.2	1.4	3.4	5.5
Did not like school	10.2	6.2	7.2	5.2	7.7	2.6	5.4
School too far	8.4	1.3	3.7	3.7	2.7	2.9	2.6
Illness	18.4	9.1	10.5	10.8	6.3	3.0	7.3
Other	0.6	5.0	4.0	1.2	1.9	1.2	2.8
Missing	2.0	0.9	0.2	0.5	0.0	0.0	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women not attending school	24	1,019	215	397	483	871	3,008

Note: Table is based on women 15-29 who ever attended school but are not currently attending school in the CORE questionnaires.

Table 3-5 Reason for not attending school by zoba: Men

Percent distribution of men age 15-29 who have ever attended school but not currently attending school by reason for leaving school , according to zoba, Eritrea 2010

Background characteristic	Zoba						Total
	Debubawi Keih Bahri	Maekel	Semenawi Keih Bahri	Anseba	Gash-Barka	Debub	
Reason for not attending school							
Family needed help on farm/business	4.8	11.4	32.1	33.1	41.7	31.3	26.9
Could not pay school fees	2.0	0.0	0.0	1.0	0.0	0.0	0.2
Needed to earn money	27.0	2.4	5.2	7.9	2.9	0.3	3.4
Graduated/had enough schooling	25.1	23.8	17.6	16.9	3.5	11.7	15.7
Didn't pass entrance exam	8.6	22.5	11.9	5.2	8.9	10.0	12.9
Didn't like school	10.5	9.5	2.0	5.4	7.4	5.1	6.6
School not accessible/too far	2.0	0.4	5.9	4.6	3.7	2.1	2.6
Illness	15.1	9.6	17.4	15.3	14.8	18.4	14.6
Other	4.9	19.4	7.8	10.0	15.6	19.8	16.1
Missing	0.0	1.1	0.0	0.7	1.5	1.2	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men not attending school	13	278	90	153	135	272	942

Note: Table is based on men 15-29 who ever attended school but are not currently attending school in the CORE questionnaires.

For women age 15-29 marriage is the main reason for leaving school in all zobas, while for men age 15-29 the main reason is family needed help on farm/business in all zobas with the exception of Debubawi Keih Bahri and Maekel where graduated/had enough schooling is cited as most frequent. Sixty-eight percent of women who reside in Debub reported that they stopped schooling because they got married, compared with 54 percent of women in Gash-Barka, 52 percent in Anseba, and 51 percent in Semenawi Keih Bahri. The proportion is relatively lower for Maekel and Debubawi Keih Bahri (24 and 35 percent, respectively).

3.3 LITERACY

The ability to read and write is an important asset, enabling individuals to have more opportunities in life. Knowing the distribution of the literate population can help policy makers of social programs, including programs in health and family planning, to decide how to reach women and men with health messages and other information.

In the EPHS2010, literacy status was determined by the respondents' ability to read all or part of a sentence. To test respondents' literacy during data collection, interviewers carried a set of cards on which simple sentences were printed in the local languages spoken in Eritrea. Only women and men who had never been to school and those who had not completed primary level education were asked to read the cards which were in the language they were most likely able to read; those who had attained middle school or above were assumed to be literate.

Close to four in every ten women and two in every ten men (38 percent of women and 15 percent of men) are illiterate. For women, this proportion drops from 68 percent in the age group 45-49 to 19 percent in the age group 15-19. For men, the proportions for these age groups are 30 percent and five percent, respectively (Table 3-6 and Table 3-7).

Illiteracy is higher in rural areas than in urban areas (15 percent in urban areas versus 54 percent in rural areas, for women, and 2 percent in urban areas versus 18 percent in rural areas, for men).

Table 3-6 Literacy: Women

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

Background characteristic	Middle school or higher	No schooling or primary school					Missing	Total	Percentage literate
		Can read a whole sentence[1]	Can read part of a sentence	Cannot read at all	No card with required language	Blind/ visually impaired			
Age									
15-19	63.1	11.5	6.5	18.9	0.0	0.0	0.1	100.0	81.1
20-24	57.2	11.6	8.8	22.4	0.0	0.1	0.0	100.0	77.5
25-29	42.7	12.3	10.0	34.8	0.0	0.0	0.1	100.0	65.1
30-34	29.1	11.5	12.3	47.0	0.0	0.1	0.1	100.0	52.8
35-39	26.6	10.4	12.6	50.2	0.0	0.1	0.1	100.0	49.5
40-44	16.6	8.4	11.5	63.0	0.0	0.3	0.2	100.0	36.5
45-49	12.2	8.2	10.9	68.2	0.0	0.5	0.0	100.0	31.3
Residence									
Total urban	66.5	9.4	8.4	15.4	0.0	0.2	0.1	100.0	84.3
Asmara	83.4	6.4	4.4	5.4	0.0	0.3	0.1	100.0	94.3
Other Town	52.7	11.8	11.6	23.5	0.0	0.2	0.2	100.0	76.1
Rural	23.1	11.9	10.9	54.0	0.0	0.1	0.0	100.0	45.9
Zoba									
Debubawi Keih Bahri	15.6	4.6	5.8	73.8	0.0	0.2	0.0	100.0	26.0
Maekel	78.6	8.4	5.5	7.1	0.0	0.3	0.1	100.0	92.5
Semenawi Keih Bahri	21.1	7.6	12.6	58.4	0.0	0.2	0.1	100.0	41.4
Anseba	29.8	13.4	15.8	40.8	0.0	0.0	0.0	100.0	59.1
Gash-Barka	17.0	7.8	8.7	66.4	0.0	0.1	0.0	100.0	33.5
Debub	40.3	16.2	10.8	32.5	0.0	0.0	0.1	100.0	67.3
Wealth quintile									
Lowest	10.3	8.8	9.7	71.1	0.0	0.1	0.0	100.0	28.8
Second	13.5	10.7	9.8	65.9	0.0	0.1	0.0	100.0	34.0
Middle	25.8	13.8	14.3	46.0	0.1	0.0	0.1	100.0	53.8
Fourth	54.5	14.2	11.2	19.7	0.0	0.2	0.2	100.0	79.9
Highest	81.8	7.2	5.2	5.6	0.0	0.2	0.1	100.0	94.2
Total	40.7	10.9	9.9	38.4	0.0	0.1	0.1	100.0	61.4

Note: Table is based on all the women in both CORE and MMM questionnaires.
[1] Refers to women who attended secondary school or higher and women who can read a whole sentence or part of a sentence.

Literacy varies among zobas, with literacy levels highest in Maekel (93 percent for women, 99 percent for men) followed by Debub (67 percent for women, 96 percent for men), whereas Debubawi Keih Bahri is the lowest (26 percent women, 67 percent men). There is also a marked difference in literacy by women's wealth, ranging from 29 percent among women in the lowest wealth quintile to 94 percent in the highest wealth quintile. Similarly, 69 percent of men in the lowest wealth quintile in contrast to almost all of men in the highest wealth quintile are literate.

Table 3-7 Literacy: Men

Percent distribution of men age 15-49[59] by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Eritrea 2010

Background characteristic	Middle school or higher	No schooling or primary school						Total	Percentage literate	Number
		Can Read a whole sentence[1]	Can read part of a sentence	Cannot read at all	No card with required language	Blind/ visually impaired	Missing			
Age										
15-19	81.7	8.6	4.2	5.3	0.0	0.1	0.0	100.0	94.6	1,544
20-24	85.8	4.7	2.6	6.6	0.0	0.3	0.0	100.0	93.1	635
25-29	74.9	9.4	5.3	10.3	0.0	0.2	0.0	100.0	89.6	449
30-34	66.7	11.6	6.6	15.1	0.0	0.0	0.0	100.0	84.9	390
35-39	66.0	13.0	7.3	13.0	0.0	0.1	0.6	100.0	86.2	490
40-44	47.5	18.9	13.5	18.8	0.0	0.2	1.2	100.0	79.9	376
45-49	33.0	21.1	15.0	30.4	0.0	0.3	0.0	100.0	69.2	417
Residence										
Total urban	90.9	4.7	2.2	1.9	0.0	0.1	0.3	100.0	97.7	1,757
Asmara	97.1	2.0	0.2	0.3	0.0	0.0	0.3	100.0	99.3	855
Other Town	85.0	7.2	4.0	3.4	0.0	0.2	0.2	100.0	96.2	902
Rural	56.8	15.4	9.5	17.9	0.0	0.2	0.1	100.0	81.7	2,542
Zoba										
Debubawi Keih Bahri	49.9	5.0	12.1	33.0	0.0	0.0	0.0	100.0	67.0	67
Maekel	93.8	4.3	0.4	1.3	0.0	0.0	0.2	100.0	98.5	1,196
Semenawi Keih Bahri	57.1	11.7	12.1	18.9	0.0	0.1	0.1	100.0	80.9	470
Anseba	60.2	13.0	12.9	13.9	0.0	0.0	0.0	100.0	86.1	588
Gash-Barka	44.2	13.9	10.0	30.9	0.0	0.7	0.3	100.0	68.0	778
Debub	76.7	15.0	4.7	3.5	0.0	0.1	0.2	100.0	96.3	1,200
Wealth quintile										
Lowest	38.9	17.0	13.2	30.0	0.0	0.6	0.4	100.0	69.1	739
Second	45.8	18.6	11.7	23.8	0.0	0.1	0.0	100.0	76.1	699
Middle	68.5	13.4	8.2	10.0	0.0	0.0	0.0	100.0	90.0	753
Fourth	84.0	9.3	3.3	2.7	0.0	0.2	0.5	100.0	96.7	960
Highest	96.8	2.4	0.6	0.1	0.0	0.0	0.1	100.0	99.8	1,148
Total 15-49	70.7	11.0	6.5	11.4	0.0	0.2	0.2	100.0	88.3	4,299
50-59	29.4	16.5	17.0	36.5	0.4	0.2	0.0	100.0	62.9	722
Total men 15-59	64.8	11.8	8.0	15.0	0.1	0.2	0.2	100.0	84.6	5,021

Note: Table is based on all the men in both CORE and MMM questionnaires.
[1] Refers to men who attended secondary school or higher and men who can read a whole sentence or part of a sentence.

3.4 Exposure to Mass Media

Exposure to information on television and radio and in the print media can increase knowledge and awareness of new ideas, social changes, and opportunities and can affect an individual's perceptions and behavior, including those about health. The level of exposure to mass media is low in Eritrea especially exposure to the print media (17 percent of women and 38 percent of men). Respondents are more likely to listen to the radio (31 percent of women and 47 percent of men) or watch television (30 percent of women and 45 percent of men) than read newspapers. Men have greater access than women to each of these media (Table 3-8 and Table 3-9).

The proportion of women who are exposed to any media at least once a week declines with age. Youngest (15-19) and eldest (45-49) men have lower access to all three media at least once a week compared to men in the other age groups. As expected, women living in urban areas are much more likely to be exposed to the mass media than rural women, particularly newspapers/magazines and television. Overall, almost two in every ten urban woman (17 percent) are exposed to all three media at least once a week, compared with only two percent of rural women.

Among women, exposure to each of the specified media sources with the exception of television has significantly decreased since 2002. For example, the proportion of women 15-49 who listen to the radio at least once a week has decreased from 72 percent in the EDHS2002 to 30 percent in EPHS2010, and the proportion reading newspaper at least once a week has decreased from 28 percent to 17 percent. No comparison is made here among men since the EDHS2002 did not collect such data for men.

By zoba, exposure to all three types of media is greatest among women and men who reside in Maekel (22 percent and 37 percent, respectively) and least among women in Gash-Barka (one percent) and men in Semenawi Keih Bahri (9 percent). As expected, there is a positive association between the level of education and exposure to mass media; as the education level of respondents increases, the proportion who report exposure to each of the three mass media increases, especially print media and television. Twenty-six percent of women and 34 percent of men with some secondary education have accessed all three media, compared with much less than one percent of women and men with no formal education. Among women and men who are in the richest households have the highest levels of exposure to all three media: 24 percent of women and 40 percent of men, compared with less than one percent of women and three percent of men in the poorest households.

Table 3-8 Exposure to mass media: Women

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

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	All three media at least once a week	No media at least once a week	Number
Age						
15-19	24.8	34.0	34.6	11.2	46.4	6,864
20-24	24.8	35.9	36.1	11.9	45.1	5,080
25-29	17.0	29.7	31.1	7.9	52.9	4,882
30-34	12.2	25.7	26.8	5.7	58.8	3,633
35-39	11.1	28.8	27.8	6.1	56.9	4,186
40-44	7.5	24.7	25.0	4.4	63.2	2,750
45-49	6.1	23.7	24.1	3.9	64.3	2,830
Residence						
Total urban	32.1	63.4	43.9	17.2	23.2	12,222
Asmara	43.3	81.0	52.1	24.9	9.4	5,494
Other Town	23.0	48.9	37.2	11.0	34.4	6,728
Rural	6.4	7.5	21.5	1.9	73.9	18,002
Zoba						
Debubawi Keih Bahri	5.0	19.3	11.6	2.8	76.3	479
Maekel	39.1	72.6	53.0	22.3	13.3	7,486
Semenawi Keih Bahri	7.9	18.0	19.4	3.2	68.9	3,263
Anseba	14.3	19.9	26.8	5.4	60.8	4,243
Gash-Barka	4.4	9.5	15.8	1.4	77.2	6,727
Debub	12.1	18.7	29.6	4.2	59.1	8,026
Education						
No education	0.2	5.1	11.4	0.1	85.3	11,452
Primary	7.5	20.6	29.6	2.3	57.7	6,478
Middle	25.1	43.7	43.3	10.6	31.6	5,694
Secondary or above	47.5	71.0	53.6	25.7	12.5	6,595
Missing	21.4	0.0	15.4	0.0	63.2	6
Wealth quintile						
Lowest	2.7	0.5	12.4	0.2	86.4	5,027
Second	2.9	1.5	14.3	0.4	83.7	5,473
Middle	6.8	5.8	23.6	1.3	71.6	5,944
Fourth	21.4	38.6	43.4	9.4	35.5	6,504
Highest	41.1	84.3	49.5	23.9	8.9	7,277
Total	16.8	30.1	30.5	8.1	53.4	30,224

Note: Table is based on all the women in both CORE and MMM questionnaires.

Table 3-9 Exposure to mass media: Men

Percentage of men age 15-49[59] who are exposed to specific media on a weekly basis, by background characteristics, Eritrea 2010

Background characteristic	Reads a newspaper at least once a week	Watches television at least once a week	Listens to the radio at least once a week	All three media at least once a week	No media at least once a week	Number
Age						
15-19	38.1	50.2	40.8	16.2	30.1	1,544
20-24	48.6	52.5	45.8	21.5	25.4	635
25-29	49.1	49.0	50.4	22.8	26.2	449
30-34	43.6	47.2	51.6	24.2	29.6	390
35-39	44.8	50.2	56.7	24.6	24.2	490
40-44	36.2	40.4	54.9	22.2	32.2	376
45-49	26.0	33.3	48.0	14.9	39.7	417
Residence						
Total urban	64.2	79.5	51.9	35.2	9.4	1,757
Asmara	74.1	88.2	53.9	42.1	4.9	855
Other Town	54.8	71.3	50.0	28.7	13.7	902
Rural	24.5	25.6	44.0	9.0	43.2	2,542
Zoba						
Debubawi Keih Bahri	18.3	32.2	26.7	10.1	57.2	67
Maekel	65.3	81.5	54.5	37.2	7.9	1,196
Semenawi Keih Bahri	25.4	38.4	36.4	9.4	41.1	470
Anseba	34.5	36.2	42.7	14.4	37.8	588
Gash-Barka	21.5	30.8	36.5	11.5	48.6	778
Debub	38.9	34.9	54.7	14.9	28.1	1,200
Education						
No education	0.9	5.7	18.5	0.1	77.7	599
Primary	16.0	22.6	40.5	4.4	45.3	659
Middle	40.0	44.9	51.4	16.7	25.5	1,188
Secondary or above	62.8	71.9	56.3	33.5	10.6	1,853
Missing	0.0	0.0	0.0	0.0	100.0	0
Wealth quintile						
Lowest	12.9	9.8	36.0	2.5	57.5	739
Second	16.8	15.8	35.4	3.6	54.6	699
Middle	31.0	33.4	51.4	12.7	33.5	753
Fourth	51.2	62.8	54.9	26.3	15.6	960
Highest	70.8	88.1	52.6	39.9	4.8	1,148
Total 15-49	40.7	47.6	47.3	19.7	29.4	4,299
50-59	20.4	27.3	45.3	12.1	46.5	722
Total men 15-59	37.8	44.7	47.0	18.7	31.9	5,021

Note: Table is based on all the men in both CORE and MMM questionnaires.

3.5 EMPLOYMENT

The EPHS2010 asked both men and women whether they were employed at the time of the survey. Respondents who reported having held a job, paid or unpaid, in any sector during the twelve months preceding the survey were considered employed.

Overall, the majority of women (77 percent) did not work at all in the 12 months preceding the survey. Only one in five women reported being currently employed and five percent of women worked during the 12 months prior to the survey but were not currently employed (Table 3-10).

Older women are generally more likely to be employed than younger women. Women who are divorced, separated, or widowed are the most likely to be currently employed (40 percent), followed by those who have never married (21 percent); married or cohabiting women are the least likely to be currently employed (13 percent). Women with five or more children are less likely to be working at the time of the survey than women with fewer children or no children at all. The current employment level is higher for women in urban areas than in rural areas, with 30 percent and 11 percent respectively (Table 3-10).

The highest proportion currently employed (32 percent) is in Maekel, followed by Debub (17 percent), and the lowest is in Anseba, at nine percent. Education generally has a positive association with the level of current employment; the proportion of women who are currently employed ranges from 11 percent among uneducated women to 33 percent among women with at least some secondary education. Among women in the highest quintile of the wealth index, 32 percent are currently employed, compared with only seven percent among women in the lowest quintile.

The results for men show that 63 percent of men had some form of employment at the time of the survey and nine percent of men had some sort of work during the last twelve months. As with women, the percentage of men working at the time of the survey increases with age, from 27 percent for those age 15-19 to 86 percent or more for those age 45-49. With respect to marital status, the results show that currently married men are proportionally more likely to be working (84 percent) than separated, divorced, or widowed men (66 percent) and those who have never been married (42 percent). With respect to residence, rural areas had the highest proportion of men working at the time of the survey: 61 percent, compared with 56 percent in urban areas, and generally the survey findings show that men are more likely to be employed than women during the last twelve months before the survey (Table 3-11).

Table 3-10 Employment status: Women

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

Background characteristic	Employed in the 12 months preceding the survey		Not employed in the 12 months preceding the survey	Missing/ don't know	Total	Number of women
	Currently employed [1]	Not currently employed				
Age						
15-19	8.9	3.5	87.6	0.0	100.0	2,301
20-24	20.4	4.7	74.9	0.0	100.0	1,744
25-29	21.1	5.2	73.6	0.0	100.0	1,646
30-34	20.2	5.7	74.1	0.0	100.0	1,228
35-39	23.9	4.5	71.6	0.0	100.0	1,429
40-44	22.1	5.3	72.6	0.0	100.0	940
45-49	19.1	6.0	74.9	0.0	100.0	951
Marital status						
Never married	21.2	3.7	75.1	0.0	100.0	2,878
Married or living together	13.2	4.7	82.1	0.0	100.0	6,183
Divorced/separated/widowed	39.5	7.7	52.8	0.0	100.0	1,177
Number of living children						
0	19.8	3.5	76.7	0.0	100.0	3,564
1-2	21.5	6.0	72.5	0.0	100.0	2,553
3-4	18.8	5.2	76.0	0.0	100.0	2,008
5+	12.0	5.2	82.8	0.0	100.0	2,113
Residence						
Total urban	30.1	2.7	67.2	0.0	100.0	4,125
..Asmara	36.5	4.1	59.4	0.0	100.0	1,870
..Other Town	24.7	1.5	73.7	0.0	100.0	2,255
Rural	10.6	6.2	83.2	0.0	100.0	6,113
Zoba						
Debubawi Keih Bahri	16.2	0.5	83.2	0.1	100.0	163
Maekel	31.6	3.7	64.7	0.0	100.0	2,535
Semenawi Keih Bahri	10.4	0.8	88.8	0.0	100.0	1,122
Anseba	9.2	0.8	90.0	0.0	100.0	1,436
Gash-Barka	15.3	4.3	80.4	0.0	100.0	2,255
Debub	17.1	10.2	72.7	0.0	100.0	2,727
Education						
No education	10.8	4.7	84.6	0.0	100.0	3,882
Primary	18.1	6.8	75.0	0.0	100.0	2,162
Middle	17.1	4.5	78.4	0.0	100.0	1,946
Secondary or above	33.1	3.3	63.5	0.0	100.0	2,246
Missing	0.0	0.0	100.0	0.0	100.0	1
Wealth quintile						
Lowest	7.2	4.0	88.8	0.0	100.0	1,746
Second	9.1	7.3	83.6	0.0	100.0	1,769
Middle	12.2	5.4	82.4	0.0	100.0	2,014
Fourth	25.2	5.1	69.6	0.0	100.0	2,223
Highest	31.9	2.8	65.4	0.0	100.0	2,485
Total	18.4	4.8	76.8	0.0	100.0	10,238

Note: Table is based on all the women in the CORE questionnaires.

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

Table 3-11 Employment status: Men

Percent distribution of men age 15-49[59] by employment status, according to background characteristics, Eritrea 2010

Background characteristic	Employed in the 12 months preceding the survey		Not employed in the 12 months preceding the survey	Total	Number of men
	Currently employed	Not currently employed			
Age					
15-19	26.7	9.1	64.1	100.0	1,544
20-24	60.3	7.8	31.9	100.0	635
25-29	75.6	12.8	11.6	100.0	449
30-34	80.8	9.9	9.4	100.0	390
35-39	84.6	9.9	5.5	100.0	490
40-44	84.0	7.6	8.3	100.0	376
45-49	86.4	7.6	6.0	100.0	417
Marital status					
Never married	41.6	9.1	49.3	100.0	2,504
Married or living together	84.3	8.9	6.8	100.0	1,715
Divorced/separated/widowed	66.1	15.5	18.4	100.0	78
Missing	48.5	51.5	0.0	100.0	2
Number of living children					
0	43.7	9.4	46.8	100.0	2,681
1-2	80.1	11.3	8.6	100.0	598
3-4	88.1	6.0	5.9	100.0	493
5+	86.1	8.6	5.3	100.0	527
Residence					
Total urban	55.9	8.1	36.0	100.0	1,757
Asmara	59.0	9.0	32.1	100.0	855
Other Town	53.0	7.3	39.7	100.0	902
Rural	61.3	9.9	28.8	100.0	2,542
Zoba					
Debubawi Keih Bahri	57.8	3.5	38.6	100.0	67
Maekel	59.1	9.2	31.7	100.0	1,196
Semenawi Keih Bahri	61.3	7.5	31.3	100.0	470
Anseba	49.9	9.5	40.6	100.0	588
Gash-Barka	69.4	7.9	22.7	100.0	778
Debub	56.0	10.9	33.1	100.0	1,200
Education					
No education	79.1	9.3	11.7	100.0	599
Primary	69.9	9.2	20.9	100.0	659
Middle	48.0	9.6	42.4	100.0	1,188
Secondary or above	55.9	8.9	35.2	100.0	1,853
Missing	0.0	100.0	0.0	100.0	0
Wealth quintile					
Lowest	62.4	11.4	26.2	100.0	739
Second	61.3	8.4	30.3	100.0	699
Middle	57.3	9.7	33.1	100.0	753
Fourth	56.4	9.6	34.1	100.0	960
Highest	59.0	7.7	33.3	100.0	1,148
Total 15-49	59.1	9.2	31.7	100.0	4,299
50-59	83.0	9.7	7.2	100.0	722
Total men 15-59	62.5	9.3	28.2	100.0	5,021

Note: Table is based on all the men in the CORE questionnaires.

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

3.6 Occupation

Two in every ten working women and four in every ten working men (22 percent of women and 42 percent of men) are occupied in agriculture. Almost the same proportion of employed men and employed women (23 percent of women and 24 percent of men) are engaged in sales and services (Table 3-12 and Table 3-13). The proportion of women involved in sales and services remains almost the same with age and is highest among urban women, women with middle education, women in Debubawi, and women in the fourth and highest wealth quintile. The percentage of women who work in agriculture is highest among the youngest and oldest age groups, currently married women, women with five or more children, rural women, women with no education, and women in the lowest wealth quintile (Table 3-12). In rural areas nearly half of the employed women (46 percent) and six in every ten employed men (56 percent) are engaged in agricultural work. Women with secondary or higher education tend to be employed in sales and services and in 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 women in the lowest three all wealth quintiles. Employment outside the agricultural sector is highest among men with more than secondary education and men in the highest wealth quintile.

3.7 Type of Employment

This topic presents the distribution of employed women and men age 15-49 by type of earnings and employer characteristics, according to type of employment, agricultural or non-agricultural (Table 3-14, Table 3-15). More than half of women (58 percent) engaged in agricultural work are unpaid workers. Women are more likely to be paid in cash if they are employed in the non-agricultural sector; eighty-three percent of women employed in this sector are paid in cash only. Overall, more than two in every ten employed women (23 percent) are not paid at all, and seven in every ten (69 percent) are paid in cash only for their work.

About one in every ten employed women works for a family member (9 percent), whereas about five in every ten employed women work for someone outside the family (52 percent), and four in every ten (40 percent) are self-employed.

Sixty-eight percent of women in the agricultural sector are self-employed, compared with 33 percent in the non-agricultural sector. In addition, the proportion of women employed by someone outside the family is much higher among women in the non-agricultural sector than in the agricultural sector (61 percent versus 18 percent).

Among women, 83 percent employed in the agricultural sector are seasonal workers. In contrast, the majority of women in the non-agricultural sector (71 percent) work all year. Fifteen percent of women are also employed occasionally, with more than twice as many women in the non-agricultural sector (17 percent) employed occasionally as women in the agricultural sector (8 percent).

Women who work tend to be better off, with 36 percent falling in the highest quintile and only 8 percent in the lowest wealth quintile. Most women employed in non-agricultural occupations are either in the fourth or the highest wealth quintile, while the majority of those who are engaged in agricultural work fall in the second or middle quintiles.

Table 3-12 Occupation: Women

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

Background characteristic	Professional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Domestic service	Agriculture	Missing	Total	Number of women
Age										
15-19	1.5	2.0	22.6	6.5	20.1	17.2	29.3	0.8	100.0	284
20-24	14.3	12.1	19.7	9.9	9.3	17.0	16.5	1.1	100.0	438
25-29	10.4	12.6	23.1	12.9	6.8	14.4	17.7	2.2	100.0	434
30-34	10.5	9.7	20.2	10.2	5.5	19.9	22.4	1.5	100.0	318
35-39	9.2	8.5	26.6	11.5	3.3	17.5	21.7	1.5	100.0	406
40-44	6.6	6.9	29.3	15.5	3.6	17.0	19.3	1.7	100.0	258
45-49	8.9	5.3	25.0	15.1	6.7	9.6	29.3	0.0	100.0	239
Marital status										
Never married	12.7	12.6	24.3	13.0	6.1	18.4	11.6	1.3	100.0	715
Married or living together	9.4	8.1	21.7	9.5	9.3	10.9	29.4	1.8	100.0	1,107
Divorced/separated/ widowed	4.8	5.3	26.1	13.4	6.8	24.3	18.7	0.6	100.0	556
Number of living children										
0	12.6	12.4	24.1	12.9	7.9	17.9	11.3	0.9	100.0	829
1-2	8.8	8.9	20.7	10.6	8.2	18.4	22.1	2.3	100.0	703
3-4	8.1	7.0	25.0	11.5	6.9	15.4	24.7	1.5	100.0	481
5+	4.3	2.7	25.6	10.0	7.6	9.6	39.6	0.5	100.0	364
Residence										
Total urban	13.0	14.0	31.5	13.6	0.9	22.2	2.7	2.1	100.0	1,352
Asmara	15.6	16.0	26.6	15.2	0.8	22.4	1.1	2.3	100.0	759
Other Town	9.7	11.4	37.7	11.6	1.1	21.9	4.9	1.7	100.0	592
Rural	4.4	2.0	13.0	8.7	16.7	8.5	46.3	0.4	100.0	1,025
Zoba										
Debubawi Keih Bahri	12.1	14.5	27.4	6.1	0.0	27.9	12.1	0.0	100.0	27
Maekel	15.6	15.1	25.9	15.5	0.7	21.6	3.6	2.1	100.0	896
Semenawi Keih Bahri	10.3	10.0	26.1	12.1	0.9	31.6	7.4	1.5	100.0	126
Anseba	15.1	6.6	29.4	9.2	3.3	23.4	11.8	1.2	100.0	143
Gash-Barka	1.0	1.4	27.6	16.3	21.1	9.9	21.6	1.0	100.0	440
Debub	5.2	5.6	16.6	4.4	10.6	9.3	47.7	0.7	100.0	744
Education										
No education	0.0	0.0	17.4	12.3	16.3	15.3	38.3	0.4	100.0	599
Primary	1.3	1.2	24.7	9.3	10.8	21.7	30.3	0.7	100.0	540
Middle	3.7	5.5	30.3	13.8	4.5	20.8	19.7	1.7	100.0	419
Secondary or above	24.2	21.9	23.7	11.2	1.1	11.1	4.4	2.3	100.0	819
Wealth quintile										
Lowest	1.7	0.3	7.8	8.0	29.8	1.3	51.2	0.0	100.0	196
Second	1.9	0.7	5.0	9.7	28.6	4.4	49.4	0.4	100.0	291
Middle	2.5	0.6	21.7	9.4	8.7	14.3	41.5	1.3	100.0	354
Fourth	6.3	6.1	31.3	12.5	1.0	25.2	16.3	1.2	100.0	675
Highest	18.7	19.0	28.0	13.0	0.5	17.5	1.2	2.1	100.0	861
Total	9.3	8.8	23.5	11.5	7.7	16.3	21.5	1.4	100.0	2,377

Note: Table is based on all the women in the CORE questionnaires.

Table 3-13 Occupation: Men

Percent distribution of men age 15-49[59] employed in the 12 months preceding the survey by occupation, according to background characteristics, Eritrea 2010

Background characteristic	Professional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Agriculture	Missing	Total	Number of men
Age									
15-19	1.6	0.4	10.7	15.8	6.6	62.7	2.2	100.0	554
20-24	11.5	4.3	16.8	20.6	5.6	39.5	1.6	100.0	432
25-29	16.6	4.9	22.4	22.0	3.8	30.0	0.4	100.0	397
30-34	18.2	4.1	33.8	13.3	5.3	25.0	0.3	100.0	353
35-39	12.0	5.8	37.1	15.1	2.6	26.2	1.2	100.0	463
40-44	11.6	3.2	30.2	17.0	3.5	33.9	0.6	100.0	345
45-49	8.4	2.9	20.5	17.8	2.0	48.0	0.4	100.0	392
Marital status									
Never married	11.2	3.8	16.5	19.7	5.0	42.0	1.8	100.0	1,270
Married or living together	10.4	3.4	29.1	15.7	3.7	37.2	0.4	100.0	1,599
Divorced/separated/widowed	11.1	2.5	35.7	8.5	4.2	36.4	1.7	100.0	64
Missing	0.0	0.0	0.0	48.5	0.0	51.5	0.0	100.0	2
Number of living children									
0	10.6	3.4	18.0	19.3	5.1	41.9	1.7	100.0	1,425
1-2	15.1	5.5	30.1	16.8	3.7	28.5	0.2	100.0	546
3-4	12.2	3.3	30.7	14.9	4.4	33.7	0.8	100.0	464
5+	5.4	1.9	26.6	14.5	2.7	48.5	0.4	100.0	500
Residence									
Total urban	20.5	7.4	27.4	29.2	3.4	10.4	1.8	100.0	1,125
Asmara	22.9	8.3	26.8	32.8	4.8	2.5	1.8	100.0	581
Other Town	17.8	6.4	28.0	25.3	1.9	18.8	1.9	100.0	544
Rural	4.8	1.2	21.4	10.0	4.9	57.2	0.6	100.0	1,810
Zoba									
Debubawi Keih Bahri	18.3	5.9	32.3	14.2	2.2	27.0	0.0	100.0	41
Maekel	18.9	6.3	25.9	30.4	3.8	13.3	1.4	100.0	817
Semenawi Keih Bahri	6.6	3.6	23.9	13.5	1.1	50.7	0.5	100.0	323
Anseba	11.1	2.8	29.3	13.6	3.9	39.0	0.3	100.0	350
Gash-Barka	5.7	1.9	19.6	10.9	7.9	52.6	1.4	100.0	601
Debub	7.4	2.1	21.7	12.2	3.7	51.8	1.1	100.0	803
Education									
No education	0.8	0.4	9.6	8.7	6.1	74.4	0.0	100.0	529
Primary	2.5	0.8	29.3	12.1	5.2	49.4	0.7	100.0	521
Middle	4.6	1.9	31.5	16.4	3.7	40.4	1.6	100.0	684
Secondary or above	22.3	7.1	23.1	23.9	3.5	18.7	1.4	100.0	1,201
Missing	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	0
Wealth quintile									
Lowest	2.5	0.2	13.1	5.0	5.8	73.1	0.4	100.0	545
Second	2.5	1.2	20.9	7.4	7.3	59.9	0.8	100.0	488
Middle	6.4	1.7	26.6	13.5	3.4	47.5	0.9	100.0	504
Fourth	11.1	3.9	28.8	23.2	1.9	30.1	0.9	100.0	633
Highest	24.6	8.3	27.0	30.1	3.9	4.1	2.0	100.0	765
Total 15-49	10.8	3.6	23.7	17.3	4.3	39.2	1.1	100.0	2,935
50-59	8.7	3.0	20.9	11.7	2.0	53.6	0.1	100.0	670
Total men 15-59	10.4	3.4	23.2	16.3	3.9	41.9	0.9	100.0	3,605

Note: Table is based on all the men in the CORE questionnaires.

Sixty percent of men employed in agricultural work are not paid, and eighty-nine percent who engaged in non-agricultural work are paid in cash only. Fifty percent of men in agricultural work are self-employed, and 54 percent work seasonally. Among men employed in the non-agricultural sector, 77 percent work all year. Men employed in non-agricultural occupations are most likely to be in the highest wealth quintile, whereas those engaged in agricultural work are most likely to be in the lowest wealth quintile (Table 3-15).

Table 3-14 Employment characteristics: Women

Percent distribution of women age 15-49 employed in the 12 months preceding the survey by type of earnings, type of employer, and continuity of employment, according to type of employment (agricultural or non-agricultural), Eritrea 2010

Employment characteristic	Agricultural work	Non-agricultural work	Missing	Total
Type of earnings				
Cash only	19.0	83.0	89.8	69.3
Cash and in-kind	4.0	1.9	0.0	2.4
In-kind only	18.9	1.3	0.0	5.1
Not paid	58.1	13.7	10.2	23.2
Missing	0.0	0.1	0.0	0.0
Total	100.0	100.0	100.0	100.0
Type of employer				
Employed by family member	14.3	6.9	3.1	8.5
Employed by nonfamily member	18.2	60.5	80.0	51.6
Self-employed	67.6	32.5	16.9	39.8
Missing	0.0	0.1	0.0	0.1
Total	100.0	100.0	100.0	100.0
Continuity of employment				
All year	8.7	71.0	79.8	57.7
Seasonal	83.4	11.4	3.7	26.8
Occasional	7.9	17.4	16.5	15.3
Missing	0.0	0.2	0.0	0.2
Total	100.0	100.0	100.0	100.0
Wealth quintile				
Lowest	19.7	5.2	0.0	8.3
Second	28.1	8.0	3.3	12.2
Middle	28.7	11.0	13.8	14.9
Fourth	21.5	30.4	25.7	28.4
Highest	2.0	45.4	57.2	36.2
Total	100.0	100.0	100.0	100.0
Number of women employed during the last 12 months	512	1,833	32	2,377

Note: Table is based on all the women in the CORE questionnaires.
Total includes women with missing information on type of employment who are not shown separately.

Table 3-15 Employment characteristics: Men

Percent distribution of men age 15-49 employed in the 12 months preceding the survey by type of earnings, type of employer, and continuity of employment, according to type of employment (agricultural or non-agricultural), Eritrea 2010

Employment characteristic	Agricultural work	Non-agricultural work	Missing	Total
Type of earnings				
Cash only	10.1	88.7	65.5	55.5
Cash and in-kind	14.3	2.5	0.0	7.4
In-kind only	15.9	0.9	0.0	7.2
Not paid	59.8	7.9	31.5	29.9
Missing	0.0	0.0	3.0	0.0
Total	100.0	100.0	100.0	100.0
Type of employer				
Employed by family member	39.3	5.7	27.2	20.0
Employed by nonfamily member	10.3	76.2	42.4	48.3
Self-employed	50.4	18.1	27.5	31.7
Missing	0.0	0.1	3.0	0.1
Total	100.0	100.0	100.0	100.0
Continuity of employment				
All year	42.3	76.8	49.4	62.1
Seasonal	54.1	11.0	27.4	29.2
Occasional	3.2	12.2	20.3	8.5
Missing	0.4	0.0	3.0	0.2
Total	100.0	100.0	100.0	100.0
Wealth quintile				
Lowest	26.4	7.0	7.0	15.1
Second	19.3	9.3	11.9	13.5
Middle	15.8	12.6	13.8	14.0
Fourth	12.6	21.2	18.3	17.6
Highest	2.1	34.9	47.8	21.2
Total	100	100	100	100
Number of men 15-49 employed during the last 12 months	1,511	2,063	31	3,605

Note: Table is based on all the men in the CORE questionnaires.
Total includes men with missing information on type of employment who are not shown separately.

3.8 Knowledge and Attitudes Concerning Tuberculosis

The EPHS2010 collected data on women's and men's knowledge and attitudes concerning tuberculosis (TB). Awareness of TB is almost universal in Eritrea; 97 percent of women and 98 percent of men age 15-49 have heard about TB (Table 3-16, Table 3-17). Knowledge of other aspects of TB is also widespread. Ninety percent of women and 91 percent of men age 15-49 who have heard about TB know that it is spread through the air by coughing, and 89 percent of women and 90 percent of men know that TB can be cured. Finally, there appears to be little stigma attached to TB in Eritrea.

Among women and men only 6 percent say that if a family member had TB they would want to keep it a secret. Rural women and men are less likely than urban residents to know that TB is spread through the air by coughing and to believe that TB can be cured. Among women who have heard about TB, women in Gash-Barka are the least likely to know that TB is spread through the air by coughing (78 percent), and women in Debub are the least likely to know that TB can be cured (85 percent). Men in Debub are the least likely to know that TB is spread through the air by coughing (86 percent) as well as the least likely to know that TB can be cured (86 percent)(Table 3-16, Table 3-17).

Among both women and men who have heard about TB, the percentages who know that TB is spread through the air by coughing and that it can be cured increases steadily as levels of education and wealth increase.

Rural women and men who have heard of TB are more likely than those in urban areas to want to keep secret the TB infection of a family member. Women in Debubawi Keih Bahri and Gash-Barka and men in Gash-Barka are most likely to report that they would want to keep a family member's TB infection a secret. This proportion decreases with respondent's education and also tends to decrease with wealth, especially among men (Table 3-16, Table 3-17).

Table 3-16 Knowledge and attitude concerning tuberculosis: Women

Percentage of women age 15-49 who have heard of tuberculosis (TB), and among women who have heard of TB, the percentages who know that TB is spread through the air by coughing, the percentage who believe that TB can be cured, and the percentage who would want to keep secret that a family member has TB, by background characteristics, Eritrea 2010

	Among all respondents:		Among respondents who have heard of TB:			
Background characteristic	Percentage who have heard of TB	Number	Percentage who report that TB is spread through the air by coughing	Percentage who believe that TB can be cured	Percentage who would want a family member's TB kept secret	Number who have heard of TB
Age						
15-19	95.1	2,301	88.0	83.8	7.6	2,189
20-24	97.2	1,744	91.1	89.8	5.3	1,695
25-29	97.7	1,646	90.7	90.3	4.9	1,608
30-34	96.4	1,228	88.9	90.8	5.7	1,183
35-39	97.2	1,429	90.1	91.1	4.9	1,389
40-44	97.7	940	89.3	89.2	5.6	918
45-49	96.4	951	89.7	88.6	6.5	917
Residence						
Total urban	99.1	4,125	94.3	94.0	5.7	4,090
Asmara	99.5	1,870	96.0	94.1	6.4	1,860
Other Town	98.9	2,255	92.9	93.8	5.0	2,229
Rural	95.0	6,113	86.4	85.0	6.0	5,809
Zoba						
Debubawi Keih Bahri	99.4	163	92.4	91.9	11.1	162
Maekel	99.5	2,535	95.5	92.5	6.5	2,521
Semenawi Keih Bahri	95.4	1,122	91.3	89.6	4.1	1,070
Anseba	97.3	1,436	95.2	91.5	4.5	1,397
Gash-Barka	92.3	2,255	78.2	86.3	8.8	2,082
Debub	97.8	2,727	89.3	85.0	4.1	2,667
Education						
No education	93.3	3,882	83.5	84.8	6.8	3,621
Primary	97.8	2,162	89.4	88.3	4.9	2,115
Middle	98.6	1,946	92.8	89.2	6.2	1,919
Secondary or above	99.9	2,246	97.2	94.8	4.9	2,243
Missing	100.0	1	100.0	100.0	0.0	1
Wealth quintile						
Lowest	92.9	1,746	83.3	81.9	5.3	1,622
Second	94.3	1,769	83.6	84.4	6.6	1,668
Middle	95.8	2,014	87.9	87.1	7.4	1,929
Fourth	99.2	2,223	93.8	90.7	4.2	2,205
Highest	99.6	2,485	95.6	95.5	6.1	2,474
Total	96.7	10,238	89.7	88.7	5.9	9,899

Note: Table is based on all the women in the CORE questionnaires.

Table 3-17 Knowledge and attitude concerning tuberculosis: Men

Percentage of men age 15-49[59] who have heard of tuberculosis (TB), and among men who have heard of TB, the percentages who know that TB is spread through the air by coughing, the percentage who believe that TB can be cured, and the percentage who would want to keep secret that a family member has TB, by background characteristics, Eritrea 2010

	Among all respondents:		Among respondents who have heard of TB:			
Background characteristic	Percentage who have heard of TB	Number	Percentage who report that TB is spread through the air by coughing	Percentage who believe that TB can be cured	Percentage who would want a family member's TB kept secret	Number who have heard of TB
Age						
15-19	96.6	1,544	87.5	85.0	9.9	1,492
20-24	99.0	635	90.5	89.7	4.6	629
25-29	98.8	449	94.6	95.4	4.2	443
30-34	98.4	390	92.2	94.5	4.0	384
35-39	99.6	490	95.2	94.2	4.8	488
40-44	99.7	376	91.8	93.8	6.2	375
45-49	99.7	417	89.8	93.3	3.2	415
Residence						
Total urban	99.2	1,757	95.7	95.1	5.7	1,743
Asmara	99.2	855	96.7	95.8	3.6	849
Other Town	99.2	902	94.8	94.3	7.6	894
Rural	97.6	2,542	87.0	87.0	7.0	2,482
Zoba						
Debubawi Keih Bahri	95.6	67	98.8	94.8	1.4	64
Maekel	99.2	1,196	96.0	93.2	3.9	1,186
Semenawi Keih Bahri	98.0	470	89.2	95.2	7.7	461
Anseba	98.7	588	93.1	91.0	6.0	580
Gash-Barka	96.1	778	87.2	89.4	9.4	748
Debub	98.8	1,200	86.3	85.5	7.0	1,186
Education						
No education	95.2	599	81.0	87.0	7.6	570
Primary	96.5	659	84.2	86.0	9.2	636
Middle	98.6	1,188	90.6	86.9	8.1	1,171
Secondary or above	99.7	1,853	95.8	95.0	4.1	1,848
Missing	100.0	0	100.0	100.0	0.0	0
Wealth quintile						
Lowest	96.8	739	82.0	87.2	8.3	716
Second	97.6	699	85.4	84.9	6.5	682
Middle	97.8	753	88.9	88.1	7.4	736
Fourth	98.7	960	94.8	91.9	6.7	947
Highest	99.6	1,148	96.7	95.6	4.3	1,143
Total 15-49	98.3	4,299	90.6	90.3	6.4	4,225
50-59	99.6	722	86.8	93.5	4.8	719
Total men 15-59	98.5	5,021	90.1	90.8	6.2	4,944

Note: Table is based on all the men in the CORE questionnaires.

3.9 Use of Tobacco

Tobacco use and smoking are addictions which can cause a wide variety of diseases and can lead to death. Smoking is a known risk factor for cardiovascular disease; it causes lung cancer and other forms of cancer and contributes to the severity of pneumonia, emphysema, and chronic bronchitis. It may also have an impact on individuals who are exposed to passive smoking; for example, inhaling second-hand smoke may adversely affect children's growth and cause childhood illnesses, especially respiratory diseases. Because smoking is an acquired behavior, all morbidity and mortality caused by smoking is preventable.

In the EPHS2010, eligible women and men were asked if they currently smoke cigarettes, and if so, how many cigarettes they smoked in the past 24 hours. Those who were not smoking cigarettes were asked if they smoke or use any other forms of tobacco, such as a pipe, chewing tobacco and safa (local snuff) (Table 3-18, Table 3-19).

Overall, almost all women (99.7 percent) in Eritrea refrain from tobacco use. Eleven percent of men age 15–49 use tobacco; seven percent smoke cigarettes, six percent use safa, and less than one percent use a pipe, chew, or consume snuff. Though cigarette smoking generally increases with age, the highest percent of men smokers is in the 30-34 age group with 13 percent.

Cigarette smoking among men is more popular in urban than rural areas (10 percent versus 5 percent), while safa users are higher in rural than urban (8 percent versus 4 percent) with Asmara city having the lowest proportion (2 percent). The proportion of cigarette smoking among men is almost the same in the five zobas except Debub with the lowest (3 percent). Male safa users are the highest in Debubawi Keih Bahri (19 percent), and the lowest both in Maekel and Debub (2 percent). Men with some education and those in the highest wealth quintile are more likely to smoke cigarettes than their counterparts. On the other hand, men with no education and men in the lowest wealth quintile are more likely to use safa than others.

Among men who smoke cigarettes, almost all of them smoked in the last 24 hours, 10 percent smoked 1 to 2 cigarettes, 35 percent smoked 3 to 5 cigarettes, 18 percent smoked 6 to 9 cigarettes, and 35 percent smoked 10 or more cigarettes in the last 24 hours preceding the survey. Although there are differentials across sub-groups of men, there is no clear and uniform pattern.

Table 3-18 Use of tobacco: Women

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

Background characteristic	Cigarettes	Pipe	Chew	Snuff	Safa	Does not use tobacco	Number of women	Number of cigarettes in the last 24 hours					Number of cigarette smokers
								1-2	3-5	6-9	10+	Total	
Age													
15-19	0.0	0.0	0.0	0.0	0.0	100.0	2,301	na	na	na	na	0.0	0
20-24	0.0	0.0	0.0	0.0	0.1	99.9	1,744	na	na	na	na	0.0	0
25-29	0.3	0.0	0.0	0.2	0.1	99.5	1,646	25.0	0.0	0.0	75.0	100.0	4
30-34	0.2	0.0	0.0	0.2	0.1	99.6	1,228	0.0	100.0	0.0	0.0	100.0	2
35-39	0.4	0.0	0.0	0.0	0.0	99.5	1,429	0.0	33.0	33.5	33.5	100.0	6
40-44	0.2	0.0	0.0	0.3	0.2	99.4	940	0.0	0.0	0.0	100.0	100.0	2
45-49	0.0	0.0	0.0	0.2	0.0	99.7	951	na	na	na	na	0.0	0
Residence													
Total urban	0.3	0.0	0.0	0.0	0.0	99.7	4,125	0.0	33.8	17.2	49.0	100.0	12
Asmara	0.2	0.0	0.0	0.0	0.0	99.8	1,870	0.0	48.6	0.0	51.4	100.0	4
Other Town	0.4	0.0	0.0	0.0	0.0	99.6	2,255	0.0	27.0	25.0	47.9	100.0	8
Rural	0.0	0.0	0.0	0.2	0.1	99.7	6,113	52.0	0.0	0.0	48.0	100.0	2
Zoba													
Debubawi Keih Bahri	0.0	0.9	0.9	5.2	2.6	90.5	163	na	na	na	na	0.0	0
Maekel	0.2	0.0	0.0	0.0	0.0	99.8	2,535	0.0	48.6	0.0	51.4	100.0	4
Semenawi Keih Bahri	0.1	0.0	0.0	0.1	0.1	99.8	1,122	0.0	0.0	0.0	100.0	100.0	1
Anseba	0.0	0.0	0.0	0.0	0.0	100.0	1,436	na	na	na	na	0.0	0
Gash-Barka	0.4	0.0	0.0	0.0	0.0	99.6	2,255	11.0	23.1	21.4	44.4	100.0	10
Debub	0.0	0.0	0.0	0.0	0.0	100.0	2,727	-	-	-	-	0.0	0
Education													
No education	0.1	0.0	0.0	0.3	0.2	99.5	3,882	25.9	0.0	50.3	23.8	100.0	4
Primary	0.3	0.0	0.0	0.0	0.0	99.7	2,162	0.0	38.1	0.0	61.9	100.0	5
Middle	0.2	0.0	0.0	0.0	0.0	99.8	1,946	0.0	26.2	0.0	73.8	100.0	4
Secondary or above	0.1	0.0	0.0	0.0	0.0	99.9	2,246	0.0	100.0	0.0	0.0	100.0	1
Missing	0.0	0.0	0.0	0.0	0.0	100.0	1	na	na	na	na	0.0	0
Maternity status													
Pregnant	0.1	0.0	0.0	0.1	0.0	99.6	756	100.0	0.0	0.0	0.0	100.0	1
Breastfeeding (not pregnant)	0.1	0.0	0.0	0.1	0.1	99.7	2,532	0.0	47.5	0.0	52.5	100.0	2
Neither	0.2	0.0	0.0	0.1	0.1	99.7	6,950	0.0	27.7	19.4	52.9	100.0	11
Wealth quintile													
Lowest	0.0	0.0	0.0	0.1	0.0	99.9	1,746	na	na	na	na	0.0	0
Second	0.1	0.0	0.1	0.4	0.2	99.3	1,769	52.0	0.0	0.0	48.0	100.0	2
Middle	0.1	0.0	0.0	0.1	0.1	99.7	2,014	0.0	0.0	0.0	100.0	100.0	2
Fourth	0.4	0.0	0.0	0.0	0.0	99.6	2,223	0.0	36.9	25.8	37.4	100.0	8
Highest	0.1	0.0	0.0	0.0	0.0	99.9	2,485	0.0	52.2	0.0	47.8	100.0	2
Total	0.1	0.0	0.0	0.1	0.1	99.7	10,238	7.5	28.9	14.7	48.9	100.0	14

Note: Table is based on all the women in the CORE questionnaires.
na= Not applicable

Table 3-19 Use of tobacco: Men

Percentage of men age 15-49 [59] 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, Eritrea 2010

Background characteristic	Cigarettes	Pipe	Chew	Snuff	Safa	Does not use tobacco	Number of men	Number of cigarettes in the last 24 hours						Total	Number of cigarette smokers
								0	1-2	3-5	6-9	10+	Don't know/ missing		
Age															
15-19	1.5	0.1	0.1	0.1	1.2	97.9	1,544	0.0	8.5	46.9	11.4	26.4	6.7	100.0	23
20-24	6.1	0.0	0.2	0.0	4.4	91.2	635	0.0	11.5	54.6	10.2	23.7	0.0	100.0	39
25-29	9.3	0.1	0.9	0.2	6.0	87.4	449	0.0	15.8	24.9	21.5	37.7	0.0	100.0	42
30-34	12.6	0.2	0.2	0.0	10.3	81.7	390	0.0	18.7	28.3	22.5	28.1	2.5	100.0	49
35-39	10.1	0.0	0.4	0.0	7.6	84.1	490	0.0	5.1	24.4	23.8	46.7	0.0	100.0	50
40-44	12.1	0.0	0.0	0.0	11.2	80.2	376	2.2	0.0	37.4	11.8	46.1	2.5	100.0	45
45-49	11.1	0.0	0.3	0.0	15.6	76.5	417	0.0	9.8	36.8	18.0	28.9	6.5	100.0	46
Residence															
Total urban	9.5	0.0	0.2	0.0	3.8	88.2	1,757	0.0	9.2	36.6	14.5	36.5	3.2	100.0	167
Asmara	10.0	0.0	0.2	0.0	1.5	89.2	855	0.0	4.9	36.1	16.0	37.6	5.4	100.0	86
Other Town	9.0	0.0	0.2	0.0	5.9	87.3	902	0.0	13.7	37.1	13.0	35.3	0.8	100.0	81
Rural	5.0	0.1	0.3	0.1	7.6	89.8	2,542	0.8	10.9	32.5	21.9	32.6	1.2	100.0	126
Zoba															
Debubawi Keih Bahri	8.3	0.3	0.2	0.6	18.6	73.9	67	0.0	5.2	26.1	13.3	55.3	0.0	100.0	6
Maekel	8.2	0.0	0.2	0.0	1.6	90.8	1,196	0.0	5.5	37.3	17.6	34.9	4.7	100.0	98
Semenawi Keih Bahri	9.2	0.3	1.0	0.4	14.7	80.2	470	0.0	12.1	36.3	14.7	35.3	1.6	100.0	43
Anseba	8.6	0.2	0.6	0.0	10.0	84.5	588	1.9	12.3	42.8	16.5	26.4	0.0	100.0	51
Gash-Barka	8.3	0.0	0.0	0.0	9.5	86.2	778	0.0	14.6	28.0	18.8	38.6	0.0	100.0	64
Debub	2.7	0.0	0.0	0.0	2.1	96.0	1,200	0.0	8.1	28.0	22.8	36.3	4.9	100.0	32
Education															
No education	4.6	0.3	0.4	0.3	14.4	82.8	599	0.0	21.1	29.3	17.6	32.0	0.0	100.0	28
Primary	7.7	0.1	0.2	0.0	9.8	86.7	659	0.0	2.2	39.8	25.4	32.6	0.0	100.0	51
Middle	6.6	0.0	0.5	0.0	5.4	90.4	1,188	1.2	9.8	35.7	20.6	31.8	0.9	100.0	79
Secondary or above	7.4	0.0	0.1	0.0	2.3	91.3	1,853	0.0	10.7	33.6	13.2	38.0	4.5	100.0	136
Missing	0.0	0.0	0.0	0.0	100.0	0.0	0	na	na	na	na	na	na	0.0	0
Wealth quintile															
Lowest	4.6	0.1	0.4	0.2	8.3	89.9	739	0.0	12.0	32.1	29.8	26.1	0.0	100.0	34
Second	4.5	0.1	0.1	0.0	8.5	89.2	699	3.1	13.1	30.6	22.0	31.2	0.0	100.0	31
Middle	6.9	0.1	0.5	0.0	9.5	86.5	753	0.0	10.5	30.8	15.4	41.9	1.3	100.0	52
Fourth	7.5	0.0	0.1	0.0	4.6	89.8	960	0.0	11.9	34.1	19.9	28.8	5.3	100.0	72
Highest	9.1	0.0	0.2	0.0	1.9	89.9	1,148	0.0	6.7	39.5	12.1	39.4	2.2	100.0	104
Total 15-49	6.8	0.1	0.2	0.1	6.0	89.2	4,299	0.3	9.9	34.8	17.7	34.8	2.3	100.0	294
50-59	7.7	0.3	0.5	0.0	9.9	83.6	722	0.0	7.9	28.0	16.7	47.4	0.0	100.0	56
Total men 15-59	7.0	0.1	0.3	0.0	6.6	88.4	5,021	0.3	9.6	33.7	17.6	36.8	2.0	100.0	349

Note: Table is based on all the men in the CORE questionnaires.
na= not applicable

Eritrea introduced a proclamation that bans cigarette smoking in public places in 2004. The EPHS2010 collected information on knowledge of the proclamation among the respondents, overall the proportion who have heard about the proclamation is higher among men than women (77 percent versus 65 percent) (Table 3-20). Among women, there is no marked difference in knowledge by age with the highest being among women in age 20-24 (69 percent) and the lowest in age 45-49 (62 percent), while among men the highest is at age 35-39 (89 percent) and the lowest is at age 15-19 (68 percent). Urban residents are more likely to have heard about the proclamation than rural residents. Women in Gash-Barka are the least likely to have heard about the proclamation (42 percent), and knowledge is the highest among women in Maekel (89 percent). Among men, Anseba has the highest proportion (86 percent) followed by Maekel (85 percent). The level of awareness on the proclamation increases steadily as levels of education and wealth quintile increase for both women and men.

Table 3-20 Knowledge on cigarette use banning proclamation

Percentage of women and men age 15-49 who have heard of proclamation that bans cigarette smoking in public place in Eritrea, according to background characteristics, Eritrea 2010

	Women		Men	
Background characteristic	Percentage who have heard	Number of respondents	Percentage who have heard	Number of respondents
Age				
15-19	63.8	2,301	68.3	1,544
20-24	69.0	1,744	79.8	635
25-29	66.5	1,646	83.1	449
30-34	63.6	1,228	80.9	390
35-39	64.4	1,429	88.7	490
40-44	62.1	940	85.2	376
45-49	61.8	951	77.8	417
Residence				
Total urban	80.8	4,125	86.0	1,757
Asmara	86.6	1,870	86.7	855
Other Town	75.9	2,255	85.3	902
Rural	54.1	6,113	71.5	2,542
Zoba				
Debubawi Keih Bahri	53.1	163	53.4	67
Maekel	86.0	2,535	84.8	1,196
Semenawi Keih Bahri	56.6	1,122	77.5	470
Anseba	68.2	1,436	86.3	588
Gash-Barka	42.1	2,255	64.1	778
Debub	66.3	2,727	75.6	1,200
Education				
No education	45.7	3,882	53.9	599
Primary	65.8	2,162	72.6	659
Middle	79.1	1,946	78.4	1,188
Secondary or above	84.8	2,246	86.1	1,853
Missing	0.0	1	100.0	0
Wealth quintile				
Lowest	42.7	1,746	65.2	739
Second	48.4	1,769	66.5	699
Middle	58.2	2,014	77.3	753
Fourth	78.7	2,223	82.7	960
Highest	85.0	2,485	87.6	1,148
Total 15-49	64.8	10,238	77.4	4,299
50-59	na	0	74.6	722
Total men 15-59	na	0	77.0	5,021

Note: Table is based on all the women and men in the CORE questionnaires.
na= not applicable

FERTILITY LEVELS, TRENDS, AND DIFFERENTIALS 4

Key Findings

- The total fertility rate in Eritrea is 4.8 children per woman. Rural women, on average, have two more children than women in urban areas and nearly three more children than women in Asmara city.
- Fertility declined substantially between 1995 and 2002, from 6.1 children per woman to 4.8 children, and has remained almost constant since 2002.
- Six in ten of births occur within three years of a previous birth; 21 percent occur within 24 months. Median birth interval length is 33 months.
- Childbearing begins early in Eritrea. One-fifth (19 percent) of women age 25-49 gave birth by age 18, and more than one-third (36 percent) by age 20.
- Eleven percent of women age 15-19 are already mothers (9 percent) or pregnant with their first child (2 percent). Teenage pregnancy and motherhood has declined from 23 percent in 1995 to 14 percent in 2002 and to 11 percent in 2010.

This chapter looks at a number of fertility indicators for women in the reproductive age group (15-49) including levels, patterns, and trends in both current and cumulative fertility; the length of birth intervals; the age at which women begin childbearing; adolescent fertility, and pregnancy status of women in the reproductive age group.

Data on fertility was collected in the EPHS2010 in several ways. First, each woman was asked a series of questions on the number of sons and daughters currently living with her, the number living elsewhere, and the number who were born alive and later died. Next, a complete history of all of the woman's births was obtained, including the name, sex, month and year of birth, age, and survival status for each of the births. For living children, a question was asked about whether the child was living in the household or away. For dead children, the age at death was recorded. Finally, information was collected on whether respondents were pregnant at the time of the survey.

4.1 Current Fertility

Measures of current fertility presented in this chapter include age-specific fertility rates (ASFR), the total fertility rate (TFR), the general fertility rate (GFR), and the crude birth rate (CBR). The rates generally refer to the period 1-36 months preceding the survey, determined from the date of interview and a child's birth date. The three-year period was chosen for calculating these rates because it reflects the current situation with sufficient statistical precision.

The ASFRs measure how fertility changes with the age of the woman. They are defined in terms of the number of live births among women in a particular age group divided by the number of woman-years in that age group during the specified period. TFR refers to the number of live births that a woman would

have had throughout her reproductive years (15-49 years) if she was subject to the current ASFRs. The GFR represents number of live births per 1,000 women of reproductive age. The CBR is the number of live births per 1,000 population. The latter two measures are based on the birth history data for the three-year period before the survey and the age-sex distribution of the household population.

The TFR is 4.8 births per woman (Table 4-1). This means that, on average, an Eritrean woman will give birth to 4.8 children by the end of her childbearing years. The TFR is the same as that observed in the EDHS2002. One of the factors contributing to the fertility level remaining unchanged could be that use of family planning has generally remained constant since the EDHS2002. Among the sub-Saharan countries in which DHS surveys have been conducted since 2006, Eritrea's fertility rate remains moderately low (Figure 4-1).

The fertility level among urban women is substantially lower than that among rural women. The TFR for rural women is 5.6 children, compared with 2.9 children for Asmara city, and 4.3 children for other towns. The ASFRs show that this pattern of lower urban fertility is prevalent in all age groups (Table 4-1, Figure 4-2). The difference in urban and rural fertility is more pronounced among women aged 20-29.

Fertility patterns for various age groups indicate that although some women begin childbearing at an early age in Eritrea, the pattern is not common (Table 4-1, Figure 4-2). Fertility rises rapidly to reach a peak in the age group 25-29, after which it declines with increasing age. Eritrean women have high fertility in their twenties and early thirties. The fertility age pattern observed for Eritrea as a whole holds true by residence also. Generally, similar fertility age patterns were observed in the EDHS1995 and EDHS2002 surveys. The ASFRs for zobas show a pattern similar to that of the nation as a whole. However, in Semenawi Keih Bahri, childbearing is uniform in the twenties and early thirties, while in Anseba it peaks at age 20-24 (Table 4-1).

The GFR in Eritrea is 159 live births per 1,000 women of reproductive age. As in the case with the TFR, the rate is considerably higher in rural areas (185) than in urban areas as a whole (122) and Asmara city (99). The crude birth rate, standing at 33.9 births per 1,000 population at the national level, is 22 percent higher in rural than in urban areas (36.2 and 29.8 births per 1,000 population, respectively).

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, Eritrea 2010

	Residence				Region						
Age group	Total urban	Asmara	Other town	Rural	Debubawi Keih Bahri	Maekel	Semenawi Keih Bahri	Anseba	Gash-Barka	Debub	Total
15-19	42	30	52	98	56	39	93	67	92	94	76
20-24	158	108	210	240	169	133	218	257	240	228	205
25-29	189	162	214	260	211	182	270	254	253	232	231
30-34	173	164	180	237	172	176	218	247	225	207	210
35-39	115	93	130	173	133	102	173	192	161	146	148
40-44	36	25	45	90	70	33	81	89	87	70	69
45-49	12	3	20	24	26	6	24	30	23	21	20
TFR	3.6	2.9	4.3	5.6	4.2	3.4	5.4	5.7	5.4	5.0	4.8
GFR	122	99	141	185	142	113	178	185	182	163	159
CBR	29.8	26.5	32.1	36.2	33.4	28.7	37.9	37.1	35.9	32.9	33.9

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

Figure 4-1 Total fertility rates, Eritrea compared with other selected sub-Saharan countries

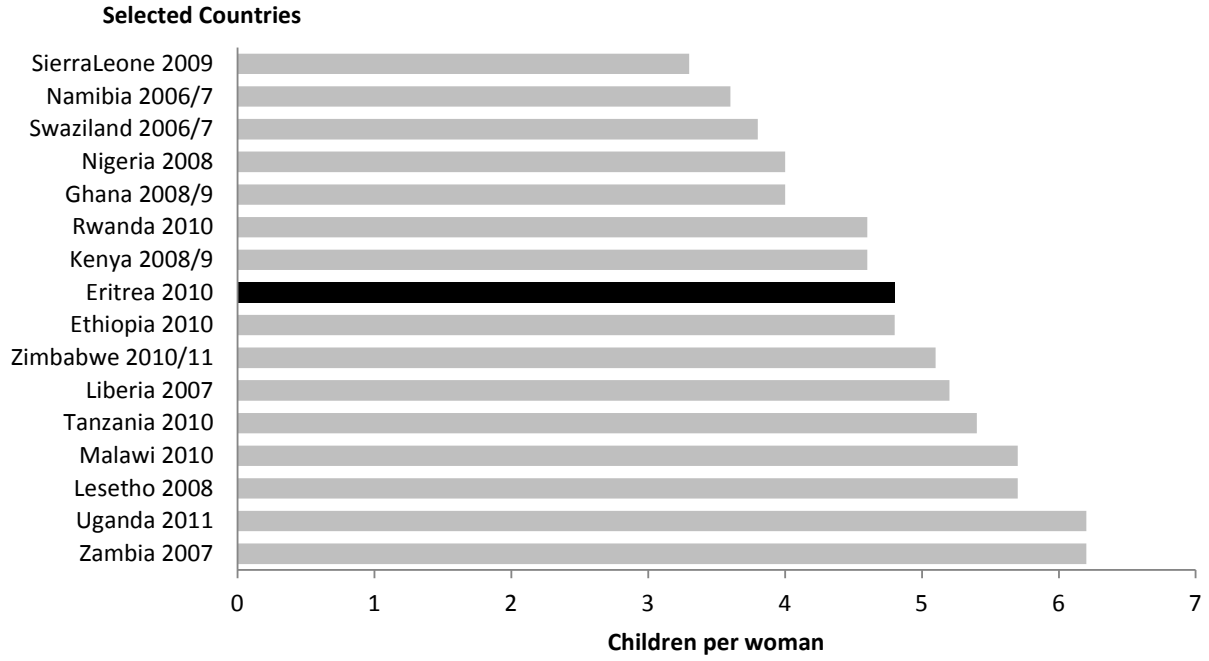
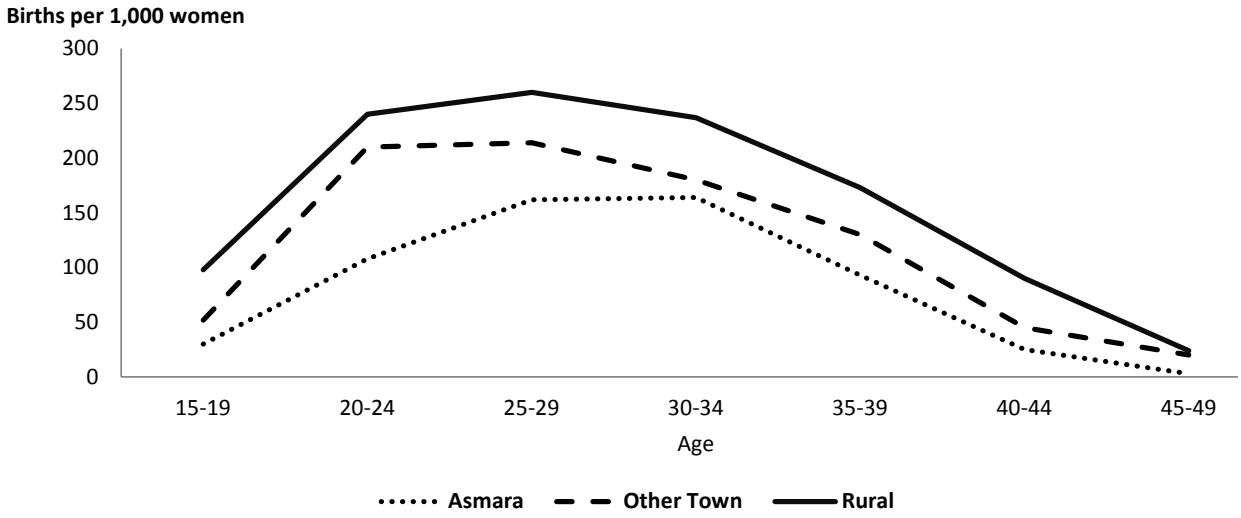


Figure 4-2 Age specific fertility rates by residence



4.2 Fertility Differences

The differences in fertility by urban-rural residence have already been discussed. A substantial variation in TFR also exists among zobas, ranging from 5.7 children per woman in Anseba to 3.4 children per women in Maekel (Table 4-2). With the exception of Debubawi Keih Bahri and Maekel, fertility levels are higher than the national average in all of the zobas. The level of fertility decreases sharply from 5.5 children among women with no education to 3.1 children among women who have at least some secondary. An even sharper variation is observed by wealth index. Women in the lowest quintile of the wealth index have a TFR of 6.0, which is almost twice as high as the fertility level of women in the highest quintile (3.2).

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 over 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

Table 4-2 Fertility by background characteristics

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

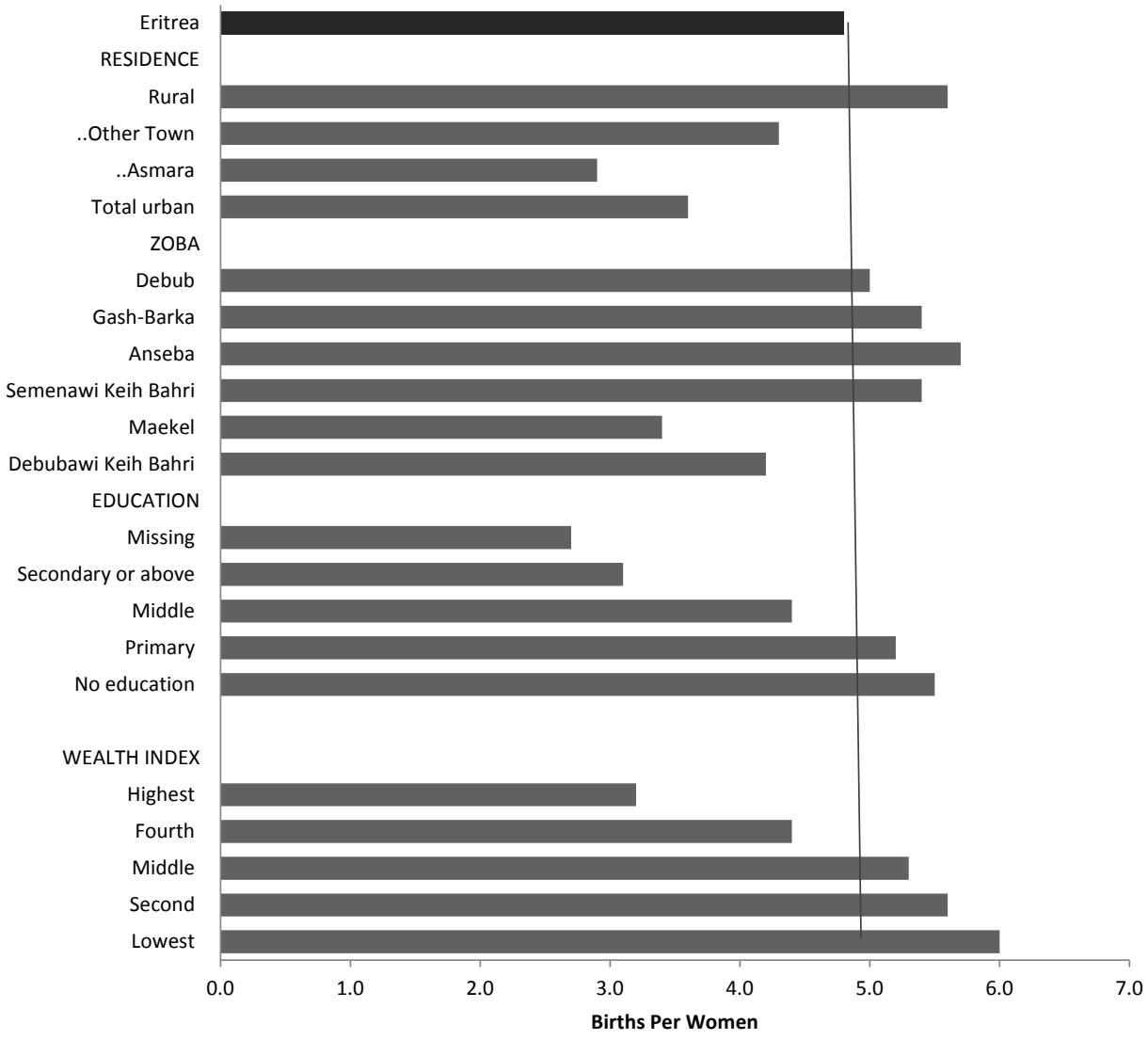
Background characteristic	Total fertility rate	Mean number of children ever born to women age 40-49	Percentage women age 15-49 currently pregnant
Residence			
Total urban	3.6	4.5	6.0
Asmara	2.9	3.6	4.7
Other Town	4.3	5.1	7.1
Rural	5.6	6.1	8.3
Zoba			
Debubawi Keih Bahri	4.2	5.4	7.6
Maekel	3.4	4.1	5.5
Semenawi Keih Bahri	5.4	5.9	8.1
Anseba	5.7	6.3	8.2
Gash-Barka	5.4	5.6	8.0
Debub	5.0	6.0	7.9
Education			
No education	5.5	6.0	7.4
Primary	5.2	5.2	9.3
Middle	4.4	4.1	7.4
Secondary or above	3.1	2.9	5.6
Wealth quintile			
Lowest	6.0	6.6	6.7
Second	5.6	6.0	8.7
Middle	5.3	5.9	8.1
Fourth	4.4	5.1	8.1
Highest	3.2	4.0	5.8
Total	4.8	5.5	7.4
Number of women		5,580	10,238

Note: Table is based on both CORE and MMM questionnaires.
Total fertility rates are for the period 1-36 months prior to interview.

of children ever born for women age 40-49 would be expected to be similar. When fertility levels have been falling, the TFR will be substantially lower than the mean number of children ever born to women age 40-49.

An overall comparison of these two fertility measures suggests a decline of nearly one child over the past few years, from 5.5 to 4.8 children (Table 4-2, Figure 4-3). Fertility has declined in both urban and rural areas, in all zobas, and for all levels of the household wealth index. Fertility has also been observed to decline among women with no education and primary education while an increasing trend has been observed among those with middle and higher education. The difference between the

Figure 4-3 Total fertility rates by background characteristics



Note: The TFR for the whole country is indicated by the vertical line.

level of current and completed fertility is highest in Debubawi Keih Bahri (1.2 children), women with no education (0.5 children), and women in the fourth quintile of the wealth index (0.7 children). The percentage of women currently pregnant provides another measure of current fertility, although the survey may not capture all pregnancies because women may not know if they are pregnant, or may be reluctant to report early-stage pregnancies. Overall, seven percent of interviewed women were pregnant at the time of the survey. The proportion may have declined slightly since 2002 (9 percent).

The percentage of currently pregnant women is lower in urban areas (6 percent) – with Asmara having the lowest proportion (5 percent) – than in rural areas (8 percent). Women in Gash-Barka, Debub, Semenawi Keih Bahri, and Anseba; women with primary education; and women in the second quintile of the wealth index are more likely to be pregnant (8-9 percent) than other women.

4.3 Fertility Trends

One way to examine trends in fertility is to use retrospective data from the birth histories collected in the 2010EPHS. Because women age 50 and older were not interviewed in the survey, the rates are successively truncated as the number of years before the survey increases.

The fertility rates have shown consistent decline in all age groups since the period 10-14 years preceding the survey and the decline was found to be more pronounced between the periods 10-14 and 5-9 years preceding the survey (Table 4-3). The data indicate a 15 percent decline in fertility among women age 15-29, from 3.1 children per women during the period 10-14 years before the survey to 2.7 children per woman during the period 0-4 years prior to the survey. The ASFRs suggest that the fertility decline among younger women (15-29) was higher during the period 10-14 (9 percent), compared to the recent five-year period (6 percent). During the most recent five-year period, the decline in fertility was higher among adolescents and women age 30-44 than women in older age groups.

Table 4-4 reveals that overall, the total fertility rate has declined from 6.1 children per woman in 1995 to 4.8 children in 2002, a drop of 21 percent. Urban fertility has declined from 4.2 to 3.5 children per woman or 17 percent, while the rural fertility has declined even more (19 percent), more than one

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, Eritrea 2010

	Number of years preceding survey			
Mother's age at birth	0-4	5-9	10-14	15-19
15-19	84	97	110	91
20-24	213	221	234	218
25-29	238	250	283	270
30-34	216	247	270	[269]
35-39	154	189	[230]	—
40-44	77	[120]	—	—
45-49	[22]	—	—	—

Note: Table is based on both CORE and MMM questionnaires.
Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated. Rates exclude the month of interview.

Table 4-4 Trends in age-specific fertility rates

Age-specific fertility rates for three-year periods preceding the survey, by mother's age at the time of the birth, Eritrea 2010

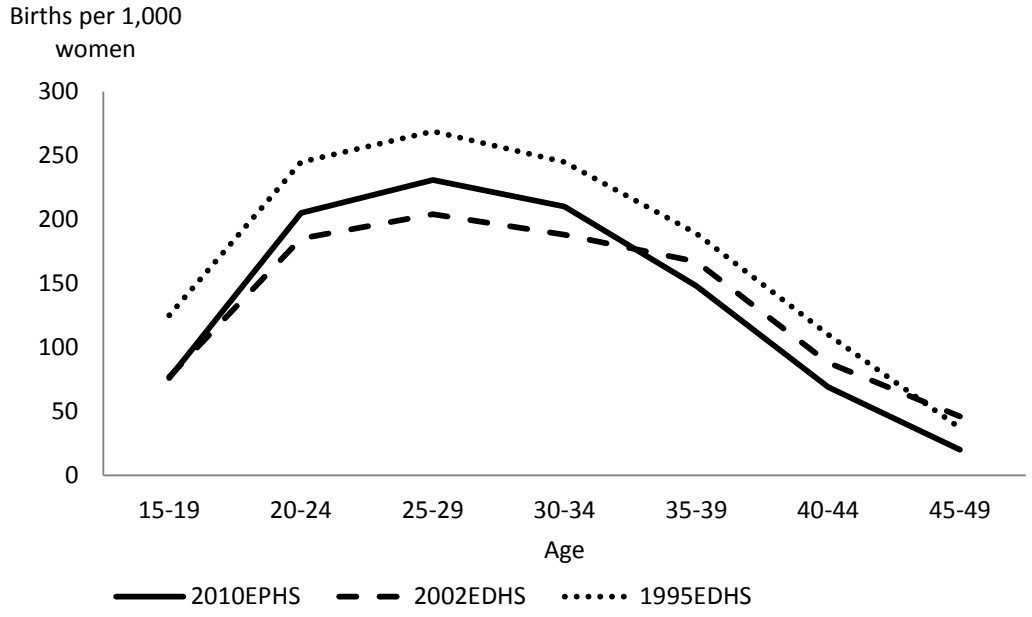
	2010			2002			1995		
Mother's age at birth	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
15-19	42	98	76	51	97	77	52	171	125
20-24	158	240	205	145	218	185	161	282	245
25-29	189	260	231	172	228	204	215	290	269
30-34	173	237	210	144	221	188	200	267	245
35-39	115	173	148	123	195	167	115	224	189
40-44	36	90	69	42	121	88	83	121	110
45-49	12	24	20	20	62	46	21	45	37
TFR	3.6	5.6	4.8	3.5	5.7	4.8	4.2	7.0	6.10

Note: Table is based on both CORE and MMM questionnaires.

child – from 7.0 to 5.7 children – over the same period. Since 2002, however, the fertility has remained almost constant at the national level and urban and rural areas considered separately.

Table 4-4 and Figure 4-4 show that the fertility decline observed during the period 1995 and 2002 has been experienced by women of all reproductive ages except those in the oldest age group (45-49), where a slight increase in fertility has occurred. Even though the TFR has remained almost constant since 2002, the fertility rate has shown an increase among women 15-34 and a decrease afterwards. This overall trend also holds true for both urban and rural areas.

Figure 4-4 **Trends in Age-Specific fertility rates 1995, 2002, 2010**



4.4 Children Ever Born and Living

Information on children ever born is useful for observing how average family size varies across age groups and for observing the level of primary infertility. 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.

On average, Eritrean women age 15-49 have given birth to 2.6 children, of which 2.4 children are still alive, indicating that 8 percent of the children ever born have died (Table 4-5). The mean number of children ever born has declined from 3.0 children in 1995 to 2.7 in 2002 and to 2.6 in 2010. The number of children that women have borne increases with age, from 0.1 children for women age 15-19 to more than two children for women in their late twenties, about five children for women in their late thirties, and to nearly six children for women at the end of their reproductive years (45-49). Of the 5.8 children ever born to women age 45-49, nearly five have survived; indicating about 85 percent of the total number of children ever born.

Table 4-5 Children ever born and living

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

	Number of children ever born														
Age	0	1	2	3	4	5	6	7	8	9	10+	Total	Number of women	Mean number of children ever born	Mean number of living children
ALL WOMEN															
Age															
15-19	91.4	7.2	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	2,301	0.10	0.09
20-24	44.4	27.0	19.4	7.5	1.3	0.5	0.0	0.0	0.0	0.0	0.0	100.0	1,744	0.96	0.91
25-29	18.2	17.1	22.8	21.9	11.9	5.0	2.2	0.8	0.1	0.0	0.0	100.0	1,646	2.21	2.08
30-34	9.4	9.5	13.7	16.4	19.0	18.5	9.3	2.3	1.6	0.2	0.2	100.0	1,228	3.43	3.18
35-39	7.0	6.7	9.1	12.6	15.1	14.9	12.7	11.5	4.8	3.6	1.9	100.0	1,429	4.46	4.06
40-44	5.8	3.7	8.2	10.2	9.8	13.7	13.4	13.1	9.3	6.5	6.4	100.0	940	5.31	4.72
45-49	4.4	4.0	6.8	8.5	9.3	10.5	11.4	13.5	11.7	9.9	9.9	100.0	951	5.84	4.95
Total	34.1	11.7	11.6	10.3	8.3	7.4	5.5	4.5	2.8	2.0	1.8	100.0	10,238	2.60	2.35
CURRENTLY MARRIED WOMEN															
Age															
15-19	56.2	36.2	7.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	402	0.52	0.48
20-24	17.6	37.0	30.5	12.1	2.0	0.8	0.0	0.0	0.0	0.0	0.0	100.0	1,057	1.46	1.40
25-29	6.7	15.6	25.8	26.8	14.8	6.2	2.9	1.1	0.2	0.0	0.0	100.0	1,252	2.64	2.49
30-34	2.1	7.2	13.5	16.4	21.7	22.2	11.6	2.9	2.0	0.2	0.2	100.0	967	3.91	3.65
35-39	2.2	3.3	7.1	11.3	16.1	17.4	15.3	14.1	6.0	4.8	2.4	100.0	1,088	5.09	4.66
40-44	2.1	1.5	5.9	9.0	9.0	14.1	15.8	14.9	11.4	8.3	8.0	100.0	715	5.97	5.32
45-49	2.1	2.4	4.5	5.7	8.2	11.1	11.5	15.1	13.1	13.0	13.3	100.0	701	6.54	5.57
Total	9.2	14.0	15.4	13.8	11.5	10.8	8.2	6.6	4.2	3.3	2.9	100.0	6,183	3.76	3.41

Note: Table is based on both CORE and MMM questionnaires.

The pattern observed for all women is also seen for currently married women, except that the mean number of children ever born is higher (3.8 children) compared with all women (2.6 children). The difference in the mean number of children ever born between all women and currently married women is because young and unmarried women have lower fertility than the currently married women. Differences at older ages generally reflect the impact of marital dissolution through either divorce or widowhood.

The proportion of married women age 45-49 years who are still childless can be taken as a rough indicator of primary infertility, or the inability to bear children. The survey results suggest that primary infertility is low in Eritrea, with only 2 percent of Eritrean women not able to bear children. The estimate does not include women who have had one or more children but who have become unable to have more children (secondary infertility).

4.5 Birth Intervals

The birth interval refers to the period of time between two successive live births. Information on birth intervals is important in providing insight into birth spacing patterns.

One-fifth of non-first births (21 percent) occur within 24 months of the previous birth, 39 percent occur between 24 and 35 months, 21 percent between 36 and 47 months, and 19 percent after 48 months (four or more years). Thus the majority of Eritrean children (80 percent) are born at least 24 months after their previous siblings. The overall median birth interval is 33 months; which is 9 months longer than the minimum of 24 months considered safe for mother and child. The median birth interval length has increased by more than two months from 31.3 months in 1995 to 33.6 months in 2002 while it remained almost constant since then.

There are no substantial differences in the length of the median birth interval by sex of the preceding birth, residence, or by women's education level – a result that is similar to that of the EDHS2002.The median birth interval for the seventh- and higher-order births is about seven months shorter than intervals for lower-order births. Debub has the longest median birth interval (34.5 months) compared with other zobas, and Debubawi Keih Bahri and Semenawi Keih Bahri have the shortest median interval (30 months). The median birth interval increases with increasing age of the mother from 25 months for births to young mothers (age 15-19) to 35 months for births to mothers age 40 or older. The proportion of births occurring within 24 months of the preceding birth declines steeply from 48 percent among women age 15-19 to 19 percent among women age 40 and above.

There is no variation in the median length of the birth interval by survival status of the previous birth. However, the percentage of births occurring after a very short interval (less than 18 months) is more than four times higher for children whose prior sibling died than for children whose prior sibling survived. The shorter intervals for the former group are partially due to the shortened period of breastfeeding (or no breastfeeding) for the preceding child, leading to an earlier return of ovulation and hence increased chance of pregnancy. Minimal use of contraception, presumably because of a desire to replace the dead child as soon as possible, could also be one of the factors responsible for the shorter birth interval in these cases (Table 4-6).

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, and median number of months since preceding birth, according to background characteristics, Eritrea 2010

Background characteristic	Months since preceding birth							Number of non-first births	Median number of months since preceding birth
	7-17	18-23	24-35	36-47	48-59	60+	Total		
Age									
15-19	24.4	23.6	38.2	10.8	1.6	1.4	100.0	103	24.6
20-29	8.5	14.7	43.6	20.9	6.8	5.5	100.0	6,330	30.9
30-39	6.9	11.6	37.3	21.6	9.9	12.6	100.0	7,775	33.8
40-49	7.0	11.6	33.7	20.9	11.1	15.7	100.0	2,302	35.3
Sex of preceding birth									
Male	7.7	12.9	38.7	21.4	9.0	10.2	100.0	8,554	32.3
Female	7.6	12.8	39.8	20.8	8.7	10.3	100.0	7,956	33.4
Survival of preceding birth									
Living	6.4	12.5	40.0	21.7	9.1	10.4	100.0	15,505	32.8
Dead	26.8	18.5	27.9	12.6	5.5	8.8	100.0	1,005	32.6
Birth order									
2-3	7.8	14.0	38.8	19.8	7.7	11.8	100.0	7,222	-
4-6	7.0	11.5	39.4	22.5	9.8	9.8	100.0	6,475	33.0
7+	8.8	13.1	40.0	21.4	9.5	7.3	100.0	2,813	25.6
Residence									
Total urban	7.6	13.2	35.7	19.6	9.6	14.3	100.0	5,004	33.5
..Asmara	8.3	13.7	34.0	17.9	10.3	15.8	100.0	1,685	33.5
..Other Town	7.2	13.0	36.5	20.5	9.2	13.6	100.0	3,318	33.5
Rural	7.7	12.7	40.8	21.8	8.5	8.5	100.0	11,506	32.3
Zoba									
Debubawi Keih Bahri	14.3	17.1	35.0	16.9	7.8	8.9	100.0	260	29.6
Maekel	7.9	12.8	36.4	20.2	9.6	13.2	100.0	2,727	33.3
Semenawi Keih Bahri	9.5	14.8	40.4	19.4	7.7	8.3	100.0	2,095	30.9
Anseba	7.8	13.1	42.9	20.5	7.8	7.8	100.0	2,668	31.6
Gash-Barka	9.0	14.3	37.4	20.8	8.0	10.5	100.0	4,343	32.1
Debub	4.8	10.2	40.3	23.6	10.4	10.7	100.0	4,416	34.5
Education									
No education	8.1	13.0	38.8	21.2	8.9	9.8	100.0	8,403	32.5
Primary	5.7	12.1	39.9	21.6	9.6	11.2	100.0	4,076	33.5
Middle	7.9	12.2	40.9	21.4	8.1	9.5	100.0	2,355	32.6
Secondary or above	9.6	14.8	37.4	19.5	7.6	11.1	100.0	1,670	31.5
Wealth quintile									
Lowest	8.2	12.9	42.0	20.7	8.0	8.3	100.0	3,441	31.7
Second	7.6	13.7	40.4	21.9	8.5	7.9	100.0	3,631	32.2
Middle	7.5	12.9	39.3	22.2	8.5	9.5	100.0	3,588	32.6
Fourth	6.7	11.8	37.7	21.0	10.1	12.8	100.0	3,349	33.9
Highest	8.4	13.1	35.8	19.3	9.4	14.0	100.0	2,501	33.1
Total	7.7	12.9	39.2	21.1	8.8	10.3	100.0	16,510	32.7

Note: Table is based on both CORE and MMM questionnaires.
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

The age at which childbearing starts has important consequences for the overall level of fertility as well as the health and welfare of the mother and the child. As indicated earlier, early childbearing is not common in Eritrea with the majority of women becoming mothers after age 20 (Table 4-7). Five percent of women age 40-44, six percent of women age 45-49, and 1 percent of women age 15-19 had given birth to their first child before age 15. The age at first birth has been decreasing over time. For example, 48 percent of women age 45-49, compared to 56 and 58 percent of women age 25-29 and 30-34, respectively, had their first birth by age 22.

The median age at first birth among women age 25-49 is 22 years. The median ages at first birth are higher (above 22 years) for older than younger cohorts (less than 21 years). The median age at first birth for women in most age groups has remained unchanged since the EDHS 2002 survey.

Table 4 7 Age at first birth

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

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			
Age								
15-19	0.8	na	na	na	na	91.2	6,864	a
20-24	2.8	18.8	38.3	na	na	45.3	5,080	a
25-29	3.9	19.1	38.7	56.3	73.0	19.6	4,882	21.3
30-34	4.5	22.7	41.4	58.4	74.2	10.1	3,633	20.9
35-39	3.3	15.9	32.7	52.0	72.1	6.6	4,186	21.8
40-44	5.4	18.9	32.1	48.1	68.2	6.1	2,750	22.3
45-49	5.8	22.5	35.1	47.9	65.3	4.7	2,830	22.3
20-49	4.1	19.4	36.8	na	na	18.0	23,360	a
25-49	4.4	19.6	36.3	53.2	71.1	10.4	18,280	21.6

Note: Table is based on both CORE and MMM questionnaires.
na = Not applicable.
a = Omitted because less than 50 percent of women had a birth before reaching the beginning of the age group.

Median ages at first birth by selected background characteristics are estimated for women age 25-49. Younger women are not included in the analysis because less than 50 percent of women age 15-19 and 20-24 had a birth before age 15 and 20, respectively. The median age at first birth for women age 25-49 in urban areas (23 years) is almost two years later than the median age at first birth in rural areas (21 years) (Table 4-8). The urban-rural difference is highest for women in the younger age groups, 25-29 and 30-34, compared to women in the older age groups. Median age at first birth ranges from 21 years in Debub to 24 years in Maekel. There is no substantial variation in median age at first birth by education of women. Women in the highest wealth quintile (24 years) start childbearing at least two years later than women in the other four wealth quintiles.

Table 4 8 Median age at first birth

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

	Age					Women age
Background characteristic	25-29	30-34	35-39	40-44	45-49	25-49
Residence						
Total urban	23.1	22.2	22.4	22.8	22.9	22.7
Asmara	a	25.8	24.3	24.6	23.9	a
Other Town	21.3	20.5	21.5	21.6	22.5	21.4
Rural	20.4	20.4	21.5	22.0	22.0	21.1
Zoba						
Debubawi Keih Bahri	23.4	22.6	23.8	22.6	24.6	23.3
Maekel	24.1	24.2	23.4	23.9	23.3	23.8
Semenawi Keih Bahri	20.8	21.0	21.8	22.4	21.8	21.5
Anseba	21.4	20.3	21.3	21.8	22.0	21.3
Gash-Barka	20.6	21.1	21.9	22.4	22.7	21.5
Debub	19.9	19.6	20.9	21.2	21.7	20.5
Education						
No education	20.2	20.4	21.4	21.8	22.0	21.1
Primary	20.1	19.4	21.0	21.8	22.1	20.6
Middle	20.9	21.5	22.0	23.4	22.6	21.5
Secondary or above	a	27.0	27.0	26.4	27.2	a
Wealth quintile						
Lowest	20.1	20.4	21.3	22.2	22.2	21.2
Second	20.4	20.7	21.8	22.5	21.8	21.3
Middle	20.6	20.1	21.6	21.2	22.1	20.9
Fourth	20.7	20.5	21.4	21.6	22.6	21.2
Highest	24.7	24.3	23.4	23.7	22.9	23.9
Total	21.3	20.9	21.8	22.3	22.3	21.6

Note: Table is based on both CORE and MMM questionnaires.

4.7 Teenage Pregnancy and Motherhood

Teenage pregnancy is a major health concern because of its association with higher morbidity and mortality for both mother and child. Childbearing during the teenage years frequently has adverse social consequences as well, particularly on educational attainment, because women who become mothers in their teens are more likely to curtail their education.

Nearly 11 percent of women age 15-19 have already started childbearing; nine percent have had a live birth, and two percent are pregnant with their first child (Table 4-9). While only one percent of women age 15 have started childbearing, 29 percent of women are either mothers or are pregnant with their first child by age 19. Adolescents in rural areas start parenthood earlier than their urban counterparts (14 percent versus 5 percent, respectively). Women in Asmara have the lowest level of teenage childbearing (3 percent). The percentage of women age 15-19 who are pregnant or who have already given birth decreases from 18 percent among women with no education to four percent among women with at least some secondary education.

Childbearing among teenagers is lowest in Maekel (4 percent) and highest in Debub and Gash-Barka (14 percent and 13 percent, respectively). Adolescent childbearing increases from 12 percent among women in the lowest quintile of wealth to 16 percent among women in the second and middle quintiles, then declines to three percent among women in the highest quintile.

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 and percentage who have begun childbearing, by background characteristics, Eritrea 2010

Background characteristic	Percentage who:		Percentage who have begun childbearing	Number of women
	Have had a live birth	Are pregnant with first child		
Age				
15	0.6	0.2	0.8	1,797
16	2.2	0.4	2.6	1,459
17	5.2	1.5	6.7	1,161
18	16.5	3.3	19.8	1,351
19	25.3	3.4	28.8	1,095
Residence				
Total urban	3.7	1.3	5.0	2,675
Asmara	2.4	0.7	3.0	1,068
Other Town	4.6	1.6	6.2	1,607
Rural	12.0	1.8	13.8	4,189
Zoba				
Debubawi Keih Bahri	6.9	2.2	9.0	76
Maekel	3.3	0.7	4.0	1,533
Semenawi Keih Bahri	8.6	1.8	10.5	652
Anseba	6.0	1.4	7.4	1,008
Gash-Barka	11.2	1.8	13.1	1,437
Debub	12.4	2.0	14.4	2,157
Education				
No education	15.5	2.2	17.7	1,181
Primary	15.0	2.2	17.2	1,353
Middle	6.8	1.4	8.1	2,302
Secondary or above	3.0	1.1	4.0	2,026
Wealth quintile				
Lowest	9.8	1.7	11.5	1,307
Second	13.8	2.3	16.1	1,197
Middle	13.5	2.3	15.8	1,336
Fourth	6.3	0.7	7.0	1,447
Highest	2.3	1.1	3.4	1,578
Total	8.8	1.6	10.4	6,864

Note: Table is based on both CORE and MMM questionnaires.

The percentage of teenagers who have started childbearing has declined over time, from 23 percent in the EDHS1995 to 14 percent in the EDHS2002 and finally to 11 percent in EPHS2010; implying a decline of 39 percent and 29 percent during the period 1995-2002 and 2002-2010, respectively. During the period 1995-2002, the percentage of early childbearing has consistently declined for all age groups while it almost remained unchanged for ages 15-17 during the period 2002-2010 (Figure 4-5). Early motherhood has remained almost unchanged in urban women, indicating that the decline in teenage childbearing at the national level is mainly due to the decline in early childbearing among rural women (Figure 4-5). In 1995, one in three rural teenagers had started childbearing, compared with one in five in 2002 and 14 percent in 2010. The likelihood of teenage childbearing has declined substantially in Debub and Gash-Barka since the EDHS2002 survey while it remained almost constant in the other zobas (Figure 4-6).

Figure 4-5 Trends in teenage motherhood by age and year

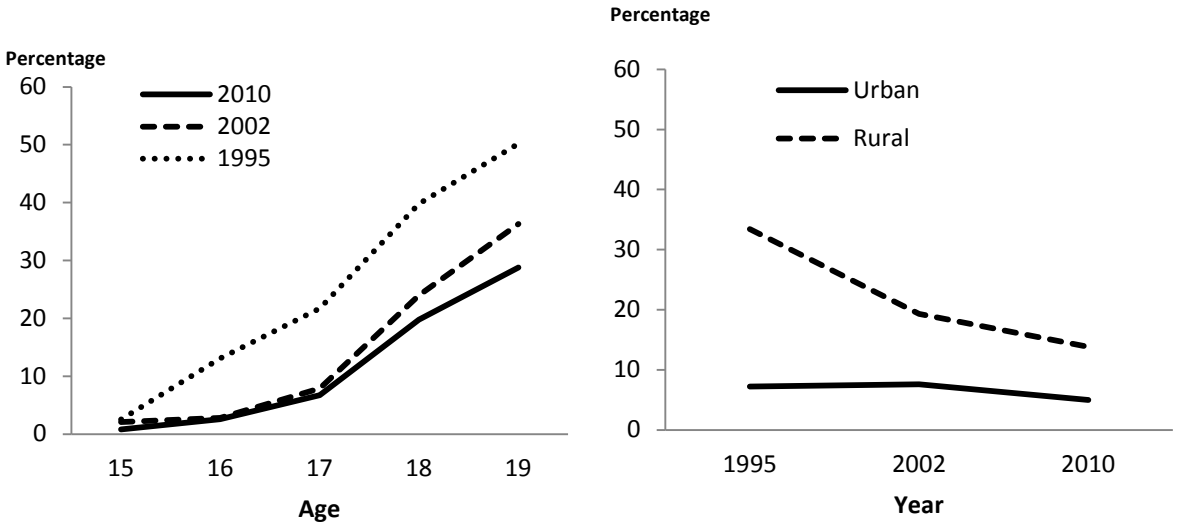
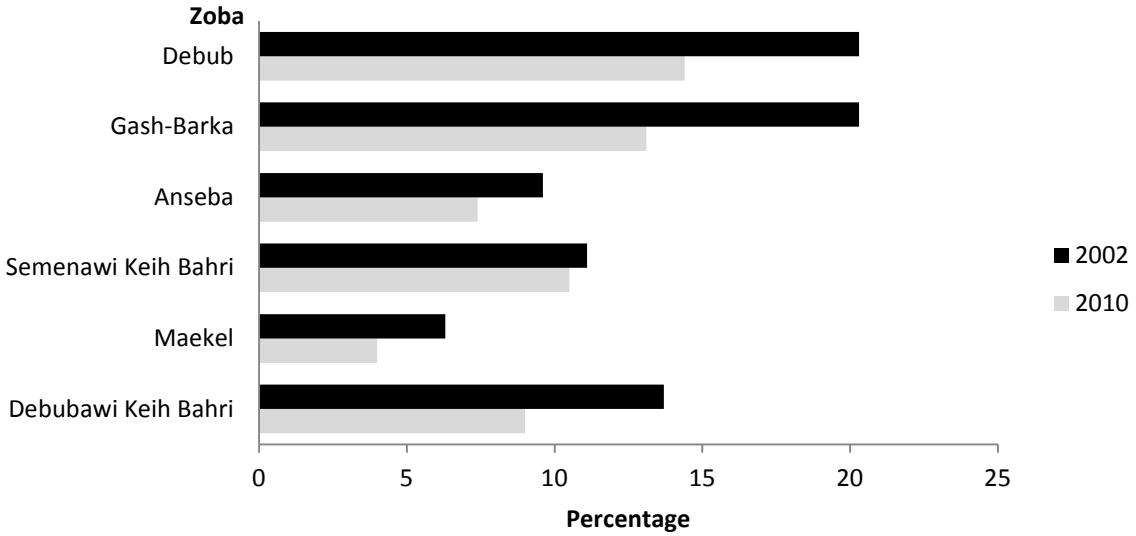


Figure 4-6 Trends in teenage motherhood by zoba



FAMILY PLANNING 5

Key Findings

- Knowledge of any contraceptive method is high and greater among sexually active unmarried women (96 percent) as compared to currently married women (86 percent); whereas knowledge of any contraceptive method in men is nearly universal at 97 percent.
- The current use of any contraceptive means among all women age 15-49 is 5.5 percent with 4.7 percent using modern methods; whereas the current use of any contraceptive method amongst married women is 8 percent. There has been no change since 1995.
- Nearly one-third of sexually active unmarried women currently use any contraceptive method.
- The most common reason for not using any contraceptive method amongst married women aged 15-49 was that 55 percent want to have as many children as possible; fear of side effects, 36 percent; lack of knowledge, 6 percent; and opposition to the use mainly for religious reasons 6 percent.

Maternal and child health services are among the top priorities of the current Health Sector Strategic Plan (2012-2016). This is in line with the commitment of the government to meeting MDGs four and five before the 2015 deadline. Reduction of maternal mortality can only be realized by working on the four pillars of safe motherhood one of which is family planning.

This chapter presents the EPHS2010 results regarding various aspects of contraceptive knowledge, attitudes, and behavior. The chapter starts with data on knowledge of contraceptive methods and sources of contraceptive means, on the channels through which Eritrean women receive information about family planning, and the acceptability of mass media providing information about family planning. Then interpersonal communication about family planning and attitudes toward use of family planning are discussed. After presenting knowledge of, and attitudes toward family planning, levels of ever use and current use of family planning methods and sources of methods are examined. The last part of the chapter focuses on women who are not using family planning and covers the following topics: reasons for non-use, intention to use in the future, preferred methods for women who intend to use in the future, and the main reasons for not planning to use in the future. The chapter closes with an evaluation of the role of health facilities in motivating nonusers to adopt family planning.

5.1 Knowledge of Contraceptive Methods and Sources

Knowledge of contraceptive methods and knowledge of sources of contraceptives are preconditions for use. Information on knowledge of family planning methods was collected by first asking the respondent to name ways or methods by which a couple could delay or avoid pregnancy. If the respondent failed to mention any of the methods listed in the questionnaire, the interviewer described the method and asked whether she had heard about it. No questions were asked to elicit information on the depth of knowledge of any method

except for periodic abstinence. Because married women have the greatest level of exposure to the risk of pregnancy, the following presentation places more emphasis on this group.

Eighty-six percent of all women know of at least one modern method of family planning (Table 51). Knowledge of methods is almost universal among sexually active unmarried women (96 percent). The current survey results show that knowledge of any contraceptive means is greater in men as compared to women: 96 and 86 percent respectively (Table 5-1).

Table 5-1 Knowledge of contraceptive methods

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

	Women			Men		
Method	All women	Currently married women	Sexually active unmarried woman[1]	All men	Currently married men	Sexually active unmarried men
Any method	85.9	85.5	95.8	96.6	95.9	99.1
Any modern method	85.9	85.5	95.8	96.5	95.7	99.1
Female sterilization	17.7	18.2	16.7	31.5	38.0	38.0
Male sterilization	7.3	6.7	6.6	21.8	26.8	29.4
Pill	79.3	79.8	93.9	83.0	87.5	92.9
IUD	20.1	21.1	28.1	25.2	31.7	35.5
Injectables	75.1	76.4	91.5	76.1	84.8	84.7
Implants	10.6	10.9	14.6	14.4	17.8	24.1
Male condom	72.1	69.3	80.1	95.2	94.2	98.1
Female condom	35.8	31.8	54.4	65.2	63.8	70.7
Diaphragm	6.6	5.9	11.8	20.7	23.7	27.4
Foam/jelly	3.3	2.9	9.6	10.9	12.9	12.6
Lactational amenorrhea (LAM)	43.6	48.8	53.6	37.4	55.1	46.2
Emergency contraception	7.3	6.2	11.5	24.4	26.7	35.8
Any traditional method	31.8	33.1	35.2	62.0	73.0	84.1
Rhythm	30.1	31.2	30.9	56.5	69.5	79.8
Withdrawal	10.4	11.1	26.2	43.2	51.4	72.3
Folk method	0.3	0.3	0.0	1.0	1.4	1.0
Mean number of methods known by respondents 15-49	4.2	4.2	5.3	6.1	6.9	7.5
Number of respondents	10,238	6,183	51	4,299	1,715	121
Mean number of methods known by respondents 15-[59]	na	na	na	6.0	6.6	7.5
Number of respondents	0	0	0	5,021	2,398	121

Note: Table is based on the CORE questionnaires.
[1] Had last sexual intercourse within 30 days preceding the survey.
na = Not applicable

The pill, male condoms, and injectables are the most widely known modern methods among all subgroups. Four in five currently married women know about the pill, and three-fourths know about condoms and injectables. Knowledge on female sterilization is generally low but better in men compared to women, the result being 18 percent in currently married women and 38 percent in currently married men. Similarly, intrauterine devices (IUDs) are known to 21 percent of married women and 32 percent of married men. Knowledge about female condoms by married women increased from 19 percent in 2002 to 32 percent in 2010. This may be attributable to the successful promotional activities undertaken by the program concerned. Knowledge of other modern methods is low.

Traditional methods are not as well known as modern methods. Among currently married women and men, the lactational amenorrhea method (LAM) is the most commonly known traditional method (49 and 55 percent, respectively). Thirty-two percent of women and 62 percent of men in general know about any traditional method.

Knowledge of most modern and traditional methods is higher among all women and sexually active unmarried women than among currently married women. Knowledge on contraceptive means by married women between the survey periods of 2002 and 2010 has not shown any substantial changes. Knowledge on male condoms among married women, however, has declined from 75 percent in 2002 to 69 percent 2010 while knowledge about injectables showed a slight increase from 74 percent in 2002 to 76 percent in 2010.

5.2 Knowledge of Contraceptive Methods by Background Characteristics

Differentials in knowledge of contraceptive methods by residence and education show that 80 percent of rural women and 74 percent of uneducated women know any modern method, whereas knowledge of a modern method is almost universal among urban women and educated women (Table 5-2). Women in Gash-Barka are less likely to know of family planning methods than women in other zobas. Knowledge of family planning methods is positively related to wealth. Similar patterns are also observed for men.

5.3 Ever Use of Contraceptive Means

5.3.1 Women

Use of contraceptive methods is one of the indicators most frequently used to assess the success of family planning programs. This section focuses on the levels, trends, and differentials in use of family planning. In general, contraceptive use in Eritrea is low. The percent of all women and currently married women who have ever used a family planning method by specific method and age are shown inTable 5-3. The table also shows ever used methods amongst the sexually active unmarried women.

Pills, injectables, male condoms and IUDs are the most used means of contraception in women in the order that they are presented here. The current survey findings are that 15 percent all women have ever used any contraceptive method with 14 percent of them using a modern method. The most widely used modern method among all women is the pill with seven percent followed by injectables at six percent and male condoms at two percent. Male sterilization and implants have never been used. The rhythm method is the most used traditional means of contraception with three percent followed by the withdrawal method at one percent.

Table 5-2 Knowledge of contraceptive methods by background characteristics

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

	Women			Men		
Background characteristic	Heard of any method	Heard of any modern method[1]	Number	Heard of any method	Heard of any modern method[1]	Number
Age						
15-19	82.2	82.2	402	100.0	100.0	15
20-24	87.6	87.6	1,057	97.7	97.7	83
25-29	87.0	87.0	1,252	95.8	95.8	200
30-34	87.1	87.1	967	93.7	92.8	275
35-39	87.5	87.4	1,088	97.4	97.4	406
40-44	83.4	83.3	715	96.2	96.2	347
45-49	78.9	78.8	701	95.4	94.8	389
Residence						
Total urban	97.1	97.0	2,030	99.9	99.9	570
Asmara	99.4	99.3	800	100.0	100.0	245
Other Town	95.5	95.5	1,230	99.9	99.9	324
Rural	79.9	79.9	4,153	94.0	93.6	1,146
Zoba						
DebubawiKeihBahri	87.6	87.6	111	92.1	92.1	35
Maekel	99.4	99.3	1,153	99.5	99.5	347
SemenawiKeihBahri	87.2	86.9	789	98.9	98.5	223
Anseba	90.2	90.2	930	99.6	99.6	229
Gash-Barka	62.7	62.7	1,541	86.2	85.3	426
Debub	93.6	93.6	1,660	99.3	99.3	455
Education						
No education	74.4	74.3	3,017	86.5	85.4	443
Primary	93.0	93.0	1,432	98.4	98.4	388
Middle	97.7	97.7	883	99.1	99.1	362
Secondary or above	99.8	99.8	850	100.0	100.0	521
Missing	100.0	100.0	1	100.0	100.0	0
Wealth quintile						
Lowest	71.8	71.8	1,237	91.4	90.7	341
Second	75.3	75.2	1,256	91.2	90.5	331
Middle	85.6	85.5	1,333	97.0	97.0	329
Fourth	97.2	97.1	1,185	99.6	99.6	348
Highest	99.3	99.3	1,171	100.0	100.0	366
Total 15-49	85.5	85.5	6,183	95.9	95.7	1,715
50-59	na	na	0	93.2	93.1	683
Total men 15-59	na	na	0	95.2	94.9	2,398

Note: Table is based on the CORE questionnaires.
[1]Female sterilization, male sterilization, pill, IUD, injectables, implants, male condom, female condom, diaphragm, foam or jelly, lactational amenorrhea method (LAM), and emergency contraception.
na= Not applicable

Table 5-3 Ever use of contraception: Women

Percentage of all women, currently married women, and sexually active unmarried women age 15-49 who have ever used any contraceptive method by method, according to age, Eritrea 2010

			Modern method												Traditional method				
Age	Any method	Any Modern method	Female sterilization	Male sterilization	Pill	IUD	Injectables	Implants	Male condom	Female condom	Diaprhagm	Foam/ jelly	LAM	Emergency contraception	Any traditional method	Rhythm	Withdrawal	Folk method	Number of women
ALL WOMEN																			
15-19	1.6	1.3	0.0	0.0	0.4	0.0	0.4	0.0	0.5	0.0	0.0	0.0	0.2	0.0	0.5	0.5	0.1	0.0	2,301
20-24	10.1	8.9	0.0	0.0	3.8	0.1	2.6	0.0	1.4	0.0	0.0	0.0	4.0	0.0	3.1	2.6	0.8	0.0	1,744
25-29	21.8	20.2	0.0	0.0	9.4	0.5	7.8	0.0	3.6	0.3	0.0	0.0	8.2	0.3	6.3	5.5	1.6	0.0	1,646
30-34	18.9	17.6	0.3	0.1	6.8	0.6	7.4	0.0	2.3	0.0	0.1	0.0	7.6	0.0	4.8	3.9	1.1	0.0	1,228
35-39	22.6	21.4	0.1	0.0	12.1	1.0	11.1	0.0	3.2	0.0	0.0	0.0	6.8	0.2	5.4	5.1	0.7	0.0	1,429
40-44	23.0	21.5	0.3	0.0	12.5	1.5	9.7	0.1	2.1	0.1	0.0	0.2	6.7	0.2	5.0	4.6	1.0	0.0	940
45-49	16.1	14.8	0.5	0.0	9.2	2.5	6.0	0.1	2.4	0.0	0.0	0.1	4.3	0.0	3.8	3.5	0.7	0.1	951
Total	14.6	13.5	0.1	0.0	6.8	0.7	5.7	0.0	2.1	0.1	0.0	0.0	4.9	0.1	3.8	3.4	0.8	0.0	10,238
CURRENTLY MARRIED WOMEN																			
15-19	5.8	4.5	0.0	0.0	1.4	0.0	1.5	0.0	1.1	0.2	0.0	0.0	0.9	0.0	1.7	1.7	0.0	0.0	402
20-24	15.5	13.4	0.0	0.0	5.9	0.2	4.0	0.0	1.8	0.0	0.0	0.0	6.4	0.0	4.9	4.3	1.3	0.0	1,057
25-29	25.3	23.3	0.1	0.0	11.0	0.7	9.1	0.0	3.2	0.1	0.0	0.0	10.6	0.3	7.6	6.8	1.9	0.0	1,252
30-34	20.9	19.3	0.4	0.0	7.5	0.8	8.1	0.0	2.3	0.0	0.1	0.0	8.5	0.0	5.4	4.2	1.3	0.0	967
35-39	24.8	23.5	0.1	0.0	13.3	1.0	13.3	0.0	3.0	0.0	0.0	0.0	7.7	0.3	5.9	5.6	0.8	0.0	1,088
40-44	23.5	22.3	0.5	0.0	12.2	1.5	10.7	0.0	1.8	0.2	0.0	0.0	7.3	0.1	5.1	4.8	0.8	0.0	715
45-49	17.5	16.0	0.7	0.0	9.6	2.9	7.3	0.1	2.5	0.0	0.0	0.1	4.7	0.0	4.4	4.2	0.8	0.1	701
Total	20.5	18.8	0.2	0.0	9.3	1.0	8.3	0.0	2.4	0.1	0.0	0.0	7.4	0.1	5.5	4.9	1.1	0.0	6,183
SEXUALLY ACTIVE UNMARRIED WOMEN[1]																			
15-19	49.1	49.1	0.0	0.0	49.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2
20-24	30.1	30.1	0.0	0.0	15.1	0.0	0.0	0.0	30.1	0.0	0.0	0.0	0.0	0.0	14.9	0.0	14.9	0.0	7
25-29	57.1	57.1	0.0	0.0	42.8	0.0	24.7	0.0	30.9	10.7	0.0	0.0	0.0	0.0	20.6	10.7	20.6	0.0	10
30-34	67.6	67.6	0.0	0.0	22.0	0.0	22.0	0.0	35.2	0.0	0.0	0.0	10.4	0.0	10.4	10.4	0.0	0.0	6
35-39	37.2	37.2	0.0	0.0	0.0	0.0	8.0	0.0	15.5	0.0	0.0	0.0	13.7	0.0	0.0	0.0	0.0	0.0	14
40-44	71.7	55.4	0.0	0.0	13.8	0.0	42.8	0.0	0.0	0.0	0.0	0.0	38.5	0.0	16.3	16.3	16.3	0.0	8
45-49	25.2	25.2	0.0	0.0	25.2	0.0	0.0	0.0	25.2	0.0	0.0	0.0	0.0	0.0	25.2	25.2	0.0	0.0	4
Total	48.3	45.8	0.0	0.0	19.3	0.0	16.1	0.0	20.5	2.0	0.0	0.0	10.9	0.0	11.9	7.9	8.6	0.0	51

Note: Table is based on the CORE questionnaires.
LAM = Lactational amenorrhea method
[1] Women who had sexual intercourse within 30 days preceding the survey.

Among the currently married women, 21 percent have used any method with 19 percent using modern methods and six percent using traditional methods. The sexually active and unmarried women are the highest contraceptives users. Hence 48 percent have used any method with 46 percent using modern methods and 12 percent using traditional methods.

5.3.2 Men

Among the sexually active unmarried men age 15-59, 93 percent have used some sort of contraceptive means and 92 percent have used modern methods. The male condom (92 percent), followed by the withdrawal method (22 percent), is the most common method of contraception used in this category of men. Traditional methods are ever used in only 28 percent of sexually active unmarried men (Table 5-4).

5.4 Current Use of Contraception by Age

This section presents information on the prevalence of current contraceptive use among women age 15-49. Level of current use is the most widely employed and valuable measure of the success of family planning programs. The contraceptive prevalence rate (CPR) is usually defined as the percentage of currently married women who are currently using a method of contraception. Table 5-5 shows the percent distribution by age of all women, currently married women, and sexually active unmarried women who currently use specific family planning methods. Six percent of all women, eight percent of currently married women, and 32 percent of sexually active unmarried women are using some methods of contraception. Users of modern methods of contraception make up the large majority of all users. Among currently married women, eight percent are using any method, seven percent modern methods and only one percent are using a traditional method. The same pattern is observed among all women and unmarried sexually active women. The most commonly used modern method among all women and currently married women is the pill (1.4 and 2.3 percent respectively), while the methods most used currently among unmarried sexually active women are the male condom and injectables at 23 and six percent, respectively.

The current use of contraception in all women is highest amongst the age group of 35-39 with ten percent using any method and nine percent using modern methods. Similarly, the highest rate of current use amongst currently married women also lies within the age group of 35-39 with 12 percent utilizing any method and 11 percent using modern methods. Uses of traditional methods are actually low (one percent) in both groups the all women and currently married women categories.

Any method of contraceptive use among currently married women is eight percent which has remained more or less unchanged (eight percent) since 1995 (Figure 5-1). Use of modern methods among currently married women has shown an increase from four percent in 1995 to five percent in 2002, to seven percent in 2010. The pill method has also shown growth from one percent in 2002 to two percent in 2010. But use of injectables has shown a slight decrease to two percent as compared to three percent in 2002. The use of traditional contraceptive methods over the three surveys has shown a trend of consistent reduction from four percent in 1995 to three percent in 2002 and to one percent in 2010. This indicates that people are opting more for modern methods over those years as opposed to the traditional methods of contraception.

Table 5-4 Ever use of contraception: Men

Percentage of all men, currently married men, and sexually active unmarried men age 15-49[59] who have ever used any contraceptive method by method, according to age, Eritrea 2010

Age	Any method	Any modern method	Modern method			Any traditional method	Traditional method			Number of men
			Female sterilization	Male sterilization	Male condom		Rhythm	Withdrawal	Folk method	
ALL MEN										
15-19	8.5	8.3	0.0	0.0	8.3	1.5	0.9	1.0	0.1	1,544
20-24	27.4	27.0	0.0	0.0	27.0	6.4	5.0	2.8	0.0	635
25-29	40.3	33.3	0.0	0.0	33.3	17.4	14.2	5.6	0.5	449
30-34	44.8	35.6	0.0	0.0	35.6	26.2	24.6	7.6	0.3	390
35-39	46.0	30.5	0.0	0.0	30.5	33.5	31.7	10.6	0.0	490
40-44	43.1	26.8	0.4	0.0	26.4	33.4	30.3	9.7	0.6	376
45-49	32.3	16.3	0.2	0.0	16.3	27.0	25.6	8.3	0.0	417
Total 15-49	27.5	21.1	0.1	0.0	21.0	15.0	13.5	4.9	0.2	4,299
50-59	25.2	12.0	0.6	0.0	11.6	21.9	20.8	6.6	0.0	722
Total men 15-59	27.2	19.8	0.1	0.0	19.7	16.0	14.6	5.1	0.2	5,021
CURRENTLY MARRIED MEN										
15-19	29.2	29.2	0.0	0.0	29.2	7.6	7.6	0.0	0.0	15
20-24	27.8	24.7	0.0	0.0	24.7	12.1	12.1	5.6	0.0	83
25-29	36.2	21.6	0.0	0.0	21.6	25.3	24.5	3.9	0.6	200
30-34	42.6	29.8	0.0	0.0	29.8	31.4	30.1	8.1	0.4	275
35-39	43.8	26.1	0.0	0.0	26.1	37.1	35.4	10.7	0.0	406
40-44	41.5	24.2	0.4	0.0	23.8	33.3	31.5	9.2	0.3	347
45-49	31.6	14.7	0.2	0.0	14.7	28.4	26.9	8.7	0.0	389
Total 15-49	38.6	23.2	0.1	0.0	23.1	30.6	29.2	8.4	0.2	1,715
50-59	25.9	11.9	0.6	0.0	11.5	23.0	21.9	6.8	0.0	683
Total men 15-59	35.0	20.0	0.3	0.0	19.8	28.4	27.1	7.9	0.1	2,398
SEXUALLY ACTIVE UNMARRIED MEN										
15-19	90.6	90.6	0.0	0.0	90.6	26.0	20.3	23.4	0.0	35
20-24	97.0	97.0	0.0	0.0	97.0	27.5	22.2	13.2	0.0	42
25-29	100.0	100.0	0.0	0.0	100.0	31.9	13.0	28.8	0.0	23
30-34	74.1	74.1	0.0	0.0	74.1	16.4	0.0	16.4	0.0	6
35-39	78.1	67.3	0.0	0.0	67.3	43.6	32.7	43.6	0.0	10
40-44	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	1
45-49	100.0	100.0	0.0	0.0	100.0	22.8	22.8	22.8	0.0	4
Total 15-49	93.2	92.3	0.0	0.0	92.3	28.2	19.4	21.9	0.0	121
50-59	na	na	na	na	na	na	na	na	na	0
Total men 15-59	93.2	92.3	0.0	0.0	92.3	28.2	19.4	21.9	0.0	121

Note: Table is based on the CORE questionnaires.
[1] Men who had sexual intercourse within 30 days preceding the survey
na= Not applicable

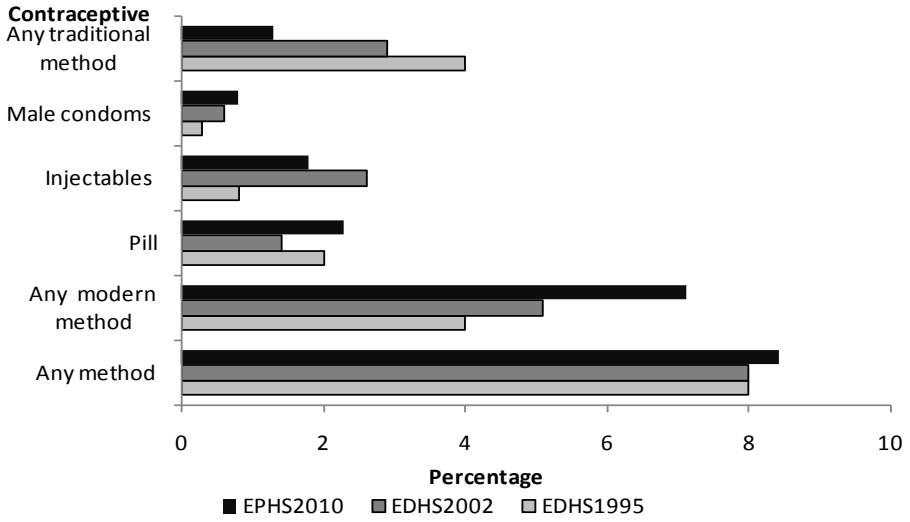
Table 5-5 Current use of contraception by age

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

Age	Any method	Any modern method	Modern method								Any traditional method	Traditional method		Not currently using	Total	Number of women
			Female sterilization	Male sterilization	Pill	IUD	Injectables	Implants	Male condom	LAM		Rhythm	Withdrawal			
ALL WOMEN																
Age																
15-19	0.8	0.6	0.0	0.0	0.1	0.0	0.1	0.0	0.4	0.0	0.1	0.1	0.0	99.2	100.0	2,301
20-24	4.0	3.3	0.0	0.0	1.4	0.1	0.3	0.0	0.6	0.8	0.7	0.6	0.1	96.0	100.0	1,744
25-29	9.3	8.1	0.0	0.0	2.0	0.2	1.5	0.0	1.7	2.6	1.2	1.1	0.1	90.7	100.0	1,646
30-34	7.5	6.6	0.3	0.1	1.3	0.3	2.0	0.0	1.1	1.5	0.9	0.7	0.2	92.5	100.0	1,228
35-39	9.6	8.6	0.1	0.0	3.0	0.5	2.6	0.0	1.3	1.2	1.0	0.9	0.1	90.4	100.0	1,429
40-44	6.6	5.1	0.3	0.0	2.0	0.3	1.4	0.0	0.3	0.6	1.5	1.4	0.1	93.4	100.0	940
45-49	3.6	3.0	0.5	0.0	0.6	0.2	0.9	0.1	0.2	0.5	0.6	0.5	0.1	96.4	100.0	951
Total	5.5	4.7	0.1	0.0	1.4	0.2	1.1	0.0	0.8	1.0	0.8	0.7	0.1	94.5	100.0	10,238
CURRENTLY MARRIED WOMEN																
Age																
15-19	2.5	2.0	0.0	0.0	0.5	0.0	0.8	0.0	0.7	0.0	0.5	0.5	0.0	97.5	100.0	402
20-24	6.4	5.2	0.0	0.0	2.4	0.2	0.5	0.0	0.8	1.4	1.2	1.1	0.1	93.6	100.0	1,057
25-29	10.9	9.2	0.1	0.0	2.6	0.3	1.8	0.0	1.2	3.4	1.6	1.5	0.1	89.1	100.0	1,252
30-34	8.7	7.6	0.4	0.0	1.6	0.4	2.3	0.0	0.9	1.8	1.2	0.9	0.3	91.3	100.0	967
35-39	12.1	10.8	0.1	0.0	3.9	0.6	3.4	0.0	1.2	1.5	1.3	1.1	0.2	87.9	100.0	1,088
40-44	8.6	6.5	0.5	0.0	2.7	0.4	1.8	0.0	0.3	0.8	2.0	1.9	0.1	91.4	100.0	715
45-49	4.2	3.4	0.7	0.0	0.4	0.3	1.3	0.1	0.0	0.6	0.8	0.7	0.1	95.8	100.0	701
Total	8.4	7.1	0.2	0.0	2.3	0.3	1.8	0.0	0.8	1.6	1.3	1.1	0.2	91.6	100.0	6,183
SEXUALLY ACTIVE UNMARRIED WOMEN[1]																
Age																
15-19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	2
20-24	24.4	24.4	0.0	0.0	0.0	0.0	0.0	0.0	24.4	0.0	0.0	0.0	0.0	75.6	100.0	7
25-29	73.4	73.4	0.0	0.0	12.1	0.0	14.0	0.0	47.2	0.0	0.0	0.0	0.0	26.6	100.0	10
30-34	67.6	67.6	0.0	0.0	0.0	0.0	22.0	0.0	35.2	10.4	0.0	0.0	0.0	32.4	100.0	6
35-39	23.8	23.8	0.0	0.0	0.0	0.0	0.0	0.0	23.8	0.0	0.0	0.0	0.0	76.2	100.0	14
40-44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	8
45-49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	4
Total	31.6	31.6	0.0	0.0	2.3	0.0	5.2	0.0	22.9	1.2	0.0	0.0	0.0	68.4	100.0	51

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

Figure 5-1 **Trends in current use of contraception among currently married women**



5.5 Decision on Using Contraception

An indication of the acceptability of family planning is the extent to which spouses discuss the topic of family planning with each other. The majority of women and men who are currently using contraception (69 percent of women, 65 percent of men) stated that they made the decision to use contraception jointly with their spouses (Table 5-6). Sixty-six percent of women aged 30-34 made the decision to use contraception jointly with their husbands. With respect to men aged 30-34, 82 percent made joint decisions to use contraception with their spouses. Joint decisions with partners on the use of contraceptives do not show any significant variation between people living in rural and urban areas. Seventy-three percent of women and 61 percent of men in Asmara made the decision jointly with their spouse. The decision to use contraception alone was mainly seen in the age group of 15-19 both in women and men (42 and 45 percent respectively). This is probably due to the fact men or women at this age group are not yet married and hence have no spouse or partner with whom to discuss the matter.

Discussions with partners/spouse resulting in joint decision were directly related to the level of education in women, i.e., the higher the level of education the higher the frequency of joint decisions being made. A direct association between the level of education and making joint decisions with partner has not, however, been demonstrated in men. No consistent pattern in the level of wealth quintile was seen to influence a joint decision to use any contraception means.

Table 5-6 Decision on using contraception

Percentage of women and men age 15-49 who are currently using contraceptive method by whose decision it was to use contraception, according to background characteristics, Eritrea 2010

Background characteristic	Women							Men					
	Not in union	Mainly respondent	Mainly partner	Joint decision	Other	Missing	Number using contraceptive method	Not in union	Mainly respondent	Mainly partner	Joint decision	Missing	Number using contraceptive method
Age													
15-19	41.6	6.3	0.0	46.7	0.0	5.3	18	44.5	8.1	9.1	37.1	1.2	110
20-24	3.8	6.7	1.7	79.0	1.4	7.4	70	44.3	4.8	1.8	46.9	2.1	131
25-29	11.2	13.2	4.8	63.7	0.0	7.1	153	38.6	3.1	1.8	53.0	3.5	97
30-34	8.5	9.7	6.4	66.0	3.3	6.0	92	10.1	5.3	1.4	81.5	1.6	91
35-39	3.7	12.4	3.6	72.8	0.9	6.7	137	8.9	3.4	4.2	83.3	0.2	121
40-44	1.4	5.1	3.4	83.8	4.9	1.4	62	9.2	0.0	3.5	80.8	6.5	79
45-49	14.1	15.8	13.9	55.8	0.0	0.4	34	3.5	4.2	6.5	84.1	1.7	62
Residence													
Total urban	8.6	9.1	5.1	69.4	1.0	6.8	391	27.2	3.8	3.6	63.2	2.2	393
Asmara	6.3	8.2	3.7	72.9	1.7	7.2	235	30.3	3.5	2.5	60.7	3.1	218
Other Town	12.0	10.4	7.2	64.1	0.0	6.2	157	23.3	4.3	5.1	66.4	10 8	175
Rural	7.0	14.3	3.6	69.3	2.4	3.4	175	22.5	5.0	4.4	65.8	2.3	300
Zoba													
Debubawi KeihBahri	14.6	17.6	3.2	59.6	0.0	5.0	6	13.5	7.3	0.0	74.1	5.0	6
Maekel	5.9	8.0	3.9	74.3	1.3	6.6	296	28.1	2.7	2.6	64.3	2.4	282
Semenawi KeihBahri	13.2	10.6	0.0	63.6	3.0	9.7	35	31.3	6.7	4.3	56.1	1.5	81
Anseba	3.7	15.6	2.5	70.4	4.5	3.3	72	25.1	6.4	6.4	59.2	2.8	72
Gash-Barka	23.4	13.7	4.0	53.2	0.0	5.6	60	21.7	10.0	5.8	57.6	5.0	81
Debub	6.2	12.9	10.7	66.4	0.0	3.7	96	19.3	2.2	4.3	73.5	0.7	170
Education													
No education	4.6	18.3	6.6	61.8	4.9	3.9	89	5.6	8.0	16.0	69.8	0.6	19
Primary	15.3	11.9	5.1	62.5	0.7	4.6	121	14.9	2.4	6.4	72.4	4.0	66
Middle	8.0	7.8	4.0	71.8	2.0	6.5	148	20.3	7.9	5.2	65.0	1.7	181
Secondary or above	5.5	8.8	4.0	74.9	0.0	6.8	207	29.7	2.9	2.5	62.6	2.3	426
Wealth quintile													
Lowest	2.3	15.0	3.5	75.2	0.0	4.0	26	28.4	9.6	7.5	54.5	0.0	73
Second	3.5	12.8	4.0	76.1	3.6	0.0	29	22.7	2.0	0.0	66.9	8.5	70
Middle	11.8	23.8	5.2	49.1	3.4	6.7	59	21.8	9.1	6.1	62.4	0.6	90
Fourth	11.9	11.0	4.0	67.9	0.8	4.4	149	21.4	3.5	7.6	66.1	1.3	177
Highest	6.4	7.4	5.0	72.9	1.3	7.0	303	28.2	2.5	1.1	65.7	2.4	284
Total	8.1	10.7	4.6	69.4	1.5	5.8	566	23.1	4.8	4.2	65.3	2.6	758

Note: Table is based on the CORE questionnaires.

5.6 Current Use of Contraception by Background Characteristics

Substantial variation according to background characteristics is shown in Table 5-7 in the current use of contraception methods by married women. Currently married women in urban areas are four or five times as likely as their rural counterparts to use any contraceptive method (18 and four percent, respectively), to use any modern method (15 and three percent, respectively) and to use any traditional method (three and one percent, respectively). The highest proportion of current contraceptive users live in the capital Asmara (28 percent) as compared to other towns across the country (11 percent).

The most preferred methods regardless of where women reside were the pill followed by the injectables and the LAM method, respectively. Unlike those living in urban areas, women who live in rural areas shown that their preferred means of contraception is the LAM method followed by the injectables and the pill.

The zobas show notable variation. The highest percentage of users of any and modern methods were from Maekel (24 and 20 percent, respectively) and the lowest percentage of users were from Gash-Barka (three and three percent, respectively). The higher the educational level the more likely that women will use means of contraception. Twenty-three percent of women with secondary or above level of education use contraception as compared to three percent of women with no education. Similarly, current use of any and modern contraceptive method increases with wealth from two percent in the lowest quintile to 24 and 20 percent in the highest quintile (Table 5-7).

5.7 Number of Living Children at First Use of Contraception

More than 85 percent of women age 15-49 have never used any contraception at any time in their life. Five percent of all women have started to use contraception when they have one living child and this makes up 36 percent of women who have ever used family planning methods. This is followed by those who started contraception use when they have four or more living children (three percent); accounting for 20 percent of ever users. No clear pattern can be deduced from Table 5-8 in the extent of contraception use as related to the number of living children they may have at first use.

5.8 Knowledge of the Fertile Period

5.8.1 Women

An elementary knowledge of reproductive physiology provides a useful background for successful practice of coitus-associated methods such as withdrawal and condom use. Such knowledge is particularly critical in the use of the rhythm method. The EPHS2010 included a question designed to obtain information on the respondent's understanding of when a woman is most likely to become pregnant during the menstrual cycle. Respondents were asked, "From one menstrual period to the next, are there certain days when a woman is more likely to get pregnant if she has sexual relations?" If the reply was yes, the respondent was further asked whether that time was just before a woman's period begins, during her period, right after her period has ended, or halfway between two periods.

Table 5-7 Current use of contraception by background characteristics

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

Background characteristic	Any method	Any modern method	Modern method							Any traditional method	Traditional method		Not currently using	Total	Number of women
			Female sterilization	Pill	IUD	Injectables	Implants	Male condom	LAM		Rhythm	Withdrawal			
Residence															
Total urban	17.6	14.6	0.6	4.6	1.0	3.7	0.1	2.1	2.5	3.0	2.6	0.4	82.4	100.0	2,030
Asmara	27.5	22.4	1.2	6.1	2.5	4.1	0.1	4.4	4.1	5.1	4.4	0.8	72.5	100.0	800
Other Town	11.2	9.6	0.3	3.6	0.0	3.5	0.0	0.7	1.6	1.6	1.5	0.1	88.8	100.0	1,230
Rural	3.9	3.4	0.0	1.1	0.0	0.9	0.0	0.2	1.2	0.5	0.4	0.1	96.1	100.0	4,153
Zoba															
Debubawi Keih Bahri	5.0	4.7	0.0	0.5	0.0	2.5	0.0	0.7	1.0	0.3	0.3	0.0	95.0	100.0	111
Maekel	24.2	20.0	0.8	5.7	1.8	4.3	0.1	3.3	3.9	4.2	3.6	0.6	75.8	100.0	1,153
Semenawi Keih Bahri	3.9	3.6	0.0	1.1	0.0	1.3	0.0	0.2	1.0	0.3	0.3	0.0	96.1	100.0	789
Anseba	7.5	5.9	0.3	1.3	0.0	1.5	0.0	0.5	2.3	1.6	1.4	0.2	92.5	100.0	930
Gash-Barka	3.0	2.7	0.1	1.2	0.0	0.9	0.0	0.1	0.5	0.3	0.3	0.0	97.0	100.0	1,541
Debub	5.4	4.8	0.0	2.1	0.0	1.4	0.0	0.2	1.1	0.6	0.5	0.1	94.6	100.0	1,660
Education															
No education	2.8	2.5	0.1	0.7	0.0	0.5	0.0	0.0	1.0	0.3	0.2	0.1	97.2	100.0	3,017
Primary	7.2	6.5	0.1	2.2	0.1	2.3	0.0	0.5	1.4	0.6	0.6	0.1	92.8	100.0	1,432
Middle	15.5	13.2	0.9	4.2	0.3	3.2	0.0	1.8	2.8	2.3	1.8	0.5	84.5	100.0	883
Secondary or above	23.1	18.1	0.0	5.9	2.0	4.0	0.1	3.2	3.0	4.9	4.7	0.3	76.9	100.0	850
Missing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	1
Number of living children															
0	1.4	1.0	0.0	0.2	0.0	0.0	0.0	0.8	0.0	0.3	0.3	0.0	98.6	100.0	621
1-2	7.5	6.2	0.1	2.0	0.3	1.2	0.1	1.2	1.4	1.3	1.2	0.1	92.5	100.0	1,944
3-4	10.8	8.8	0.2	2.5	0.5	1.9	0.0	1.1	2.5	2.1	1.8	0.3	89.2	100.0	1,679
5+	9.5	8.5	0.4	2.9	0.3	3.0	0.0	0.2	1.6	1.0	0.8	0.1	90.5	100.0	1,939
Wealth quintile															
Lowest	2.1	1.8	0.0	0.7	0.0	0.6	0.0	0.1	0.4	0.2	0.2	0.0	97.9	100.0	1,237
Second	2.2	2.1	0.0	0.7	0.0	0.6	0.0	0.0	0.9	0.1	0.1	0.0	97.8	100.0	1,256
Middle	3.9	3.3	0.1	1.1	0.0	0.6	0.0	0.3	1.3	0.6	0.5	0.1	96.1	100.0	1,333
Fourth	11.0	9.3	0.1	3.7	0.0	2.5	0.0	0.6	2.5	1.7	1.5	0.2	89.0	100.0	1,185
Highest	24.2	20.1	1.1	5.5	1.8	5.1	0.1	3.3	3.3	4.1	3.6	0.5	75.8	100.0	1,171
Total	8.4	7.1	0.2	2.3	0.3	1.8	0.0	0.8	1.6	1.3	1.1	0.2	91.6	100.0	6,183

Note: Table is based on the CORE questionnaires.
If more than one method is used, only the most effective method is considered in this tabulation.
LAM = Lactational amenorrhea method

Table 5-8 Number of children at first use of contraception

Percent distribution of women age 15-49 by number of living children at the time of first use of contraception, according to current age, Eritrea 2010

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		
Age									
15-19	98.4	0.6	0.6	0.2	0.0	0.0	0.2	100.0	2,301
20-24	89.9	1.9	5.8	1.6	0.5	0.1	0.3	100.0	1,744
25-29	78.2	2.0	10.7	5.6	2.1	1.1	0.2	100.0	1,646
30-34	81.1	1.2	6.7	4.8	2.9	3.1	0.1	100.0	1,228
35-39	77.4	1.7	6.4	4.0	3.0	7.3	0.2	100.0	1,429
40-44	77.0	2.6	4.5	3.8	2.4	9.7	0.0	100.0	940
45-49	83.9	3.4	3.1	2.1	1.6	5.8	0.1	100.0	951
Total	85.4	1.7	5.3	2.9	1.6	3.0	0.2	100.0	10,238

Note: Table is based on the CORE questionnaires.

Knowledge of the fertile period among all respondents in relation of their knowledge and use of the rhythm method is rather low as shown in Table 5-9. Forty-one percent of all respondents think that the fertile period is right after the menstrual period has ended, and only 13 percent rightly think half way between the two menstrual periods. Among those who know the rhythm method, 49 percent stated that the fertile period is right after the menstrual period ends and 26 percent stated halfway between the two menstrual periods. Twenty-three percent of all respondents do not have any knowledge whatsoever about the point under discussion (Figure 5-2).

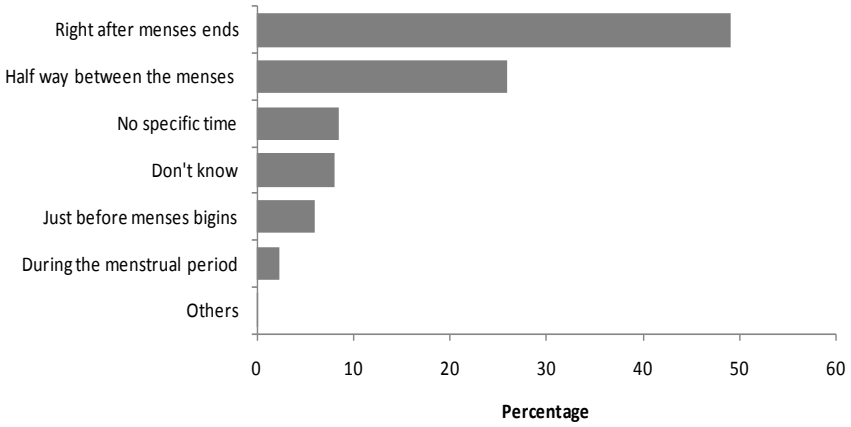
Table 5-9 Knowledge of the fertile period: women

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

Perceived fertile period	Knows rhythm method	Users of rhythm method	Nonusers of rhythm method	All respondents
Just before her menstrual period begins	6.0	6.7	4.0	4.1
During her menstrual period	2.3	1.8	2.6	2.6
Right after her menstrual period has ended	49.0	45.5	41.5	41.5
Halfway between two menstrual periods	25.9	38.1	12.4	12.6
Other	0.2	0.0	0.1	0.1
No specific time	8.5	2.7	16.4	16.3
Don't know	8.1	5.2	23.0	22.9
Total	100.0	100.0	100.0	100.0
Number of women	1,061	72	10,166	10,238

Note: Table is based on the CORE questionnaires.

Figure 5-2 Knowledge of the fertile period among women aged 15-49 years



5.8.2 Men

Very similar to that of women, men were asked about their knowledge on the fertile period and in relation to their knowledge and use of the rhythm method. The results in Table 5-10 show that 35 percent of all respondents think that the fertile period is right after the end of the menstrual period, 18 percent half way between the two periods, 14 percent do not think of any specific time and 26 percent do not have any knowledge about the issue of the discussion whatsoever. Among those who have knowledge on the rhythm method, 46 percent and 25 percent think the fertile period to be right after the completion of the menstrual period and halfway between two menstrual periods, respectively.

Table 5-10 Knowledge of the fertile period: men

Percent distribution of men age 15-49[59] by knowledge of the fertile period during the ovulatory cycle, according to current use of the rhythm method, Eritrea 2010

Perceived fertile period	Knows rhythm method	Users of rhythm method	Nonusers of rhythm method	All respondents
Just before her menstrual period begins	5.3	1.1	4.5	4.4
During her menstrual period	3.5	1.0	3.9	3.8
Right after her menstrual period has ended	46.3	65.7	34.2	35.2
Halfway between two menstrual periods	24.9	25.3	17.2	17.5
Other	0.1	0.0	0.0	0.0
No specific time	8.8	3.7	14.0	13.7
Don't know	11.2	3.2	26.2	25.5
Missing	0.1	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0
Number of men	1,858	134	4,165	4,299

Note: Table is based on the CORE questionnaires.

5.9 Source of Modern Contraception Method

Information on where women obtain their contraceptives methods is important for family planning program managers. In the EPHS2010, information was collected on sources from which modern family planning methods were obtained. For women using female sterilization, the place where the operation was performed was considered the source, while women using other methods were asked the most recent source of the method.

Public health facilities are the main source of modern contraceptive methods (Table 5-11 and Figure 5-3). Two-thirds of women who uses modern family planning methods obtained the method from public health facilities with one-fifth and one-third of them obtaining the methods from government hospitals and health centers, respectively). The next most common source of modern contraceptive methods is the private medical sector providing services to 14 percent of current users with pharmacies taking the largest share (13 percent).

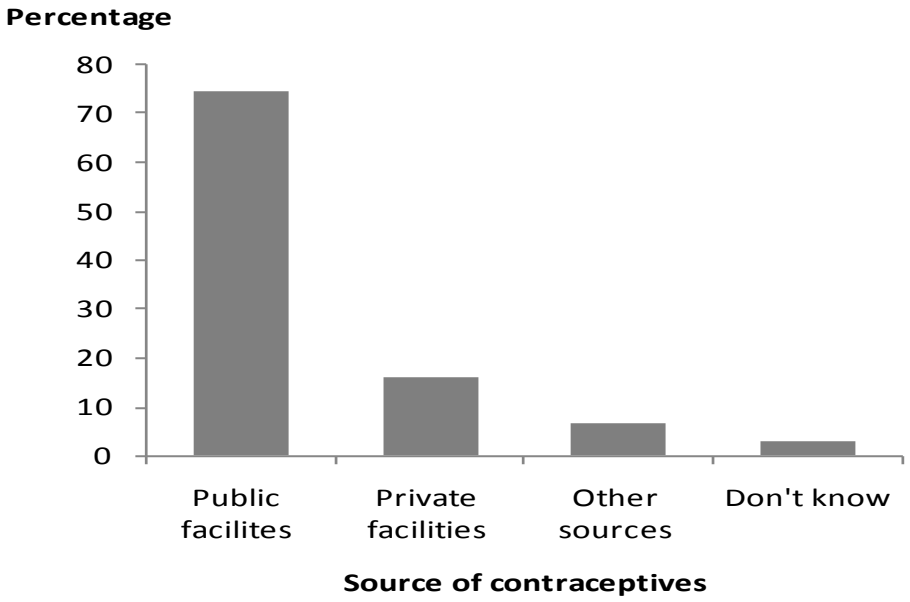
Table 5-11 Source of modern contraception methods

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

Source	Female sterilization	Male sterilization	Pill	IUD	Injectables	Implants	Male condom	Total
Public sector	88.6	0.0	78.2	95.4	85.4	100.0	10.4	66.5
Government hospital	88.6	0.0	22.3	28.4	20.2	100.0	1.8	20.0
Government health center	0.0	0.0	43.7	9.6	47.9	0.0	6.1	33.0
Family planning clinic	0.0	0.0	11.2	57.5	16.2	0.0	2.4	12.9
Other public	0.0	0.0	1.0	0.0	1.2	0.0	0.0	0.7
Private medical sector	11.4	0.0	19.7	4.6	14.6	0.0	7.4	14.2
Private hospital/clinic	5.1	0.0	0.6	4.6	0.6	0.0	0.0	0.9
Pharmacy	0.0	0.0	19.0	0.0	13.1	0.0	6.7	12.6
Private doctor	6.3	0.0	0.0	0.0	0.9	0.0	0.0	0.5
Other private medical	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.2
Other source	0.0	0.0	0.0	0.0	0.0	0.0	19.2	4.3
Shop	0.0	0.0	0.0	0.0	0.0	0.0	15.1	3.4
Friend/relative	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.9
Other	0.0	0.0	0.8	0.0	0.0	0.0	5.9	1.6
Don't know	0.0	0.0	0.7	0.0	0.0	0.0	10.5	2.6
Missing	0.0	100.0	0.6	0.0	0.0	0.0	46.6	10.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women[1]	14	1	145	21	116	1	85	383

Note: Table is based on the CORE questionnaires.
[1] Total includes other modern methods but excludes lactational amenorrhea method (LAM).

Figure 5-3 **Percent distribution of current users of modern contraceptive methods by sources of supply**



5.10 Informed Choice

Informed choice is an important aspect in determining the quality of family planning services. Current users of modern methods of contraception were asked whether they were informed of side effects or problems they might have with a method, what to do if they experienced side effects, and alternative methods they could use. This information assists users in coping with side effects and decreases unnecessary discontinuation of a method. Moreover, such data serve as a measure of the quality of family planning service provision. Results by method type and source are presented in Table 5-12.

Of all those who used female sterilization, 91 percent were informed that female sterilization is permanent and irreversible. Information on other methods of contraception that can be used was also provided (Table 5-12). The percentage of all users that were informed about other methods by a health facility or family planning worker was 89 percent of IUD users, 76 percent of injectable users, 71 percent of pills users. Nearly eight in ten (78 percent) and two-thirds (64 percent) of women who obtained family planning services from public and private health facilities, respectively, were informed about the existence other methods of contraceptive that can be used.

Table 5-12 Informed choice

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

	Among women who started last episode of modern contraceptive method within five years preceding the survey:		Among women who were sterilized:	
Method/source	Percentage who were informed by a health or family planning worker of other methods that could be used	Number of women	Percentage who were informed that sterilization is permanent	Number of women
Method				
Female sterilization[1]	52.4	8	91.0	8
Pill	70.8	136	na	0
IUD	88.8	17	na	0
Injectables	76.1	106	na	0
Other	66.1	102	na	0
Initial source of method[2]				
Public sector	77.6	263	90.2	8
Government hospital	81.6	75	90.2	8
Government health center	78.4	124	na	0
Family planning clinic	71.9	61	na	0
Other public sector	55.8	3	na	0
Private medical sector	60.4	44	100.0	1
Private hospital/clinic	85.3	7	100.0	1
Pharmacy	53.5	35	na	0
Private doctor	100.0	2	na	0
Other source	55.1	33	na	0
Friend/relative	55.1	33	na	0
Other	53.4	28	na	0
Don't know	0.0	2	na	0
Total	71.4	370	91.0	8

Note: Table is based on the CORE questionnaires.
Table includes users of only the methods listed individually.
na = Not applicable
[1] Among women who were sterilized in the five years preceding the survey.
[2] Source at start of current episode of use.

5.11 Future Use of Contraception

An important indicator of the changing demand for family planning is the extent to which nonusers of contraception intend to use family planning in the future. Women who were not using contraception at the time of the survey were asked about their intention to use family planning in the future. The results for currently married women are presented in Table 5-13.

Among currently married women who are not using a contraceptive method, 22 percent intend to use on in the future, nine percent were unsure, and 69 percent do not intend to use one in the future. The proportion of women who do not intend to use in the future remains fairly consistent across the spectrum and regardless of how many living children they have. The high level of respondents who have no intention to use contraception in the future points to the unlikely scenario that the low contraceptive use in Eritrea will change any time soon.

Table 5-13 Future use of contraception

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

	Number of living children[1]					
Intention	0	1	2	3	4+	Total
Intends to use	16.1	24.0	23.3	24.9	21.6	22.3
Unsure	9.6	7.3	6.8	7.4	9.7	8.5
Does not intend to use	74.3	68.7	69.9	67.6	68.6	69.2
Missing	0.0	0.0	0.0	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	489	861	925	801	2,586	5,662

Note: Table is based on the CORE questionnaires.
[1] Includes current pregnancy.

5.12 Reasons for Not Intending to Use Contraceptives in Future

Overall, the most important reasons for not using a contraceptive method were fertility related (70 percent) and specifically that they want to have as many children as possible (55 percent), or face opposition to use (10 percent) from partners or religious circles (Table 5-14). Lack of knowledge as to which method to use and method-related reasons, each, were reported by eight percent of the respondents. The reasons for not intending to use contraceptive in the future have similar patterns by age of the respondents.

Table 5-14 Reason for not intending to use contraception in the future

Percent distribution of currently married women age 15-49 who are not using contraception and who do not intend to use in the future by main reason for not intending to use, Eritrea 2010

	Age		
Reason	15-29	30-49	Total
Fertility-related reasons	73.4	68.2	70.3
Infrequent sex/no sex	2.9	3.6	3.3
Menopausal/had hysterrectomy	0.0	5.8	3.4
Subfecund/ infecund	0.6	13.6	8.4
Wants as many children as possible	69.9	45.3	55.2
Opposition to use	9.9	10.4	10.2
Respondent opposed	3.2	3.9	3.6
Husband/partner opposed	1.0	1.1	1.1
Religious prohibition	5.7	5.4	5.5
Lack of knowledge	7.1	8.4	7.9
Knows no method	5.3	6.4	5.9
Knows no source	1.8	2.0	1.9
Method-related reasons	5.9	8.5	7.5
Health concerns	1.0	4.8	3.3
Fear of side effects	4.3	3.2	3.6
Lack of access/too far	0.0	0.0	0.0
Inconvenient to use	0.3	0.3	0.3
Interfere with body's normal process	0.3	0.2	0.3
Other	2.2	2.6	2.4
Don't know	1.4	1.8	1.7
Missing	0.1	0.1	0.1
Total	100.0	100.0	100.0
Number of women	1,574	2,343	3,917

Note: Table is based on the CORE questionnaires.

5.13 Preferred Method of Contraception for Future Use

Non-users who planned to use family planning in the future were asked about the method they would prefer to use. About 85 percent of women prefer either pills or injectables (Table 5-15). Older women (30-49) are more likely to prefer injectables (50 percent) than pills (34 percent); while younger women (15-29) are almost equally likely to prefer both injectables and pills (43 and 42 percent, respectively). Two percent of nonusers who plan to use in the future prefer condoms. For the periodic abstinence, five and three percent of younger and older women, respectively, prefer to use that method. It should be noted that two and four percent of younger and older nonusers, respectively, were not sure what method they would prefer to use in the future.

Table 5-15 Preferred method of contraception for future use

Percent distribution of currently married women age 15-49 who are not using a contraceptive method but who intend to use in the future by preferred method, Eritrea 2010

	Age		
Method	15-29	30-49	Total
Female sterilization	0.7	0.5	0.6
Male sterilization	0.2	0.0	0.1
Pill	41.9	34.4	38.7
IUD	1.2	1.8	1.4
Injectables	43.0	49.6	45.8
Implants	1.5	1.7	1.6
Condom	2.3	1.4	1.9
Female condom	0.0	0.1	0.0
Diaphragm	0.0	0.2	0.1
Lactation amenorrhea	1.5	1.6	1.5
Periodic abstinence	4.6	3.4	4.1
Withdrawal	0.1	0.2	0.2
Other	1.0	1.6	1.3
Unsure	2.0	3.6	2.7
Total	100.0	100.0	100.0
Number of women	732	528	1,261

Note: Table is based on the CORE questionnaires.

5.14 Exposure to Family Planning Messages

Radio and television are the major sources of information about family planning in the electronic media. Print media, that is newspapers or magazines, posters, and leaflets or brochures, can also provide family planning information. Assessment of the level of public exposure to various media allows program managers and planners to effectively target population subgroups for information, education, and communication campaigns.

The EPHS2010 respondents were asked whether in the last 12 months they had heard about family planning on the radio or television or read about family planning in a newspaper or magazine, a poster, or leaflets or brochures. Thirty-one percent of women have heard a family planning message on the radio, the major medium used by all subgroups (Table 516). Sixteen percent of women reported having seen a family planning message on television, and nine percent read a family planning message in newspapers or magazines. Nearly two-thirds (65 percent) of women were not exposed to any family planning messages in any of these media.

Rural women are less likely to be exposed to family planning messages in the media than urban women. Half of women in urban areas are exposed to at least one of the media, compared to only one-fourth of women in rural areas (Table 5-16). There is no significant variation in exposure to any media by age of the respondents. Women age 40-49 are, however, less likely to be exposed to any media than younger women. Exposure to family planning methods in any media is the highest among women in Maekel (55 percent) and the lowest among women in Gash-Barka (21 percent) and Debubawi Keih Bahri (24 percent). Proportion of women exposed to any media increases with an increase in the level of education from only 17 percent among women with no education to 60 percent among women with at least secondary education. Wealth also has a similar positive influence on the likelihood of exposure of family planning methods in media. Fifty-seven percent of women in the highest wealth quintile are exposed to any media, compared to only 20 percent among those in the lowest wealth quintile.

The differentials of exposure to any media by background characteristics also hold true with any specific media. Exposure to the print media, for instance, increases from seven percent among the youngest women (15-19) to 11 percent among those age 25-29, and then declines steadily to six percent in the age 45-49. Increase in the level of education is positively associated with exposure to family planning messages in both the print media and the two electronic media. For example, 17 percent of uneducated women compared with 46 percent of women with at least secondary education have heard a family planning message on the radio.

Exposure to family planning messages for men also show a similar pattern except for the fact that men are less likely to be exposed to such messages compared to their female counterparts. Nineteen percent, 19 percent, and 18 percent of men were exposed to family planning messages in radio, television, and newsletter or magazine, respectively, during the period 12 months preceding the survey.

Exposure to family planning messages in media showed an increasing trend during the period 1995-2002 and declining trend since 2002 (Figure 5-4). Proportion of women exposed to radio increased from 36 percent in 1995 to 50 percent in 2002 and then declined to 30 percent in 2010. In 1995, 11 percent of women were exposed to family planning messages in television, compared to 19 percent in 2002 and 16 percent in 2010. Similarly, exposure to print media was 11 percent in 1995, increased to 16 percent in 2002 and declined to nine percent in 2010. Generally, a similar trend is also observed in exposure to family planning message on media by urban and rural residence.

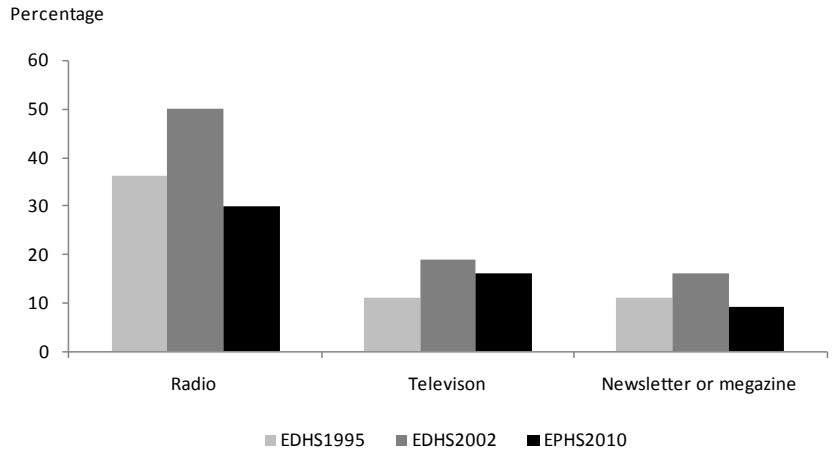
Table 5-16 Exposure to family planning messages

Percentage of women and men age 15-49 [59] who heard or saw a family planning message on the radio, television or in a newspaper in the past few months, according to background characteristics, Eritrea 2010

Background characteristic	Women					Men				
	Radio	Television	Newspaper/ magazine	None of these three media sources	Number	Radio	Television	Newspaper/ magazine	None of these three media sources	Number
Age										
15-19	26.6	18.3	6.8	66.5	2,301	12.6	13.2	11.0	75.8	1,544
20-24	35.4	21.4	10.8	58.5	1,744	19.9	18.8	21.8	66.1	635
25-29	32.7	17.4	11.2	61.5	1,646	21.3	21.2	22.7	63.6	449
30-34	32.8	14.3	8.4	63.8	1,228	24.1	24.2	21.5	63.4	390
35-39	31.1	11.6	7.9	65.7	1,429	26.2	25.5	25.1	58.5	490
40-44	29.1	9.2	7.1	69.1	940	23.9	21.0	22.2	64.1	376
45-49	25.6	9.4	5.7	73.0	951	24.5	20.6	17.7	70.0	417
Residence										
Total urban	41.5	28.1	16.0	49.5	4,125	25.4	31.4	28.8	54.7	1,757
Asmara	45.1	36.7	23.0	41.2	1,870	28.9	38.4	36.3	46.3	855
Other Town	38.6	21.1	10.2	56.3	2,255	22.1	24.7	21.7	62.7	902
Rural	23.2	7.1	3.4	75.0	6,113	15.1	9.8	10.5	77.9	2,542
Zoba										
Debubawi Keih Bahri	20.9	8.9	8.4	76.1	163	24.4	12.9	8.3	69.5	67
Maekel	43.1	32.0	20.1	44.7	2,535	28.1	35.5	33.2	48.7	1,196
Semenawi Keih Bahri	30.2	9.9	6.1	68.4	1,122	16.7	14.9	11.1	74.6	470
Anseba	28.7	15.2	5.1	67.4	1,436	13.6	9.6	13.3	78.2	588
Gash-Barka	20.9	5.0	2.5	78.5	2,255	11.0	8.1	6.6	83.7	778
Debub	28.8	12.1	5.3	68.4	2,727	19.5	14.9	15.8	70.9	1,200
Education										
No education	17.1	2.0	1.7	82.7	3,882	7.7	2.9	0.4	91.2	599
Primary	32.3	9.0	4.4	65.8	2,162	14.4	8.8	7.5	81.2	659
Middle	37.4	21.7	9.7	56.8	1,946	18.3	16.1	14.9	71.1	1,188
Secondary or above	46.3	40.1	23.0	39.5	2,246	25.4	28.9	29.4	54.8	1,853
Missing	0.0	0.0	0.0	100.0	1	0.0	0.0	0.0	100.0	0
Wealth quintile										
Lowest	15.4	3.1	1.4	84.0	1,746	9.7	3.8	5.2	87.3	739
Second	19.2	4.4	1.9	80.1	1,769	14.0	6.0	8.1	82.5	699
Middle	26.1	7.7	3.4	72.5	2,014	16.9	12.4	11.9	74.8	753
Fourth	40.2	18.6	8.5	55.1	2,223	22.5	21.1	21.0	62.4	960
Highest	44.4	36.0	22.1	42.5	2,485	27.6	38.0	33.7	48.6	1,148
Total 15-49	30.6	15.6	8.5	64.7	10,238	19.3	18.7	18.0	68.4	4,299
50-59	na	na	na	Na	0	21.1	16.1	13.1	71.4	722
Total men 15-59	na	na	na	Na	0	19.6	18.3	17.3	68.8	5,021

Note: Table is based on the CORE questionnaires.
na = Not applicable

Figure 5-4 **Trends in exposure to family planning on media, 1995, 2002, 2010**



5.15 Acceptability of Family Planning Messages in Mass Media

To determine the level of acceptance of the dissemination of family planning information through the media, respondents were asked in the EPHS2010 whether it was acceptable to disseminate family planning information on radio and television. It should be pointed out that the acceptability of dissemination on radio in Eritrea is much more important because the exposure to television is very limited in rural areas where the vast majority of women live.

Overall, 74 percent of women (Table 5-17) reported that it is acceptable to use radio to air family planning messages, up from 69 percent in 2002 and 57 percent in 1995. Similar percentages of women also accept dissemination of family planning through television (72 percent), and newspaper or magazine (71 percent). Acceptance of family planning messages on mass media is higher in urban areas, in Asmara in particular, as compared to rural, and in Maekel as compared to other zobas. Women in Debubawi Keih Bahri are least likely to accept dissemination of family planning messages in mass media, particularly through television and print media, which calls for a more inquiry to be made to determine the reasons why.

Acceptance to family planning messages on mass media gets higher as the level of education or wealth quintile increases. For instance, only six in ten of women with no education accepts family planning message on radio, compared to nine in ten of women with at least secondary education. Acceptance of family planning messages on radio ranges from 58 percent among those in the lowest wealth quintile to 90 percent among those in the highest wealth quintile (Table 5-17).

Table 5-17 Acceptability of family planning messages on mass media

Percentage distribution of women age 15-49 who accepts family planning messages by type of mass media, according to background characteristics, Eritrea 2010

Background characteristic	Acceptable on radio	Acceptable on television	Acceptable in newspaper or magazine	Acceptable in video or films	Number of women
Age					
15-19	72.2	70.2	69.9	66.2	2,301
20-24	77.6	76.1	76.0	71.5	1,744
25-29	77.9	75.9	74.4	72.0	1,646
30-34	73.5	72.0	69.9	67.7	1,228
35-39	74.3	71.8	70.2	67.5	1,429
40-44	70.6	67.8	65.8	63.3	940
45-49	65.4	62.9	60.5	57.9	951
Residence					
Total urban	85.2	84.5	83.7	79.2	4,125
Asmara	89.5	89.3	89.1	81.3	1,870
Other Town	81.6	80.4	79.2	77.4	2,255
Rural	66.0	63.0	61.5	59.4	6,113
Zoba					
Debubawi Keih Bahri	42.6	35.5	29.8	28.5	163
Maekel	89.6	89.3	89.2	82.8	2,535
Semenawi Keih Bahri	76.7	73.3	69.8	67.6	1,122
Anseba	71.7	68.8	67.0	63.0	1,436
Gash-Barka	56.2	53.8	53.0	51.9	2,255
Debub	75.2	73.0	72.0	70.3	2,727
Education					
No education	57.9	54.7	51.7	50.0	3,882
Primary	76.5	73.8	73.1	70.0	2,162
Middle	82.9	82.0	81.6	77.9	1,946
Secondary or above	90.4	90.1	90.8	85.8	2,246
Missing	100.0	100.0	100.0	100.0	1
Wealth quintile					
Lowest	58.0	54.1	52.4	50.0	1,746
Second	59.2	55.6	54.1	51.8	1,769
Middle	71.5	69.2	67.0	65.4	2,014
Fourth	82.0	80.6	80.2	77.6	2,223
Highest	89.5	89.4	88.8	83.1	2,485
Total	73.7	71.7	70.5	67.4	10,238

Note: Table is based on the CORE questionnaires.

5.16 Men's Attitude Towards Family Planning

The attitude of men in family planning is as important as women's in having a successful family planning program. Men who think that family planning are women's affairs and they do not have to get involved or that oppose family planning practices for one reason or another would definitely contribute negatively in having a successful birth control program. Hence their attitudes need to be known and that they have to be brought on board. Table 5-18 has, therefore, presented percentage distribution of men 15-49 years of age who have talked with a health worker or health professional in the last six months, and have captured their attitudes and perceptions about conception and contraception according to different background characteristics.

Among the different age groups, those in the range of 35-39 are the ones who most talked (8 percent) about the practice of contraception with a health professional or health worker. Among women in this age group, the highest proportion (54 percent) think that a woman who is breast feeding her baby can become pregnant, 85 percent disagree with the idea that contraception is women's business and a man should not have to worry about it, and 82 percent are against the idea that women who use contraception may have sex with many men (Table 5-18). The highest percent of women who disagree with the idea that contraception is women's business and a man should not worry about it (86 percent) fall within the age group of 40-44 years.

Men in urban areas are more likely to disagree with the statement that "contraception is women's business and men need not get involved" than rural women (87 and 72 percent, respectively). Men in Debubawi Keih Bahri and Maekel are more likely to disagree (92 and 87 percent, respectively) with that belief that contraception is the affair of women and men need not get involved than other zobas. A similar pattern is observed in opposing the assertion that women who use contraception may have sex with many men with the percentages being higher in Debubawi Keih Bahri and Maekel (87 and 80 percent, respectively) than the other zobas.

The proportion of men that oppose the ideas that contraception is women's business and women who use contraception may have sex with many men have been observed to consistently increase as the level of education and wealth quintile increases. This is an important observation for program managers to take into account when trying to change people's attitudes and perceptions.

Table 5-18 Men's attitude to family planning

Percentage distribution of men age 15-49 [59] who have talked about practice of family planning with a health worker or health professional in the last six months, percentage who think that woman who is breastfeeding her baby can become pregnant, and percentage of men who disagree with some perceptions about contraception, according to background characteristics, Eritrea 2010

Background characteristic	Percentage who talked about practice of contraception with health professional or health worker	Percentage who think that woman who is breastfeeding her baby can become pregnant	Disagree on:		Number of men
			Contraception is women's business and a man should not have to worry about it	Women who use contraception may have sex with many men	
Age					
15-19	2.3	34.7	70.7	67.5	1,544
20-24	5.6	49.9	78.8	77.2	635
25-29	5.4	49.3	81.6	79.1	449
30-34	5.1	47.6	85.2	76.1	390
35-39	7.9	54.0	84.7	82.2	490
40-44	7.5	51.8	86.1	80.8	376
45-49	7.2	45.6	77.9	80.2	417
Residence					
Total urban	6.0	43.2	86.6	80.9	1,757
Asmara	6.0	45.3	89.6	82.9	855
Other Town	7 .0	41.1	83.7	79.1	902
Rural	4.0	45.3	72.1	70.9	2,542
Zoba					
Debubawi Keih Bahri	5.6	18.3	92.3	86.7	67
Maekel	5.5	48.4	86.5	80.1	1,196
Semenawi Keih Bahri	4.7	31.7	73.2	76.6	470
Anseba	6.3	43.4	76.3	74.7	588
Gash-Barka	3.1	40.0	73.1	66.7	778
Debub	5.0	50.1	74.6	74.2	1,200
Education					
No education	2.6	38.1	64.4	67.0	599
Primary	3.0	44.6	69.6	70.3	659
Middle	4.8	41.3	74.5	70.2	1,188
Secondary or above	5.5	48.3	87.6	82.3	1,853
Missing	0	0.0	100.0	100.0	1
Wealth quintile					
Lowest	4.8	41.2	67.7	69.9	739
Second	3.0	42.8	68.6	69.8	699
Middle	4.2	44.2	75.3	73.2	753
Fourth	5.0	47.0	79.9	72.8	960
Highest	6.7	45.4	90.5	84.6	1,148
Total 15-49	4.9	44.4	78.0	75.0	4,299
50-59	5.0	49.9	74.0	73.1	722
Total men 15-59	5.0	45.2	77.4	74.7	5,021

Note: Table is based on the CORE questionnaires.

5.17 Discussions on Family Planning with Husband

Although discussion between couples about contraceptive use is not a precondition for adoption of contraception, its absence may be an impediment to use. Inter-spousal communication is thus an important intermediate step along the path to eventual adoption and especially continuation of contraceptive use. Lack of discussion may reflect a lack of personal interest, hostility to the subject, or customary reticence in talking about sex-related matters. To explore this subject, married women interviewed in the EPHS2010 survey were asked whether their husband/spouse knew that they were currently using a contraceptive method.

The percentage distribution of currently married women age 15-49 by the number of times they have discussed family planning with their husband/partner in the past twelve months, according to the background characteristics is presented in Table 5-19. Two thirds of all women (65 percent) have never discussed the subject of family planning with their husbands. Seven out of ten of those living in rural areas as compared to five out of ten of those who live in urban areas have never had any discussion with their husbands. The highest proportion of women having never discussed issues on family planning with their husbands are from Debubawi Keih Bahri (86 percent) followed by Semenawi Keih Bahri (78 percent) and Gash-Barka (71 percent). Women in Anseba and Gash-Barka are most likely to discuss family planning with their husbands (30 and 29 percent, respectively).

5.18 Attitudes Towards Family Planning

Besides knowledge of methods, a positive attitude towards family planning is a prerequisite to adoption of family planning. Attitudinal data was collected by asking respondents whether they approved of a couple using family planning and, if they were currently married, what they thought was their husband's opinion on the subject. Overall, 59 percent of currently married women and 42 percent of husbands approve of family planning (Table 5-20).

There is no significant variation in approval of family planning by age with youngest (15-19) and oldest (45-49) women having lower approval to family planning compared to women in the other age groups. Seven in ten urban women, compared to five in ten rural women, approve family planning. Women in Maekel are much more likely to approve of family planning (74 percent) than the other zobas, with the least approval belonging to women in Debubawi Keih Bahri (24 percent). Approval towards family planning increases with an increase in education and wealth quintile. Approval of family planning by husbands has a similar pattern by background characteristics as to that of wives.

Table 5-19 Discussion on family planning with husband

Percentage distribution of currently married women age 15-49 who know a contraceptive method by the number of times they discussed family planning with their husband/ partner in the past 12 months, according to background characteristics, Eritrea 2010

Background characteristic	Number of times family planning was discussed with husband				Total	Number of women
	Never	Once or twice	More often	Missing		
Age						
15-19	72.5	17.0	10.0	0.4	100.0	330
20-24	56.4	24.0	19.5	0.1	100.0	926
25-29	59.5	20.3	19.7	0.5	100.0	1,089
30-34	61.8	19.3	18.6	0.3	100.0	842
35-39	65.2	17.9	16.3	0.7	100.0	952
40-44	71.4	12.4	15.6	0.6	100.0	596
45-49	80.9	10.3	8.7	0.2	100.0	553
Residence						
Total urban	52.9	22.3	24.4	0.4	100.0	1,970
Asmara	47.9	20.7	31.1	0.3	100.0	796
Other Town	56.3	23.4	19.8	0.5	100.0	1,175
Rural	71.8	15.8	12.1	0.4	100.0	3,319
Zoba						
Debubawi Keih Bahri	85.8	8.4	5.3	0.6	100.0	97
Maekel	48.4	20.3	31.0	0.3	100.0	1,146
Semenawi Keih Bahri	78.4	13.0	8.5	0.1	100.0	688
Anseba	70.3	17.6	11.1	1.0	100.0	839
Gash-Barka	70.8	18.5	10.4	0.3	100.0	966
Debub	62.7	19.7	17.3	0.3	100.0	1,554
Education						
No education	80.2	11.7	8.0	0.1	100.0	2,245
Primary	63.8	19.0	16.6	0.7	100.0	1,333
Middle	50.3	25.7	23.5	0.6	100.0	862
Secondary or above	40.1	26.6	32.8	0.5	100.0	848
Missing	0.0	100.0	0.0	0.0	100.0	1
Wealth quintile						
Lowest	81.7	11.6	6.3	0.3	100.0	889
Second	77.9	13.2	8.7	0.2	100.0	945
Middle	68.7	19.7	11.1	0.5	100.0	1,141
Fourth	55.2	20.7	23.6	0.5	100.0	1,152
Highest	46.7	23.4	29.6	0.3	100.0	1,163
Total	64.7	18.2	16.7	0.4	100.0	5,289

Note: Table is based on the CORE questionnaires.

Table 5-20 Attitude towards family planning

Percentage distribution of currently married women age 15-49 who know a contraceptive method by approval of family planning and their perception of their husbands' attitude towards family planning, according to background characteristics, Eritrea 2010

Background characteristic	Respondent approves family planning			Respondent disapproves family planning				Total	Wife approves	Husband approves	Number of women
	Husband approves	Husband disapproves	Husband attitude unknown	Husband approves	Husband disapproves	Husband attitude unknown	Women unsure				
Age											
15-19	29.3	8.4	15.3	4.5	27.4	9.9	5.2	100.0	53.0	33.9	330
20-24	37.0	9.9	11.4	4.0	21.1	9.9	6.7	100.0	58.2	41.6	926
25-29	45.5	8.0	11.8	2.6	17.4	9.1	5.7	100.0	65.3	48.4	1,089
30-34	39.5	9.3	10.9	2.9	18.6	12.2	6.5	100.0	59.8	43.1	842
35-39	38.9	8.0	12.0	3.6	19.6	10.2	7.8	100.0	58.9	43.2	952
40-44	35.4	6.6	14.2	2.5	24.0	11.1	6.2	100.0	56.2	38.2	596
45-49	27.9	9.7	16.4	2.3	24.6	12.7	6.3	100.0	54.1	30.2	553
Residence											
Total urban	50.9	8.6	10.6	3.5	16.0	7.2	3.2	100.0	70.1	55.0	1,970
Asmara	58.4	8.4	7.4	5.3	14.8	3.6	2.1	100.0	74.2	64.3	796
Other Town	45.9	8.7	12.7	2.4	16.8	9.6	3.9	100.0	67.3	48.7	1,175
Rural	30.1	8.6	13.8	2.9	23.6	12.6	8.4	100.0	52.5	33.4	3,319
Zoba											
Debubawi Keih Bahri	13.0	1.8	9.1	0.8	23.9	8.3	43.1	100.0	23.9	14.8	97
Maekel	56.4	9.8	8.0	4.6	15.5	3.2	2.5	100.0	74.2	61.7	1,146
Semenawi Keih Bahri	28.5	9.8	13.6	2.9	24.8	11.6	8.7	100.0	51.9	32.0	688
Anseba	32.4	8.6	16.2	2.1	24.4	11.8	4.4	100.0	57.2	35.0	839
Gash-Barka	33.1	6.7	14.5	1.8	19.7	15.2	8.9	100.0	54.3	35.3	966
Debub	35.8	8.7	12.6	3.6	21.3	12.1	5.8	100.0	57.2	39.7	1,554
Education											
No education	23.5	7.4	15.5	2.1	25.0	16.0	10.5	100.0	46.5	26.0	2,245
Primary	38.4	10.0	13.0	4.0	21.0	9.3	4.3	100.0	61.4	42.9	1,333
Middle	49.9	10.1	10.2	3.1	17.7	5.3	3.7	100.0	70.2	53.7	862
Secondary or above	62.8	7.8	6.8	4.5	12.5	3.7	2.0	100.0	77.4	67.7	848
Missing	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	1
Wealth quintile											
Lowest	23.2	5.7	16.2	2.0	25.4	17.8	9.7	100.0	45.1	25.4	889
Second	26.2	7.6	14.1	2.9	25.5	14.2	9.5	100.0	47.9	29.7	945
Middle	29.4	10.9	14.5	3.5	23.6	11.1	7.0	100.0	54.8	33.2	1,141
Fourth	46.7	9.6	11.2	2.3	17.6	7.7	4.8	100.0	67.5	49.6	1,152
Highest	58.1	8.3	8.1	4.7	13.7	4.4	2.6	100.0	74.6	63.3	1,163
Total	37.9	8.6	12.6	3.1	20.8	10.6	6.5	100.0	59.1	41.5	5,289

Note: Table is based on the CORE questionnaires.

5.19 Contact of Nonusers with Health Care Providers

To gain insight into the level of "missed opportunities," that is, contacts between nonusers and health workers that are not utilized to provide information about family planning and to motivate them to adopt family planning, nonusers were asked whether they had visited any health facility in the 12 months preceding the survey. Those who had visited a health facility were further asked whether during any visit to the health facility, anyone at the facility discussed family planning with them. Nonusers were also asked whether they have ever been visited by a field worker who discussed family planning with them.

Of all the nonusers who visited a health facility, only 8 percent had a health worker speak to them about family planning and 35 percent of them did not discuss family planning. Overwhelming majority (91 percent) of women who are not using contraception have neither discussed family planning with a fieldworker nor at a health facility (Table 5-21).

By age 25 to 39, women were more likely to discuss family planning when they visited a health facility than younger or older women. Women who live in rural areas (92 percent) and women in Gash-Barka and Semenawi Keih Bahri (94 and 92 percent, respectively) had the highest level of "missed opportunities." Women with some education are more likely to have discussed family planning with a provider than women with no education. By wealth index, 94 percent of women in the lowest to second wealth quintile have neither discussed family planning with fieldworker nor at health facility, compared to 88-91 percent of women in the higher wealth quintiles.

5.20 Husband's/Partners Knowledge of Women's Use of Contraception

Currently married women who are using a contraceptive method were asked whether their husband/partner knows about their use of contraception and the result is given in Table 5-22. Overall, nine in ten women stated that their husband or partner knows their use of contraception. Husbands or partners of younger women (15-24) are more likely to know the use of contraception by their partners than husbands or partners of older women. There isn't any marked difference when the zobas are considered with Maekel, however, having the highest (92 percent) and Debubawi Keih Bahri the lowest proportion (82 percent) of women who reported that their husband or partner know their use of contraception. Ninety-three percent of women in the highest wealth quintile reported that their husbands/partners know that they are currently using contraception, compared to 77-87 percent of those in the other wealth quintiles (Table 5-22).

Table 5-21 Contact of nonusers with family planning providers

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

Background characteristic	Percentage of women who were visited by fieldworker who discussed family planning	Percentage of women who visited a health facility in the past 12 months and who:		Percentage of women who neither discussed family planning with fieldworker nor at a health facility	Number of women
		Discussed family planning	Did not discuss family planning		
Age					
15-19	0.7	1.6	19.4	97.8	2,283
20-24	2.0	10.1	38.8	89.2	1,674
25-29	2.3	12.1	42.5	87.0	1,493
30-34	2.6	11.8	44.1	87.1	1,135
35-39	1.8	11.7	39.7	87.7	1,292
40-44	1.8	7.4	33.8	91.9	878
45-49	1.0	4.3	34.7	95.1	917
Residence					
Total urban	2.2	9.4	38.6	89.7	3,734
Asmara	2.0	8.9	37.0	90.3	1,636
Other Town	2.3	9.8	39.8	89.2	2,098
Rural	1.4	7.2	32.2	92.2	5,938
Zoba					
Debubawi Keih Bahri	7.7	8.8	23.5	90.3	157
Maekel	1.7	10.2	37.3	89.1	2,238
Semenawi Keih Bahri	2.0	6.9	43.7	92.1	1,086
Anseba	1.5	10.3	37.7	89.4	1,364
Gash-Barka	1.9	5.1	26.8	93.9	2,195
Debub	1.1	7.9	34.4	91.5	2,631
Education					
No education	1.8	6.4	31.6	92.8	3,793
Primary	2.1	9.8	40.1	89.2	2,041
Middle	1.5	9.0	34.8	90.5	1,798
Secondary or above	1.3	8.3	35.0	91.1	2,039
Missing	0.0	100.0	0.0	0.0	1
Wealth quintile					
Lowest	1.2	5.1	28.6	94.2	1,720
Second	1.5	5.8	30.7	93.5	1,740
Middle	1.5	8.3	35.2	91.0	1,955
Fourth	2.3	11.6	38.3	87.6	2,075
Highest	1.7	8.4	38.7	90.7	2,182
Total	1.7	8.0	34.7	91.2	9,672

Note: Table is based on the CORE questionnaires.

Table 5-22 Husband/partner's knowledge of women's use of contraception

Among currently married women age 15-49 who are using a method, percent distribution by whether they report that their husbands/partners know about their use, according to background characteristics, Eritrea 2010

Background characteristic	Knows	Does not know	Unsure whether knows/missing	Total	Number of women
Age					
15-19	100.0	0.0	0.0	100.0	10
20-24	91.9	6.2	1.8	100.0	67
25-29	85.5	10.7	3.8	100.0	136
30-34	89.5	6.0	4.6	100.0	84
35-39	86.9	7.2	5.9	100.0	132
40-44	92.8	3.9	3.3	100.0	61
45-49	95.3	4.7	0.0	100.0	29
Residence					
Total urban	90.4	5.7	3.9	100.0	358
Asmara	91.3	6.0	2.7	100.0	220
Other Town	88.9	5.2	5.9	100.0	138
Rural	86.1	10.2	3.7	100.0	163
Zoba					
Debubawi Keih Bahri	81.8	5.7	12.5	100.0	6
Maekel	92.0	5.3	2.7	100.0	279
Semenawi Keih Bahri	84.5	5.5	10.0	100.0	31
Anseba	83.6	14.1	2.3	100.0	69
Gash-Barka	86.0	4.6	9.4	100.0	46
Debub	87.6	9.3	3.1	100.0	90
Education					
No education	78.4	12.5	9.1	100.0	85
Primary	89.1	9.8	1.1	100.0	103
Middle	92.2	5.0	2.8	100.0	137
Secondary or above	91.4	4.9	3.8	100.0	196
Wealth quintile					
Lowest	84.3	6.6	9.1	100.0	25
Second	84.2	14.8	1.0	100.0	28
Middle	76.7	18.3	5.0	100.0	52
Fourth	87.7	8.5	3.8	100.0	131
Highest	92.8	3.7	3.5	100.0	284
Total	89.0	7.1	3.9	100.0	520

Note: Table is based on the CORE questionnaires.
[1] Includes women who report use of male sterilization, male condoms or withdrawal.

OTHER PROXIMATE DETERMINANTS OF FERTILITY 6

Key Findings

- The percentage of never married has increased slightly in the last eight years, from 23 to 28 percent among women age 15-49; and the percentage never married among men age 15-59 is 50 percent.
- The percentage of women who were first married by exact age 15 has declined from 27 percent among women currently age 45-49 to six percent among women age 15-19.
- The median age at first marriage among women age 25-49 is 18 years. For men age 30-59, the median age at first marriage is 27 years.
- Eritrean women generally initiate sexual intercourse at the time of their first marriage.
- However, men initiate sexual intercourse four years before their first marriage.
- The percentage of women age 15-49 currently active in sexual intercourse has decreased slightly to 35 percent compared to 38 percent in 2002. Two-fifths of men age 15-59 are currently sexually active.

A number of factors, other than contraception, that affect women's chances of becoming pregnant are discussed in this chapter. Such factors are called the proximate determinants of fertility. They include marriage, polygyny, sexual activity, postpartum amenorrhoea, abstinence from sexual activity, and onset of menopause.

6.1 Current Marital Status

Marriage is one of the main indications of the exposure of women to the possibility of pregnancy and hence is important to the understanding of fertility. Early age at first marriage in a population is usually associated with a longer period of exposure to the risk of pregnancy and thus higher fertility levels. The early initiation of childbearing associated with early marriage may also adversely affect women's and children's health.

The term 'married' refers to legal or formal marriage, while the term 'living together' designates an informal union in which a man and a woman live together but a formal civil or religious ceremony has not taken place. The categories 'married' and 'living together' are combined in subsequent tables, and hereafter are referred to as 'currently married'. Respondents who are currently married, widowed, divorced, or separated are referred to as 'ever married'.

The proportion of women age 15-49 that have never married (or lived with a man) is 28 percent (Table 6-1), showing a five percentage point increment from the EDHS2002, which was 23 percent. The largest proportion of never married women is observed in the age group 15-19, of whom 81 percent had never been married in 2010. This proportion was 62 percent in EDHS1995 and 69 percent in EDHS2002.

Table 6-1 Current marital status

Percent distribution of women and men age 15-49 [59] by current marital status, according to age, Eritrea 2010

Age	Marital status							Total	Percentage of respondents currently in union	Number of respondents
	Never married	Married	Living together	Divorced	Separated	Widowed	Missing			
					WOMEN					
Age										
15-19	81.2	17.1	0.3	1.1	0.2	0.1	0.0	100.0	17.5	2,301
20-24	33.0	57.0	3.6	5.2	0.9	0.3	0.0	100.0	60.6	1,744
25-29	13.6	71.7	4.3	6.5	1.9	1.9	0.0	100.0	76.1	1,646
30-34	7.3	74.3	4.4	7.1	2.4	4.4	0.0	100.0	78.8	1,228
35-39	5.6	70.7	5.5	9.1	3.3	5.8	0.0	100.0	76.1	1,429
40-44	3.1	72.6	3.4	7.3	4.3	9.2	0.0	100.0	76.1	940
45-49	1.3	70.1	3.6	7.7	4.2	13.1	0.0	100.0	73.7	951
Total 15-49	28.1	57.1	3.3	5.7	2.0	3.8	0.0	100.0	60.4	10,238
					MEN					
Age										
15-19	98.8	0.9	0.1	0.1	0.0	0.0	0.1	100.0	1.0	1,544
20-24	86.1	12.5	0.5	0.6	0.4	0.0	0.0	100.0	13.0	635
25-29	53.6	42.0	2.5	0.4	0.9	0.6	0.0	100.0	44.5	449
30-34	25.8	67.2	3.4	2.5	0.9	0.0	0.3	100.0	70.6	390
35-39	13.8	80.4	2.5	1.8	0.4	1.1	0.0	100.0	82.9	490
40-44	3.5	90.3	2.1	2.5	1.2	0.4	0.0	100.0	92.3	376
45-49	2.6	91.0	2.4	2.3	0.4	1.4	0.0	100.0	93.4	417
Total 15-49	58.2	38.5	1.4	1.1	0.4	0.4	0.1	100.0	39.9	4,299
50-59	0.7	92.4	2.2	2.3	0.7	1.7	0.0	100.0	94.6	722
Total men 15-59	50.0	46.3	1.5	1.2	0.5	0.5	0.0	100.0	47.8	5,021

Note: Table is based on the CORE questionnaires.

Women who are currently married account for 60 percent (including three percent who are living together) of the respondents, which was 66 percent in 2002. The remaining women are comprised of six percent divorced, two percent separated and four percent widowed. The proportions of these three categories remained relatively stable since the EDHS2002 with five, two, and four percent, respectively.

Men tend to marry at later ages than women with the majority of men age 15-49 (58 percent) still being single, i.e., over two fold of women of the same age (28 percent). Overall, among men age 15-59, 50 percent are never married and 48 percent are currently married (Table 6-1). The table further shows that the proportion of respondents who are divorced, separated or widowed is lower in men than women in each age category; one of the possible reasons could be due to higher incidence of polygyny among men than women (Table 6-2 and Table 6-3).

A significant proportion of men marry after they have reached 25 years, in contrast to women, who tend to marry before the age of 25. For example, 57 percent of women age 20-24 are in union, compared with only 12 percent of men in the same age group. Like women, however, virtually all men get married by the time they reach age 50.

6.2 POLYGYNY

Marital unions are of two types, those that are monogamous (marriage with one spouse) and those that are polygamous (marriage with more than one spouse). The distinction has social significance and probable fertility implications. Polygyny, the practice of having more than one wife, has implications for the frequency of exposure to sexual activity and thus, may have an effect on fertility.

The extent of polygyny was ascertained by asking all currently married female respondents whether their husband or partner had other wives (co-wives) and, if so, how many. The majority of currently married women (91 percent) are in monogamous unions; showing that polygyny is not very common in Eritrea (Table 6-2). Nine percent of the currently married women report their husbands have

Table 6-2 Number of co-wives

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

Background characteristic	Number of co-wives				Total	Number of women
	0	1	2+	Missing		
Age						
15-19	96.8	1.6	0.6	1.0	100.0	402
20-24	95.3	2.8	0.6	1.3	100.0	1,057
25-29	92.9	5.1	0.9	1.1	100.0	1,252
30-34	88.2	8.7	1.7	1.3	100.0	967
35-39	87.2	8.6	2.4	1.8	100.0	1,088
40-44	87.7	8.8	2.9	0.6	100.0	715
45-49	87.1	9.9	1.8	1.3	100.0	701
Residence						
Total urban	90.7	6.4	1.1	1.8	100.0	2,030
Asmara	92.5	4.2	0.5	2.7	100.0	800
Other Town	89.5	7.8	1.5	1.2	100.0	1,230
Rural	90.5	6.7	1.8	1.0	100.0	4,153
Zoba						
Debubawi Keih Bahri	76.9	19.0	3.2	1.0	100.0	111
Maekel	92.7	4.2	1.0	2.1	100.0	1,153
Semenawi Keih Bahri	86.0	11.9	1.6	0.5	100.0	789
Anseba	88.6	8.2	2.2	1.0	100.0	930
Gash-Barka	90.5	6.4	2.2	0.9	100.0	1,541
Debub	93.3	4.3	0.9	1.6	100.0	1,660
Education						
No education	87.9	8.9	2.2	1.0	100.0	3,017
Primary	92.1	5.1	1.5	1.3	100.0	1,432
Middle	93.0	4.8	0.7	1.5	100.0	883
Secondary or above	94.7	2.9	0.4	1.9	100.0	850
Missing	100.0	0.0	0.0	0.0	100.0	1
Wealth quintile						
Lowest	89.3	7.8	1.8	1.0	100.0	1,237
Second	91.3	6.3	2.0	0.4	100.0	1,256
Middle	90.3	7.0	1.4	1.3	100.0	1,333
Fourth	90.1	7.2	1.3	1.5	100.0	1,185
Highest	91.8	4.7	1.3	2.2	100.0	1,171
Total	90.6	6.6	1.6	1.3	100.0	6,183

Note: Table is based on the CORE questionnaires.

more than one wife (seven percent with only one co-wife, i.e., her husband has another one wife besides her, and two percent with more than one co-wives) which is a similar proportion to the EDHS2002. The proportion of women with one co-wife increases steadily with age, from two percent at age 15-19, to10 percent at age 45-49.

The extent of polygyny shows some differences by residence: the percentage of married women living in polygynous unions with one co-wife is four percent in Asmara compared to eight percent in other urban towns and seven percent in rural areas (Table 6-2). As regards the zoba, polygyny is more practiced in Debubawi Keih Bahri, with 22 percent of women reporting being in a polygynous union and it is least practiced in Maekel and Debub with five percent in each.

Women's level of education does affect the frequency of this practice with the proportion of women in a polygynous union decreasing from 11 percent among those with no education to three percent among those with secondary or above. Women of lowest wealth status have highest probability of being in polygynous union (10 percent), while women of highest wealth status have lowest probability of being in a polygynous union (six percent).

In this survey, the currently married males were also asked whether they had one or more wives or partners with whom they were living. Table 6-3 shows that five percent of men age 15-59 report having two or more wives. The proportion of men in polygynous marriage increases with age, rising from zero percent at age 20-24 to seven percent at age 45-49. Furthermore, it can be inferred from the table that older men (age 50-59), men living in Anseba, Debubawi Keih Bahri and Semenawi Keih Bahri, and those within the second wealth quintile are more likely to be in polygynous unions than other men.

The influence of education on polygyny is visible as an increase in educational level is followed with a decrease in polygynous union. Six percent of men with no education were in polygynous unions and this decreases to two percent for men with at least some secondary.

6.3 Age at First Marriage

Marriage is an important social event and the age at first marriage is an important determinant of fertility. Whether the start of marriage coincides with the initiation of sexual intercourse or not, and thus the beginning of exposure to the risk of pregnancy, in most societies, age at first marriage represents the point in a person's life when childbearing first becomes socially acceptable. Duration of exposure to the risk of pregnancy depends primarily on the age at which women first marry. On average, women who marry early are more likely to have their first child at a young age and give birth to more children, contributing to an overall higher fertility.

One approach in identifying trends in age at marriage from the EPHS2010 survey is to examine the experience of different cohorts. The percent distribution by age at first marriage and the median age at first marriage for the different age cohorts is presented in Table 6-4. Since the median is based on all respondents, including those who have never been married or lived in a consensual union, there may not be a median for younger age cohorts; hence, the median age at first marriage is not shown for the youngest cohorts of women and the first three youngest cohorts of men because in each of these age groups over 50 percent of the corresponding respondents were not married (Table 6-1).

Table 6-3 Number of men's wives

Percent distribution of currently married men age 15-49 [59] by number of wives, according to background characteristics, Eritrea 2010

Background characteristic	Number of wives			Total	Number of men
	1	2+	Missing		
Age					
15-19	93.7	6.3	0.0	100.0	15
20-24	100.0	0.0	0.0	100.0	83
25-29	99.0	1.0	0.0	100.0	200
30-34	97.9	1.6	0.5	100.0	275
35-39	95.9	4.1	0.0	100.0	406
40-44	96.1	3.8	0.1	100.0	347
45-49	93.1	6.9	0.0	100.0	389
Residence					
Total urban	96.4	3.6	0.0	100.0	570
Asmara	97.2	2.8	0.0	100.0	245
Other Town	95.7	4.3	0.0	100.0	324
Rural	96.1	3.8	0.1	100.0	1,146
Zoba					
Debubawi Keih Bahri	88.3	11.0	0.7	100.0	35
Maekel	98.0	2.0	0.0	100.0	347
Semenawi Keih Bahri	93.5	6.5	0.0	100.0	223
Anseba	92.5	7.5	0.0	100.0	229
Gash-Barka	97.4	2.3	0.3	100.0	426
Debub	97.4	2.6	0.0	100.0	455
Education					
No education	93.9	5.8	0.3	100.0	443
Primary	94.8	5.2	0.0	100.0	388
Middle	98.0	2.0	0.0	100.0	362
Secondary or above	97.8	2.2	0.0	100.0	521
Missing	100.0	0.0	0.0	100.0	0
Wealth quintile					
Lowest	95.7	4.3	0.0	100.0	341
Second	94.6	5.1	0.4	100.0	331
Middle	96.9	3.1	0.0	100.0	329
Fourth	96.7	3.3	0.1	100.0	348
Highest	96.8	3.2	0.0	100.0	366
Total 15-49	96.2	3.8	0.1	100.0	1,715
50-59	91.7	8.3	0.0	100.0	683
Total men 15-59	94.9	5.1	0.1	100.0	2,398

Note: Table is based on the CORE questionnaires.

Marriage in Eritrea occurs relatively earlier for women. Among women age 25-49, 20 percent were married by age 15, 49 percent were married by age 18, and 64 percent were married by age 20 (Table 6-4). The median age at first marriage among women age 25-49 (18 years) has remained the same in the last eight years. Accompanying the overall trend to later marriage is an especially marked decline in the proportion of women marrying at very young ages.

The proportion of women married by the exact age 15 has apparently declined; it is 27 percent among women age 45-49 compared to only six percent among those women age 15-19, indicating a shift

Table 6-4 Age at first marriage

Percentage of women and men age 15-49 [59] who were first married by specific exact ages and median age at first marriage, according to current age, Eritrea 2010

	Percentage first married by exact age:							
Current age	15	18	20	22	25	Percentage never married	Number	Median age at first marriage
				WOMEN				
Age								
15-19	6.0	na	na	na	na	81.2	2,301	a
20-24	12.9	40.7	56.8	na	na	33.0	1,744	19.0
25-29	15.5	43.4	62.0	73.8	82.0	13.6	1,646	18.7
30-34	21.9	51.3	65.5	75.5	84.0	7.3	1,228	17.8
35-39	18.4	46.9	62.4	74.3	83.2	5.6	1,429	18.4
40-44	22.8	50.0	64.3	74.5	85.7	3.1	940	18.0
45-49	26.6	55.5	66.8	76.5	85.1	1.3	951	17.2
20-49	18.6	46.9	62.3	na	na	12.7	7,937	18.4
25-49	20.3	48.6	63.9	74.8	83.7	7.0	6,193	18.2
30-49	22.0	50.5	64.5	75.1	84.3	4.7	4,547	17.9
				MEN				
Age								
15-19	0.1	na	na	na	na	98.8	1,544	a
20-24	0.0	2.3	8.9	na	na	86.1	635	a
25-29	0.5	3.0	7.0	17.0	33.7	53.6	449	a
30-34	0.7	2.4	7.3	15.8	32.9	25.8	390	27.3
35-39	0.7	1.8	5.6	17.5	33.9	13.8	490	28.3
40-44	0.4	3.6	11.1	21.2	43.9	3.5	376	25.8
45-49	0.0	2.9	7.0	18.5	35.7	2.6	417	27.3
20-49	0.4	2.6	7.8	na	na	35.5	2,756	a
25-49	0.5	2.7	7.5	17.9	35.8	20.4	2,121	a
30-49	0.4	2.6	7.6	18.2	36.3	11.5	1,672	27.2
20-59	0.4	3.1	8.8	na	na	28.3	3,477	a
25-59	0.5	3.3	8.8	18.3	36.0	15.4	2,842	a
30-59	0.5	3.3	9.1	18.5	36.4	8.2	2,394	27.3

Note: Table is based on the CORE questionnaires.
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 married for the first time before reaching the beginning of the age group.

towards later marriage. For the older broad age group, two in ten women age 30-49 married by the time they were 15, and one in two married by age 18. The median age at first marriage for this group is also 18 years.

The median age at first marriage among men currently aged 30-49 is 27 years, nine years greater than women of the same cohort. Among men age 30-49, the percentages married by exact age 15 and 18 were one and three percent, respectively; which are much lower proportions as compared to their women counterparts with 22 and 51 percent respectively. This also holds true for the marriages of other specified ages.

The records on the men's category for the older broad age group 30-59 shows that eight percent were never married, and among the currently married men age 30-59, the median age at first marriage was 27 years; with thirty-six percent of them married by exact age 25.

6.4 Median Age at First Marriage

Differences by residence for the median age at first marriage among women show that early marriage is much more common in rural than in urban areas (Table 6-5). The median age at first marriage for women age 30-49 in Asmara is higher than in other towns (22 years and 19 years; respectively); and it is more

Table 6-5 Median age at first marriage: Women

Median age at first marriage among women by five-year age groups, age 20-49, 25-49 and age 30-49, according to background characteristics, Eritrea 2010

	Age						Women age	Women age	Women age
Background characteristic	20-24	25-29	30-34	35-39	40-44	45-49	20-49	25-49	30-49
Residence									
Total urban	a	21.1	20.0	19.7	18.9	18.4	a	19.8	19.4
Asmara	a	24.1	25.4	22.0	22.1	19.2	a	23.0	22.4
Other Town	19.7	19.0	17.9	18.5	17.8	17.5	18.6	18.3	18.1
Rural	17.6	17.6	16.7	17.5	17.2	16.7	17.3	17.3	17.0
Zoba									
Debubawi Keih Bahri	a	20.8	19.5	19.8	19.0	18.7	19.9	19.9	19.4
Maekel	a	22.4	22.7	21.3	20.8	19.2	a	21.6	21.2
Semenawi Keih Bahri	18.4	17.8	17.6	18.3	17.5	16.9	17.9	17.7	17.7
Anseba	18.9	18.7	17.7	18.5	18.6	18.3	18.5	18.4	18.2
Gash-Barka	17.9	17.7	17.3	17.5	17.7	17.5	17.6	17.6	17.5
Debub	17.1	17.4	15.9	16.9	16.2	15.8	16.7	16.5	16.2
Education									
No education	17.2	17.1	16.8	17.1	16.7	16.6	16.9	16.9	16.8
Primary	16.8	17.6	16.6	18.2	18.1	17.4	17.4	17.5	17.5
Middle	18.1	19.3	19.5	20.1	20.4	19.8	19.2	19.5	19.8
Secondary or above	a	23.6	25.4	24.9	24.4	21.9	a	24.3	24.8
Wealth quintile									
Lowest	17.8	17.1	17.2	17.0	16.8	16.0	17.0	16.9	16.8
Second	17.4	17.8	16.8	17.8	18.5	16.8	17.5	17.6	17.5
Middle	17.6	17.6	16.5	18.0	17.1	16.5	17.4	17.3	17.0
Fourth	19.0	18.7	17.4	17.9	16.9	18.0	18.2	17.9	17.6
Highest	a	22.5	22.5	21.6	20.9	18.8	a	21.7	21.3
Total	19.0	18.7	17.8	18.4	18.0	17.2	18.4	18.2	17.9

Note: Table is based on the CORE questionnaires.
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 married for the first time before reaching the beginning of the age group.

than five years higher than the median age at first marriage of rural women (17 years). In Asmara, median age at first marriage shows considerable difference with a decrease in age; 19 years for women age 45-49 compared with 24 years for women age 25-29.

Debub has the lowest median age at marriage for women age 30-49 (16 years), while Maekel has the highest (21 years). The median age at first marriage of women age 30-49 with at least some secondary education is 25 years, five years higher than the median age of women with middle level of education (20 years) and eight years higher than women with no education (17 years). The median age at marriage among women age 30-49 in the lowest wealth quintile is more than four years younger than women in the highest wealth quintile (17 and 21 years of age, respectively).

The median age at first marriage for women in age group 45-49 is 17 years, which is increasing slightly with the subsequent lower age groups to the level of 19 years for women in age group 20-24; indicating that younger generations are getting married later.

Table 6-6 Median age at first marriage: Men

Median age at first marriage among men by five-year age groups, age 20-59 ,age 25-59 and age 30-59, according to background characteristics, Eritrea 2010

	Age						Men age	Men age	Men age
Background characteristic	25-29	30-34	35-39	40-44	45-49	50-59	20-59	25-59	30-59
Residence									
Total urban	a	a	a	29.4	29.9	30.0	a	a	a
Other Town	a	29.0	29.0	26.8	28.8	29.4	a	29.4	28.9
Rural	25.4	25.6	26.4	24.6	25.7	26.1	26.5	25.7	25.7
Zoba									
Debubawi Keih Bahri	27.5	27.3	27.3	26.0	28.3	a	30.0	28.1	28.1
Semenawi Keih Bahri	25.1	26.4	27.6	25.7	28.0	28.1	28.0	27.0	27.1
Anseba	26.8	26.2	27.0	27.2	27.2	27.2	28.2	26.9	26.9
Gash-Barka	23.9	25.5	27.3	24.8	25.7	28.4	26.6	26.2	26.3
Debub	27.1	26.0	24.7	23.8	24.9	25.2	26.4	25.2	24.9
Education									
No education	23.5	23.1	24.6	24.7	25.5	26.4	25.4	25.3	25.4
Primary	24.0	25.8	25.6	24.3	26.1	26.5	25.7	25.5	25.7
Middle	26.6	26.4	27.2	24.6	28.7	28.9	28.0	26.7	26.7
Wealth quintile									
Lowest	26.5	23.2	23.9	23.9	25.5	26.4	25.8	25.0	25.0
Second	24.5	25.9	26.3	25.7	25.7	25.8	26.2	25.7	25.8
Middle	24.7	25.7	26.1	24.5	26.4	26.6	26.7	25.8	26.0
Fourth	a	28.3	29.3	25.0	27.6	28.4	30.0	28.4	28.1
Total	a	27.3	28.3	25.8	27.3	27.5	29.2	27.6	27.3

Note: Table is based on the CORE questionnaires.
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 men married for the first time before reaching the beginning of the age group.

The median age at first marriage for men age 25-59 and age 30-59 is 28 years and 27 years respectively. The median age at first marriage for men age 30-59 by residence is higher in urban areas, excluding Asmara, (29 years) than rural areas (26 years). Zoba comparisons showed that the median age at first marriage for men age 30-59 is lowest in Debub (25 years) and highest in Debubawi Keih Bahri (28 years). There is no marked variation in median age for men age 30-59 by educational attainment. The median age at first marriage for men age 30-59 increases with an increase in the wealth status, going from 25 years for those in the lowest quintile to 28 years for those in the highest quintile.

6.5 Age at First Sexual Intercourse

Age at first marriage is often used as a proxy for the onset of women's exposure to the risk of pregnancy. However, since some women are sexually active before marriage, the age at which women initiate sexual intercourse marks more precisely the beginning of their exposure to pregnancy. Therefore, information on the percentage of women and men who had first sexual intercourse by specific ages and the median age at first intercourse, irrespective of marital status allows an assessment of the age at which women and men start having sexual intercourse and its trend across age cohorts.

Approximately one in five of women age 25-49 had first sexual intercourse by the time she had reached exact age 15; one in two had first sexual intercourse by age 18, and three in five had first sexual intercourse by age 20 (Table 6-7). The median age at first intercourse among women age 25-49 is 18 years. There has been virtually no change since the EDHS2002 where the median age at first sexual intercourse was 18 years. It appears that the median age at first intercourse is nearly identical to the median age at first union, which confirms that the majority of Eritrean women have their first sexual intercourse at the time of their first union.

With regard to men, the median age at first sexual intercourse for age 25-49 is 24 years; about six years higher than among women in the same age group (18 years). This could be mostly because men get married later than women (Table 6-4). Approximately one percent of men age 25-49 had first sexual intercourse by exact age 15, one in ten by age 18, and one in four by age 20. The median age at first sexual intercourse among men age 25-59 is four years earlier than the median age at marriage, suggesting general pre-marital sexual intercourse by men. However, these findings also indicate that men tend to initiate their first sexual activity later in life than women. The data also indicate that six percent of women and nine percent of men age 25-49 and three in five of women and four in five of men age 15-24 have never had sexual intercourse (Table 6-7).

Table 6-7 Age at first sexual intercourse

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

Current age	Percentage who had first sexual intercourse by exact age: 15	18	20	22	25	Percentage who never had intercourse	Number	Median age at first intercourse
				WOMEN				
Age								
15-19	6.0	na	na	na	na	80.3	2,301	a
20-24	12.4	41.0	57.1	na	na	31.5	1,744	18.9
25-29	15.2	44.1	62.1	73.5	81.5	10.6	1,646	18.6
30-34	20.3	51.3	63.9	74.2	82.5	6.2	1,228	17.8
35-39	18.1	46.9	62.8	73.8	81.8	4.0	1,429	18.3
40-44	22.0	50.0	64.3	74.1	83.2	2.3	940	18.0
45-49	25.4	55.0	64.5	73.7	81.6	1.0	951	17.2
20-49	17.9	47.0	62.0	na	na	11.2	7,937	18.3
25-49	19.5	48.7	63.3	73.8	82.0	5.5	6,193	18.1
15-24	8.8	na	na	na	na	59.2	4,045	a
				MEN				
Age								
15-19	1.8	na	na	na	na	89.9	1,544	a
20-24	1.3	14.2	30.3	na	na	59.7	635	a
25-29	1.5	12.7	26.8	42.1	62.4	27.1	449	23.0
30-34	2.0	10.8	27.8	43.5	57.4	10.8	390	23.3
35-39	1.6	8.1	20.8	41.5	59.4	4.5	490	23.4
40-44	0.6	6.4	21.8	41.7	60.7	1.1	376	23.0
45-49	0.5	6.9	16.5	32.6	49.3	1.0	417	25.1
20-49	1.3	10.2	24.4	na	na	20.8	2,756	a
25-49	1.3	9.0	22.7	40.3	57.9	9.2	2,121	23.5
15-24	1.6	na	na	na	na	81.1	2,179	a
20-59	1.1	10.0	24.3	na	na	16.6	3,477	a
25-59	1.1	9.1	23.0	38.7	56.4	7.0	2,842	23.8

Note: Table is based on the CORE questionnaires.
na = Not applicable due to censoring.
a = Omitted because less than 50 percent of the respondents had intercourse for the first time before reaching the beginning of the age group.

6.6 MEDIAN AGE AT FIRST SEXUAL INTERCOURSE

The variation in the median age at first sexual intercourse among women according to background characteristics is nearly identical to the variation in the median age at first marriage. Women age 25-49 in rural areas have median age at first sexual intercourse of 17 years and women in Asmara have the highest median age at first sexual intercourse (23 years). For the differential by zobas, women residing in Debub are more likely to have their first sexual intercourse at a younger age with the median age at first sexual intercourse of 17 years and residents of Maekel are the latest with a median age of 21 years.

Noticeable differences in age at first sexual intercourse are also evident by educational and wealth background. The differential is especially pronounced between women with no or primary education having

Table 6-8 Median age at first intercourse: Women

Median age at first sexual intercourse among women by five-year age groups, age 20-49 and age 25-49, according to background characteristics, Eritrea 2010

	Age						Women age	Women age
Background characteristic	20-24	25-29	30-34	35-39	40-44	45-49	20-49	25-49
Residence								
Total urban	a	20.8	20.2	19.7	18.9	18.4	a	19.8
Asmara	a	23.8	24.8	22.9	22.2	19.1	a	23.2
Other Town	19.3	18.9	18.0	18.4	17.6	17.6	18.5	18.3
Rural	17.6	17.7	16.7	17.5	17.3	16.7	17.4	17.3
Zoba								
Debubawi Keih Bahri	a	20.8	20.0	20.2	19.7	19.0	a	20.3
Maekel	a	21.9	22.6	21.2	20.8	18.9	a	21.4
Semenawi Keih Bahri	18.4	17.8	17.6	18.1	17.7	17.4	18.0	17.8
Anseba	19.0	18.6	17.8	18.5	18.5	18.8	18.5	18.4
Gash-Barka	17.7	17.6	17.1	17.3	17.2	17.5	17.4	17.4
Debub	17.0	17.5	16.0	17.0	16.2	15.8	16.7	16.6
Education								
No education	17.3	17.1	16.9	17.1	16.8	16.6	17.0	16.9
Primary	16.8	17.3	16.6	18.1	18.1	17.4	17.3	17.4
Middle	18.0	19.2	19.2	19.7	20.6	19.8	19.0	19.4
Secondary or above	a	23.7	25.1	25.4	25.1	23.0	a	24.4
Wealth quintile								
Lowest	18.0	17.2	17.1	17.0	16.8	16.2	17.1	16.9
Second	17.3	17.9	16.8	17.6	18.6	16.6	17.5	17.6
Middle	17.7	17.5	16.6	17.9	17.0	16.8	17.4	17.3
Fourth	18.7	18.6	17.5	18.1	17.0	18.2	18.2	18.0
Highest	a	22.4	22.4	21.7	20.9	18.5	a	21.7
Total	18.9	18.6	17.8	18.3	18.0	17.2	18.3	18.1

Note: Table is based on the CORE questionnaires.
a = Omitted because less than 50 percent of the women had intercourse for the first time before reaching the beginning of the age group.

a lower median age at first intercourse of 17 years, two years earlier than their counterparts with middle education (19 years) and seven years earlier than those with at least secondary education (24 years). The median age at first sex is 22 years among women in the highest wealth quintile, about five years later than among women in the lowest quintile (17 years).

The median age at first sexual intercourse of women age 25-49 has remained more or less similar with only marginal change in comparison to EDHS 2002 (18.1 years and 17.9 years, respectively). In a country level comparison, though the differences are sometimes small, Eritrean women initiate their first sexual intercourse later than their counterparts in many other sub-Saharan African countries (Figure 6-1).

For the most part, differences in the median age at first sexual intercourse among men by background characteristics are similar to those discussed for median age at first intercourse for women. Men age 25-59 in Maekel and Debub (23 years for both zobas) initiate sexual intercourse two years earlier than men in the

Table 6-9 Median age at first intercourse: Men

Median age at first sexual intercourse among men by five-year age groups, age 50-[59] and age 25-[59], according to background characteristics, Eritrea 2010

	Age						Men age
Background characteristic	25-29	30-34	35-39	40-44	45-49	50-59	25-59
Residence							
Total urban	22.9	22.9	22.7	23.7	22.4	24.8	23.3
Asmara	23.5	22.4	22.7	24.3	21.4	23.0	22.9
Other Town	22.7	24.0	22.8	23.0	23.6	25.5	23.8
Rural	23.1	23.4	23.7	22.8	25.6	24.5	24.0
Zoba							
Debubawi Keih Bahri	24.9	23.3	24.5	24.4	25.5	27.9	25.0
Maekel	23.2	22.6	23.1	23.0	22.7	22.6	22.9
Semenawi Keih Bahri	22.0	23.3	26.4	25.0	28.3	27.5	a
Anseba	23.4	23.4	23.7	25.2	25.7	26.3	25.0
Gash-Barka	22.0	24.5	26.0	23.4	25.6	25.1	24.5
Debub	24.4	23.0	21.4	21.3	22.9	23.3	22.6
Education							
No education	23.0	22.5	23.6	24.1	25.8	25.2	24.7
Primary	22.4	24.2	23.5	22.5	25.5	24.6	24.0
Middle	22.6	23.9	23.7	22.0	23.5	23.5	23.1
Secondary or above	23.5	23.2	22.8	23.6	21.7	23.9	23.1
Wealth quintile							
Lowest	22.8	21.6	23.5	23.1	25.7	25.5	24.5
Second	23.4	25.9	24.1	25.0	25.8	23.4	24.5
Middle	22.2	22.9	23.1	22.4	25.0	26.3	23.7
Fourth	22.6	23.1	24.3	22.9	24.3	23.9	23.7
Highest	24.0	23.1	22.0	22.5	22.4	23.8	22.9
Total	23.0	23.3	23.4	23.0	25.1	24.6	23.8

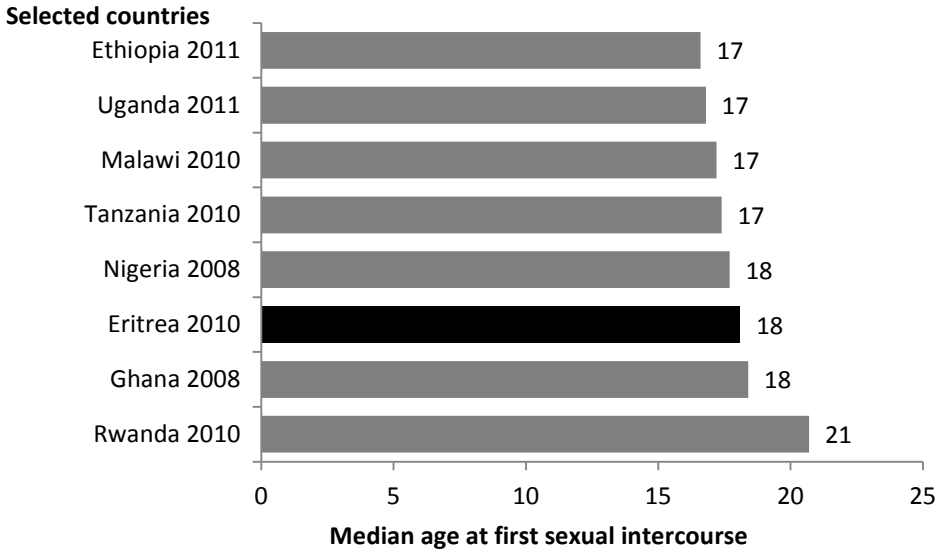
Note: Table is based on the CORE questionnaires.
a = Omitted because less than 50 percent had intercourse for the first time before reaching the beginning of the age group.

rest of the zobas (25 years). Similarly, men from the two lowest wealth quintiles initiate sexual intercourse about two years later than men in the highest quintile (23 years) and less than one year later than the middle and fourth quintiles (24 years).

6.7 Recent Sexual Activity

In the absence of effective contraception usage, the probability of becoming pregnant is highly dependent upon the frequency of sexual intercourse. Thus, information on intercourse is important for refining measurement of exposure to pregnancy. Men and women who have had sex were asked how long ago they recently had sexual intercourse.

Figure 6-1 Median age at first sexual intercourse, women age 25-49, by selected sub-Saharan African countries



Although about three in four women age 15-49 have ever had sexual intercourse, only 35 percent were currently sexually active – that is, they had sexual intercourse in the four weeks preceding the survey (Table 6-10). Twenty-two percent of women had been sexually active within the 12-month period prior to the survey, but not in the month prior to the interview, and 16 percent had last been sexually active one or more years previously. The percentage of women age 15-19 who reported never having had sexual intercourse increased from 67 percent in the EDHS2002 to 80 percent in the EPHS2010. The proportion of women who were sexually active during the four weeks before the survey increases with age, from eight percent among those age 15-19 to 54 percent among those age 40-44, and then it decreases to 52 percent among those age 45-49.

Women who are currently in unions report recent sexual activity more often than women who are divorced, separated, widowed, or never married. Fifty-seven percent of currently married women report being recently sexually active in the four weeks preceding the survey in contrast to three percent of women who were formerly married (divorced, separated or widowed) and one percent of women who have never been married. Women married for less than 10 years were less likely to be sexually active in the four weeks preceding the survey than women married for longer periods. About two-thirds of women with marital duration of 20-24 years and three in five of women who have been married more than once were sexually active in the four weeks preceding the survey.

Rural women were more likely to be recently sexually active (39 percent) than urban women (28 percent), while only one in four of women residing in Asmara have been sexually active in the past four

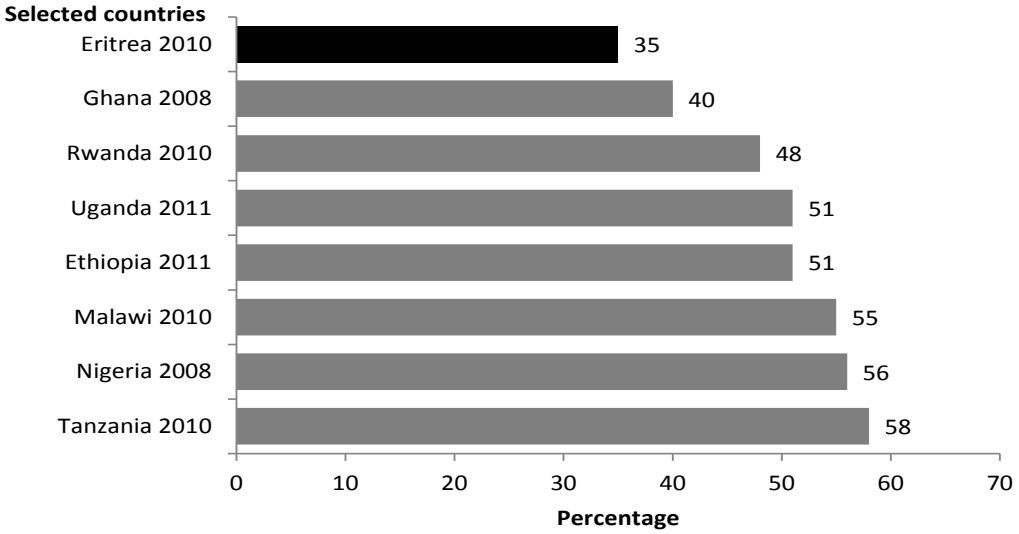
Table 6-10 Recent sexual activity: Women

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

Background characteristic	Timing of last sexual intercourse				Never had sexual intercourse	Total	Number of women
	Within the last 4 weeks	Within[1] 1 year	One or more years	Missing			
Age							
15-19	8.1	8.4	3.1	0.1	80.3	100.0	2,301
20-24	27.5	27.7	12.8	0.5	31.5	100.0	1,744
25-29	40.4	31.2	17.3	0.4	10.6	100.0	1,646
30-34	44.3	29.7	19.3	0.4	6.2	100.0	1,228
35-39	46.8	24.8	23.6	0.9	4.0	100.0	1,429
40-44	54.3	16.9	25.9	0.7	2.3	100.0	940
45-49	52.3	16.6	29.7	0.4	1.0	100.0	951
Marital status							
Never married	0.6	1.5	3.2	0.0	94.7	100.0	2,878
Married or living together [2]	56.6	33.4	9.2	0.6	0.1	100.0	6,183
Divorced/separated/widowed	2.8	10.0	86.6	0.6	0.0	100.0	1,177
Marital duration							
0-4 years	46.8	41.8	9.9	0.8	0.7	100.0	1,118
5-9 years	48.1	40.2	11.5	0.1	0.0	100.0	1,187
10-14 years	56.5	35.2	7.5	0.7	0.0	100.0	850
15-19 years	61.3	28.3	9.5	0.8	0.0	100.0	834
20-24 years	64.4	26.8	7.9	0.9	0.0	100.0	684
25+ years	70.7	22.5	6.5	0.3	0.0	100.0	667
Married more than once	59.8	29.8	9.7	0.6	0.0	100.0	843
Residence							
Total urban	27.9	17.2	18.6	0.5	35.9	100.0	4,125
Asmara	25.4	14.0	16.3	0.7	43.8	100.0	1,870
Other Town	30.0	19.8	20.6	0.3	29.3	100.0	2,255
Rural	39.3	24.8	14.9	0.4	20.5	100.0	6,113
Zoba							
Debubawi Keih Bahri	40.4	21.3	13.6	0.3	24.4	100.0	163
Maekel	27.1	14.9	16.9	0.6	40.5	100.0	2,535
Semenawi Keih Bahri	39.5	25.7	15.8	0.2	18.9	100.0	1,122
Anseba	33.9	25.2	13.6	0.6	26.7	100.0	1,436
Gash-Barka	44.2	22.6	14.3	0.7	18.2	100.0	2,255
Debub	31.9	24.0	19.5	0.1	24.4	100.0	2,727
Education							
No education	46.9	25.9	18.4	0.7	8.1	100.0	3,882
Primary	38.2	23.9	20.1	0.4	17.5	100.0	2,162
Middle	23.3	19.5	14.1	0.3	42.9	100.0	1,946
Secondary or above	20.2	14.5	11.4	0.2	53.8	100.0	2,246
Missing	0.0	100.0	0.0	0.0	0.0	100.0	1
Wealth quintile							
Lowest	44.0	23.3	11.6	0.3	20.8	100.0	1,746
Second	42.1	24.9	14.8	0.7	17.6	100.0	1,769
Middle	34.0	27.8	17.3	0.5	20.4	100.0	2,014
Fourth	29.2	20.6	21.7	0.5	28.0	100.0	2,223
Highest	28.4	14.4	15.6	0.3	41.4	100.0	2,485
Total	34.7	21.7	16.4	0.4	26.7	100.0	10,238

Note: Table is based on the CORE questionnaires.
[1] Excludes women who had sexual intercourse within the last 4 weeks.
[2] Excludes women who are not currently married.

Figure 6-2 Recent sexual activity for women age 25-49, by selected sub-Saharan African countries



weeks (Table 6-10). Women living in Gash-Barka (44 percent), Debubawi Keih Bahri and Semenawi Keih Bahri (40 percent in each), were more likely than women in other zobas to have been sexually active in the past four weeks, while women in Maekel (27 percent) were least likely. Women with no education (47 percent) were more sexually active in the past four weeks than those with a primary education (38 percent). Women with middle level education and secondary or higher education were least likely to have been sexually active in the past four weeks (23 and 20 percent, respectively). Among wealth quintiles, women in the lowest and second category were the two most likely to report being sexually active in the past four weeks (44 and 42 percent respectively).

A comparison of data from EDHS1995, EDHS2002, and EPHS2010 for currently married women who are sexually active in the four weeks preceding the surveys show a gradual decrease from 47 percent in 1995, to 38 percent in 2002 and to 35 percent in 2010. Country-wise comparison (Figure 6-2) shows that Eritrea is one of those sub-Saharan African countries with smallest percentage of women who are recently sexually active.

Overall, four in ten men age 15-59 report having sexual intercourse within the four weeks preceding the interview, and 15 percent had been sexually active within the 12 month period preceding the survey (Table 6-9). Thirty-nine percent of men replied that they had never had sex. However, men of age 15-49 are less likely in contrast to women of similar age group to have had recent sexual intercourse. Thirty-four percent of men age 15-49 had sexual intercourse in the four weeks before the survey, 14 percent had sexual intercourse in the past year but not in the previous four weeks, six percent had sex one or more years ago, and 46 percent report never having had sexual intercourse.

Among younger ages (15-24), a higher percentage of women are sexually active compared with men, and among older ages (25-49) a higher percentage of men are sexually active as compared with women. For men, the differential peaks in the 45-49 age group with almost three-fourths of them being sexually active within the last four weeks and then dropped marginally to 72 percent for the 50-59 age group. Currently married men are much more likely to have been recently sexually active (79 percent) than those never married (five percent). Men married for less than five years were more likely to be sexually active in the four weeks preceding the survey than the others.

Like women, men in rural areas, with 38 percent, are more likely to have been sexually active in the recent past than those in urban areas with 29 percent (Table 6-11). Zoba variation shows patterns similar to those of women. The rate of recent sexual activity is highest among men living in Debubawi Keih Bahri (46 percent) and lowest in Maekel (26 percent). Men's recent sexual activity, like women's, decreases with an increase in their level of education from 60 percent among men with no education to 26 percent among those with secondary or above education. Recent sexual activity is least common among the wealthiest men (27 percent).

6.8 Postpartum Amenorrhea, Abstinence and Insusceptibility

Postpartum amenorrhoea refers to the interval between childbirth and the return of menstruation. The length and intensity of breastfeeding influence the duration of amenorrhoea which offers protection from conception. Postpartum abstinence refers to the period between childbirth and the time when a woman resumes sexual activity. Delaying the resumption of sexual relations can also prolong protection. Women are considered to be insusceptible to pregnancy if they are not exposed to the risk of conception, either because their menstrual period has not resumed since giving birth or because they are abstaining from intercourse after childbirth.

These distributions are based on current status information, i.e.. on the proportion of births occurring for some specific months before the survey for which mothers were still amenorrheic, abstaining, or insusceptible at the time of the survey. Thus, the results presented in Table 6-12 are based on cross-sectional data, representing the experience of mothers of all births at a single point in time rather than showing the experience of a cohort of mothers over time. The data are grouped in two-month intervals to minimize the fluctuations in the estimates. The median and mean duration estimates shown at the bottom of Table 6-12 are calculated from the current status distributions presented in the table. The prevalence/incidence mean is obtained by dividing the number of mothers who are amenorrheic, abstaining, or insusceptible by the average number of births per month over the 36-month period.

At the time of the survey, 49 percent of the mothers who had given birth during the three years preceding the survey were insusceptible because they were either amenorrheic or still abstaining (or both). The median duration of postpartum insusceptibility to pregnancy is 19 months. The median duration of amenorrhoea is 17 months; while the median duration of postpartum abstinence is much lower (three months). The mean duration of postpartum amenorrhea is 16 months and the mean duration for abstinence is seven months.

Table 6-11 Recent sexual activity: Men

Percent distribution of men age 15-59 by timing of last sexual intercourse, according to background characteristics, Eritrea 2010

Background characteristic	Timing of last sexual intercourse: Within the last 4 weeks	Within 1 year	One or more years	Missing	Never had sexual intercourse	Total	Number of men
Age							
15-19	3.2	5.2	1.8	0.0	89.9	100.0	1,544
20-24	16.9	13.9	9.2	0.3	59.7	100.0	635
25-29	42.6	18.6	11.6	0.0	27.1	100.0	449
30-34	59.0	19.1	10.8	0.3	10.8	100.0	390
35-39	67.3	19.8	8.4	0.0	4.5	100.0	490
40-44	67.9	23.4	7.4	0.3	1.1	100.0	376
45-49	73.9	20.3	4.8	0.0	1.0	100.0	417
Marital status							
Never married	4.5	9.6	7.5	0.1	78.2	100.0	2,504
Married or living together	78.6	19.4	1.9	0.1	0.0	100.0	1,715
Divorced/separated/widowed	11.4	27.8	60.7	0.0	0.0	100.0	78
Missing	0.0	0.0	0.0	0.0	100.0	100.0	2
Marital duration							
0-4 years	82.4	16.4	1.2	0.0	0.0	100.0	392
5-9 years	77.4	21.3	1.1	0.3	0.0	100.0	392
10-14 years	76.3	19.4	3.9	0.0	0.4	100.0	250
15-19 years	80.1	18.7	1.2	0.0	0.0	100.0	251
20-24 years	75.3	22.3	2.3	0.0	0.0	100.0	152
25+ years	72.1	23.7	4.2	0.0	0.0	100.0	64
Married more than once	79.0	18.8	2.2	0.0	0.0	100.0	215
Residence							
Total urban	28.6	15.3	8.8	0.2	47.1	100.0	1,757
Asmara	25.9	16.5	9.5	0.5	47.6	100.0	855
Other Town	31.1	14.1	8.1	0.0	46.7	100.0	902
Rural	38.1	12.8	4.5	0.0	44.6	100.0	2,542
Zobas							
Debubawi Keih Bahri	45.9	8.8	4.0	0.2	41.2	100.0	67
Maekel	25.8	15.3	8.9	0.4	49.7	100.0	1,196
Semenawi Keih Bahri	40.9	17.6	5.8	0.0	35.7	100.0	470
Anseba	35.0	11.9	5.8	0.0	47.2	100.0	588
Gash-Barka	44.0	14.5	4.7	0.0	36.8	100.0	778
Debub	32.5	11.7	5.1	0.0	50.7	100.0	1,200
Education							
No education	60.0	13.9	4.6	0.0	21.5	100.0	599
Primary	46.8	13.2	5.3	0.2	34.5	100.0	659
Middle	27.1	11.3	4.9	0.1	56.6	100.0	1,188
Secondary or above	25.9	15.7	8.0	0.1	50.3	100.0	1,853
Missing	0.0	100.0	0.0	0.0	0.0	100.0	0
Wealth quintile							
Lowest	39.0	13.8	3.5	0.0	43.7	100.0	739
Second	39.7	11.3	5.9	0.0	43.2	100.0	699
Middle	38.7	12.4	5.8	0.0	43.2	100.0	753
Fourth	31.2	13.0	6.1	0.0	49.7	100.0	960
Highest	27.3	17.1	8.7	0.4	46.5	100.0	1,148
Total 15-49	34.2	13.8	6.2	0.1	45.6	100.0	4,299
50-59	72.4	18.3	8.0	0.7	0.5	100.0	722
Total men 15-59	39.7	14.5	6.5	0.2	39.1	100.0	5,021

Table 6-12 Postpartum amenorrhea, abstinence and insusceptibility

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

	Percentage of births for which the mother is:			
Months since birth	Amenorrheic	Abstaining	Insusceptible	Number of births
< 2	94.3	93.6	98.3	163
2-3	86.3	52.6	93.5	213
4-5	84.1	34.9	87.9	227
6-7	79.0	23.6	84.3	238
8-9	74.9	18.4	80.0	217
10-11	61.6	17.2	67.9	231
12-13	62.2	11.7	65.8	240
14-15	54.8	16.5	61.2	210
16-17	54.7	11.9	59.8	231
18-19	46.3	11.7	49.7	245
20-21	35.2	14.0	42.9	229
22-23	29.5	13.2	38.6	224
24-25	10.6	7.8	17.4	224
26-27	11.6	7.8	17.5	223
28-29	7.6	5.7	11.2	203
30-31	4.6	6.6	10.4	251
32-33	5.7	4.0	9.3	276
34-35	4.9	4.5	9.1	201
Total	43.9	18.4	49.2	4,044
Median	17.1	3.2	18.7	na
Mean	16.4	7.4	18.4	na

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

The percentage of births for which the mothers are amenorrheic declines from 94 percent in the two months immediately after a birth to 86 percent during the period two to three months after birth. By the period of six to seven months after a birth (the recommended time duration for exclusive breastfeeding), 84 percent of mothers are still insusceptible to pregnancy; of which 79 percent are as a result of amenorrhea. Two-thirds were still insusceptible (with 62 percent being amenorrheic) after one year of delivery. Abstinence declines rapidly as the months since birth increase compared with insusceptibility due to amenorrhoea, which declines at a slower rate.

6.9 Median Duration of Postpartum Insusceptibility by Background Characterstics

The median duration of postpartum amenorrhea and the median length for postpartum insusceptibility is slightly longer among women age 30-49 (19 and 20 months, respectively) when compared to women age 15-29 (16 and 18 months, respectively). The median length of postpartum abstinence for older women is three months compared with four months for the younger age group (Table 6-13).

Table 6-13 Median duration of amenorrhea, postpartum abstinence and postpartum insusceptibility

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

Background characteristic	Postpartum amenorrhea	Postpartum abstinence	Postpartum insusceptibility[1]	Number of births
Mother's age				
15-29	16.2	3.5	17.7	2,168
30-49	19.3	2.8	20.3	1,876
Residence				
Total urban	11.2	2.7	12.4	1,248
Asmara	8.3	2.8	9.3	449
Other Town	14.1	2.7	15.1	799
Rural	19.1	3.4	20.2	2,796
Zobas				
Debubawi Keih Bahri	12.6	3.6	13.5	64
Maekel	10.1	2.9	11.0	700
Semenawi Keih Bahri	16.7	3.0	16.9	502
Anseba	17.8	3.4	20.0	655
Gash-Barka	16.1	2.9	17.0	1,025
Debub	19.7	3.5	21.0	1,099
Education				
No education	19.1	3.3	20.1	1,817
Primary	18.7	2.9	19.6	973
Middle	15.3	3.2	17.7	670
Secondary or above	8.8	3.4	10.2	580
Missing	25.5	3.5	25.5	3
Wealth quintile				
Lowest	19.4	3.7	20.6	803
Second	19.1	3.5	19.7	838
Middle	18.3	3.0	19.3	904
Fourth	14.6	2.5	20.1	842
Highest	8.6	3.1	9.9	656
Total	17.1	3.2	18.7	4,044

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

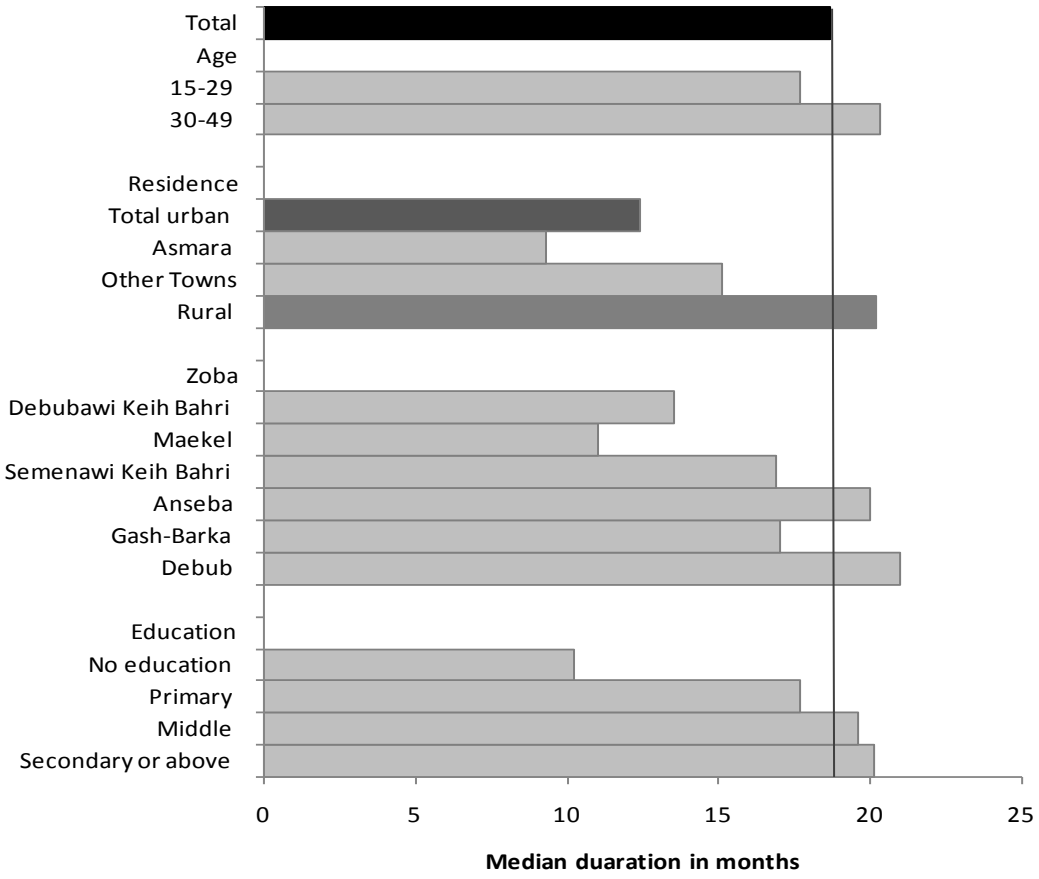
Rural women have longer median duration of postpartum insusceptibility (20 months) than urban women (12 months). The median duration of postpartum abstinence is slightly higher in rural than urban areas, implying much of the difference in postpartum insusceptibility comes from the marked difference in postpartum amenorrhea (11 months for urban and 19 months for rural).

There is considerable variation among zobas in postpartum amenorrhea, abstinence, and insusceptibility. The median duration of postpartum amenorrhea ranges from 20 months in Debub to 10 months in Maekel, and similarly postpartum insusceptibility ranges from 21 months in Debub to 11 months in Maekel.

The length of postpartum amenorrhea and postpartum insusceptibility lasts longer among women with less education and women with less wealth, in contrast to the postpartum abstinence which increases with an increase in the level of the mother's education and wealth status.

In the eight years after 2002, the median duration of amenorrhea and insusceptibility have increased by about four months, but there has been practically no change in the median duration of abstinence.

Figure 6-3 Median duration of postpartum insusceptibility by background characteristics

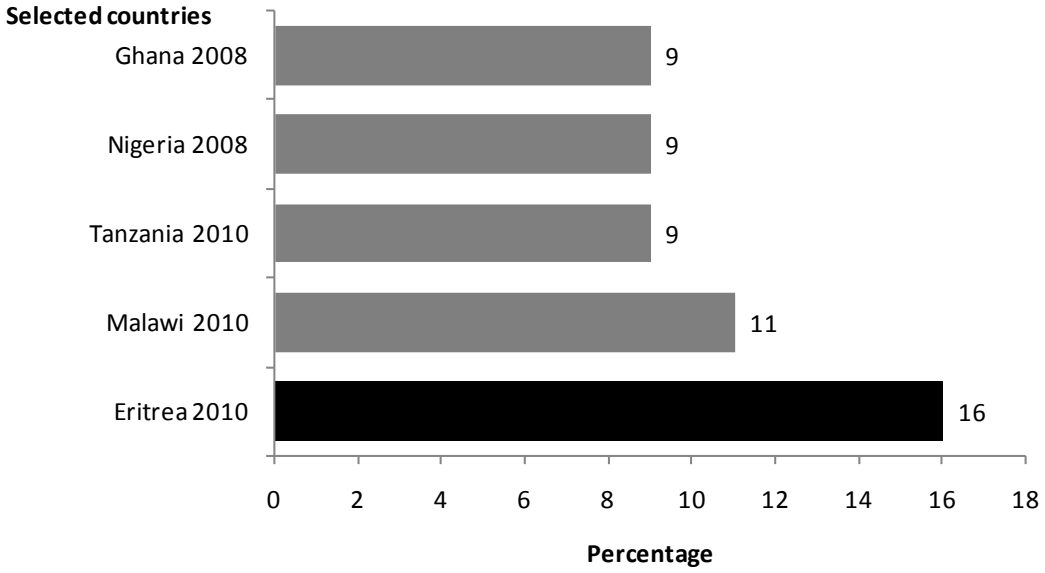


6.10 Menopause

Another factor influencing the risk of pregnancy among women is menopause. In the context of the available survey data, women are considered menopausal if they are neither pregnant nor postpartum amenorrheic and if they have not had a menstrual period in the six months preceding the survey.

Overall, sixteen percent of women age 30-49 are menopausal (Table 6.14); showing a four percentage point increment when compared to 12 percent of same age in EDHS2002. The proportion of women who are menopausal, increases with age from two percent among women age 30-34 to 63 percent among women age 48-49. Comparison of the national percentage in contrast to some selected sub-Saharan African countries show that Eritrea has the highest percentages of age 30-49 women who are in menopausal (Figure 6-4).

Figure 6-4 Menopausal Women age 30-49 by selected sub-Saharan African countries



FERTILITY PREFERENCES 7

Key Findings

- More women and men in Eritrea of age 15-49 (60 percent of women and 81 percent of men) have formal education than those who do not. The proportion for women has increased since 2002, when 50 percent of women had formal education.
- The main reasons for not attending school for 69 percent of women and 39 percent of men age 15-29 who ever attended school are marriage (51 percent) for women and family needed help on farm/business (27 percent) for men.
- Men of age 15-59 are more likely to be exposed to at least one form of mass media compared to women of age 15-49 (68 and 47 percent respectively).
- Only twenty-three percent of women were employed in the 12 months preceding the survey. The largest group of these women (23 percent) worked in the sales and services occupation.

The EPHS2010 included questions that ascertain fertility preferences. Women and men were asked about their desire to have another child, the length of time they would like to wait before having another child, and what they would consider the ideal number of children to be. These fertility preferences were then used to assess future fertility patterns and potential demand for contraception. The information was also used to construct the measures of unwanted or mistimed birth.

7.1 Reproductive Preferences

Information about the desire for more children helps predict future reproductive behavior in Eritrea. The provision of adequate and accessible family planning services depends on the availability of such information. In EPHS2010, currently married women and men were asked if they have a desire to have another child and, how soon they wanted the child. The same question was phrased differently in the case of pregnant women or men whose spouse or partner were pregnant at the time of interviewing; the question then focused on desire for subsequent children after completion of the current pregnancy. Sterilized women and men were considered to want no more children, so they were not asked questions about their desire for more children.

Women's and men's reproductive preferences are summarized in Table 7-1 and Figure 7-1. Among currently married women 31 percent would like to have another child soon (within two years), 37 percent want to have another later (wait for two or more years), and 22 percent want no more children. Among currently married men (age 15-59) 29 percent would like to have another child soon, 40 percent want to have another later, and 21 percent want no more children.

The desire for a child is related to the number of living children a woman or a man has. The desire to delay childbearing among women with no children is 16 percent, while that of men is 27 percent. With an increased the number of living children, there is a decreased desire to have more children both among women and men. Eritrean women exhibit pronatalist tendencies; one in three women with five children, two in five women with six children, and three in five women with seven or more children want to cease childbearing. Among women with seven or more children, 24 percent want to have another child sooner or later.

Table 7-1 Fertility preferences by number of living children

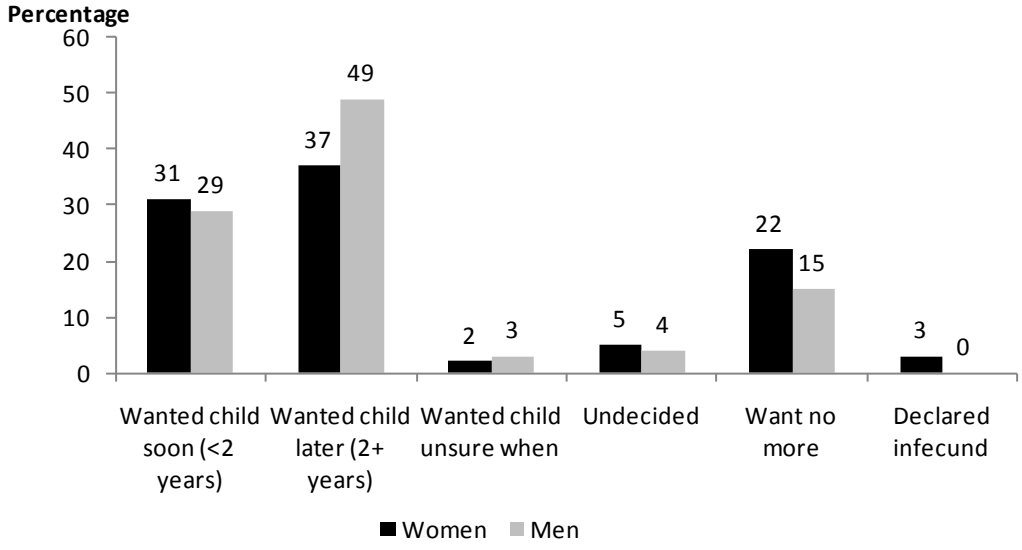
Percent distribution of currently married women and currently married men age 15-49 by desire for children, according to number of living children, Eritrea 2010

	Number of living children[1]										
Desire for children	0	1	2	3	4	5	6	7+	Total 15-49	50-59	Total men 15-59
WOMEN											
Have another soon[2]	77.0	40.0	34.5	27.3	27.4	21.6	21.5	12.4	31.3	na	na
Have another later[3]	16.0	53.8	51.5	50.3	36.9	28.9	22.0	12.0	36.8	na	na
Have another, undecided when	1.3	0.9	2.1	2.5	3.1	2.0	2.0	1.0	1.9	na	na
Undecided	3.7	1.8	3.1	3.2	6.0	9.5	6.4	8.7	5.1	na	na
Want no more	0.6	2.1	7.0	13.2	22.6	33.1	42.4	60.5	21.5	na	na
Sterilized[4]	0.0	0.0	0.2	0.1	0.3	0.1	0.4	0.7	0.2	na	na
Declared infecund	1.5	1.5	1.6	3.4	3.7	4.7	5.4	4.8	3.2	na	na
Missing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	na	na
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	0.0
Number	496	923	1,011	900	837	720	513	783	6,183	0	0
MEN[5]											
Have another soon	65.5	41.2	27.6	31.1	22.9	22.6	16.9	15.7	29.4	29.2	29.4
Have another later	26.9	56.7	62.7	53.2	50.5	45.8	38.9	35.9	48.7	16.4	39.5
Have another, undecided when	2.3	0.9	4.0	3.8	3.2	2.5	2.6	1.1	2.6	2.8	2.7
Undecided	3.5	0.0	2.4	1.6	3.9	4.6	6.8	8.3	3.6	3.0	3.4
Want no more	1.5	1.2	2.4	9.6	18.9	23.3	34.2	37.2	14.9	35.3	20.7
Sterilized	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.0
Declared infecund	0.0	0.0	0.0	0.1	0.6	1.1	0.6	1.3	0.4	13.2	4.1
Missing	0.3	0.0	1.0	0.7	0.0	0.0	0.0	0.0	0.3	0.1	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	134	247	286	252	249	191	143	212	1,715	683	2,398

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

In the EDHS surveys of 1995 and 2002, the percentage of women who wanted to have another child soon were 21 and 33 percent, respectively, compared to 31 percent in EPHS2010. Half of currently married women in 1995 and 39 percent in 2002 wanted to have another child later, which was higher than their corresponding fertility preferences in EPHS2010 (37 percent). The fertility preferences of currently married women age 15-49 years who want no more children are somewhat higher than those of currently married men age 15-49 years (22 and 15 percent, respectively)(Figure 7-1).

Figure 7-1 **Fertility preferences of currently married women and men age 15-49**



7.2 Desire to Limit Childbearing by Background Characteristics

The desire to limit childbearing data by background characteristic provides information about variations in the potential demand for family planning among women and men. Overall, percentage of currently married women and men who want no more children (or who are sterilized) is about the same, 22 and 21 percent, respectively (Table 7-2 and Table 7-3).

The desire to limit childbearing for the currently married women is slightly higher in urban areas (25 percent) than the rural (20 percent). Women in Maekel (25 percent) and Debub (26 percent) are not as pronatalist as those in the other zobas, Debubawi Keih Bahri (9 percent), Semenawi Keih Bahri (17 percent), Anseba (19 percent) and Gash-Barka (20 percent). The percentage wanting no more children generally increases with increasing educational level once the women have one or more children. The

Table 7-2 Desire to limit childbearing: Women

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

	Number of living children[1]								
Background characteristic	0	1	2	3	4	5	6	7+	Total
Residence									
Total urban	0.0	1.5	11.7	16.3	31.2	46.6	53.2	72.6	24.9
Asmara	0.0	0.0	14.5	19.8	41.0	56.2	72.4	77.0	25.6
Other Town	0.0	2.7	9.3	13.7	25.1	42.7	45.1	70.9	24.5
Rural	0.8	2.4	4.7	11.4	17.8	27.4	39.1	57.8	20.2
Zoba									
Debubawi Keih Bahri	0.0	2.1	1.8	7.6	15.3	11.1	18.7	25.8	9.1
Maekel	0.0	0.0	11.1	17.3	38.3	53.1	63.3	74.3	25.2
Semenawi Keih Bahri	0.0	2.8	8.1	10.9	11.6	32.6	30.1	51.2	17.3
Anseba	0.0	0.0	0.8	7.8	12.8	29.3	35.7	53.4	18.6
Gash-Barka	1.0	3.8	7.0	13.4	19.2	29.3	38.7	53.0	19.9
Debub	1.2	3.0	7.3	14.1	26.1	31.1	49.4	71.9	25.7
Education									
No education	0.7	2.6	5.8	14.0	18.0	29.8	37.9	58.4	25.4
Primary	1.0	1.4	6.9	10.4	25.9	36.2	47.6	71.2	22.1
Middle	0.0	2.7	6.8	12.9	25.0	39.0	62.1	62.9	15.3
Secondary or above	0.0	1.4	10.3	15.9	35.8	49.8	61.7	67.2	14.9
Wealth quintile									
Lowest	3.1	2.0	4.0	11.7	13.0	24.4	37.8	50.2	22.5
Second	0.0	1.4	5.6	12.3	18.1	25.1	34.9	55.4	17.2
Middle	0.0	4.5	4.2	10.6	19.7	34.6	40.2	60.4	19.3
Fourth	0.0	1.3	8.4	12.8	25.5	38.3	49.6	78.2	24.8
Highest	0.0	0.7	12.7	17.8	35.9	52.0	61.4	73.7	25.6
Total	0.6	2.1	7.2	13.3	22.9	33.2	42.8	61.2	21.7

Note: Table is based on the CORE questionnaire.
Women who have been sterilized are considered to wa`nt no more children.
[1] The number of living children includes the current pregnancy.

percentage wanting no more children also increases with increasing wealth quintile among women with two or more children. Currently married women in the second lowest wealth quintile are less likely to want to limit childbearing (17 percent) than those in the other wealth quintiles (19-26 percent).

Fewer rural men want no more children (12 percent) compared to urban men (21 percent) (Table 7-3). Among the six zobas, three zobas, Semenawi Keih Bahri, Anseba and Debubawi Keih Bahri have the lowest percentage of men desiring no more children (nearly eight percent), while the proportion is the highest in Maekel (23 percent). The percentage of currently married men who want no more children increases with increasing level of education and wealth index.

Table 7-3 Desire to limit childbearing: Men

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

Background characteristic	Number of living children[1]								Total
	0	1	2	3	4	5	6	7+	
Residence									
Total urban	2.5	2.7	5.0	15.6	32.9	37.9	43.3	48.2	20.5
Asmara	4.7	7.9	7.2	18.7	41.0	29.9	59.9	45.3	22.4
Other Town	0.0	0.0	2.6	12.8	25.0	40.8	32.2	49.2	19.0
Rural	1.1	0.6	0.6	5.7	9.8	16.9	31.0	34.8	12.2
Zoba									
Debubawi Keih Bahri	0.0	2.6	0.0	9.1	15.1	6.7	0.0	14.8	7.6
Maekel	4.7	5.2	5.4	16.9	40.9	31.4	65.2	49.2	23.2
Semenawi Keih Bahri	0.0	0.0	4.5	2.6	11.4	22.8	0.0	18.2	7.0
Anseba	0.0	0.0	0.0	6.3	3.3	17.1	14.1	12.5	7.5
Gash-Barka	0.0	0.0	0.0	8.8	7.1	14.3	46.3	29.0	11.1
Debub	3.1	1.1	1.5	7.4	18.7	32.8	37.1	59.2	20.4
Education									
No education	0.0	0.2	0.0	5.8	4.8	8.7	23.6	24.4	10.7
Primary	0.0	1.6	0.0	6.6	17.1	26.8	28.8	42.7	18.7
Middle	3.4	0.0	1.5	9.5	22.9	24.2	50.6	71.5	17.6
Secondary or above	2.0	2.3	4.1	13.5	30.4	34.9	48.6	39.8	14.0
Wealth quintile									
Lowest	0.0	0.0	0.0	4.8	3.1	16.9	26.7	24.4	11.9
Second	0.0	1.7	1.7	8.3	7.9	15.4	24.2	27.1	9.4
Middle	2.9	0.0	0.0	10.0	18.5	18.7	38.7	39.2	12.4
Fourth	5.8	0.0	0.0	4.4	19.6	19.4	38.8	58.2	17.6
Highest	0.0	4.7	6.7	17.2	38.4	48.3	48.1	54.5	22.6
Total 15-49	1.5	1.2	2.4	9.6	18.9	23.3	34.2	37.7	14.9
Men 50-59	0.0	23.8	11.0	9.7	26.3	33.5	42.2	44.8	35.3
Total men 15-59	1.4	2.8	3.3	9.6	20.6	26.7	37.6	41.8	20.7

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

7.3 Need For Family Planning Services

One of the major concerns of family planning programs is to assess the size of the potential demand for contraception and to identify women and men who are in need of contraceptive services. Table 7-4 and Table 7-5 present estimates of unmet need, met need, and the total demand for family planning in Eritrea. The table also shows the percentage of the total demand that is satisfied.

Women who are currently married and women who either do not want any more children or want to wait two or more years before having another child, but are not using contraception, are considered to have an unmet need for family planning. Women with a fulfilled desire for family planning are those who are currently using contraception. The total demand for family planning is the sum of unmet need and met need.

As seen in Table 7-4, the survey puts total unmet need for family planning in Eritrea at 28 percent, 21 percent for spacing and seven percent for limiting. Combining total unmet need with the eight percent of married women who are currently using contraceptive methods yields the total demand for family planning, which encompasses more than one-third of married women in Eritrea. It was noted in Chapter 5 that contraceptive prevalence has not changed since 1995; levels of unmet need for spacing and unmet need for limiting are also the same as those reported in 1995.

Unmet need for family planning is highest among women age 15-19 (33 percent), and lowest among women age 45-49 (15 percent); a substantial portion of the latter group are menopausal (Table 6-10). Virtually all unmet need among women under age 35 is for spacing births, while for women in their 40s unmet need is mainly for limiting births. Unmet need in urban areas (27 percent) shows a slight increase over that of EDHS2002 (25 percent). Substantial differences among zobas are observed in unmet need for contraception, from 16 percent in Debubawi Keih Bahri to 31 percent in Debub.

Unmet need ranges from 25 percent among women with at least secondary-school education to 31 percent for women who have attained middle-school level. Unmet need is highest among women in the fourth wealth quintile (33 percent), and is lowest among women in the highest wealth quintile (22 percent).

Because both met and unmet need have remained unchanged since 1995, the overall percentage of demand satisfied has not changed. One-fourth of the total demand for family planning is being satisfied. Demand is least likely to be satisfied among younger women (under age 25), those who live in rural areas, and among those in Gash-Barka. The total demand satisfied increases with increased level of education and wealth index. For example, percentage of demand satisfied for currently married women with no education and lowest quintile is 10 percent and seven percent, respectively, compared with 48 percent and 52 percent among those with at least secondary education and those in the highest wealth quintile.

Table 7-5 presents data on family planning need and demand for all women and for women who are not currently married. Overall, 17 percent of all women have an unmet need for family planning. Total demand for family planning is 22 percent, with 25 percent of the demand satisfied. Among women who are not currently married, 0.3 percent have an unmet need for family planning. For these women, total demand for family planning is 1.4 percent, with 78 percent of the demand satisfied.

Table 7-4 Need and demand for family planning among currently married women

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

Background characteristic	Unmet need for family planning[1]			Met need for family planning (currently using)[2]			Total demand for family planning			Percentage of demand satisfied	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total		
Age											
15-19	30.5	2.0	32.5	2.5	0.0	2.5	33.1	2.0	35.1	7.2	402
20-24	30.2	1.1	31.3	6.0	0.4	6.4	36.2	1.5	37.6	16.9	1,057
25-29	26.6	3.0	29.6	9.6	1.3	10.9	36.1	4.3	40.5	26.8	1,252
30-34	22.7	5.9	28.6	6.9	1.8	8.7	29.6	7.8	37.4	23.4	967
35-39	18.4	10.4	28.8	5.5	6.6	12.1	23.9	17.0	41.0	29.6	1,088
40-44	8.2	15.3	23.6	1.7	6.9	8.6	9.9	22.2	32.1	26.7	715
45-49	2.8	11.9	14.6	0.3	3.9	4.2	3.1	15.7	18.8	22.3	701
Residence											
Total urban	19.1	7.7	26.7	11.3	6.3	17.6	30.4	13.9	44.4	39.7	2,030
Asmara	15.3	7.0	22.3	16.9	10.7	27.5	32.2	17.7	49.8	55.2	800
Other Town	21.5	8.1	29.6	7.8	3.4	11.2	29.3	11.5	40.8	27.5	1,230
Rural	21.3	6.4	27.7	2.5	1.4	3.9	23.8	7.8	31.7	12.4	4,153
Zoba											
Debubawi Keih Bahri	13.7	2.4	16.2	3.5	1.5	5.0	17.3	3.9	21.2	23.7	111
Maekel	17.8	6.5	24.3	14.8	9.4	24.2	32.6	15.9	48.5	49.9	1,153
Semenawi Keih Bahri	22.1	5.2	27.3	3.1	0.8	3.9	25.2	6.0	31.2	12.5	789
Anseba	22.2	5.7	27.9	5.0	2.4	7.5	27.3	8.1	35.4	21.1	930
Gash-Barka	20.1	6.4	26.5	2.2	0.8	3.0	22.3	7.2	29.5	10.1	1,541
Debub	21.7	9.1	30.9	3.3	2.1	5.4	25.1	11.2	36.3	14.9	1,660
Education											
No education	17.7	8.2	25.9	1.5	1.4	2.8	19.2	9.5	28.7	9.9	3,017
Primary	22.8	7.4	30.1	3.6	3.6	7.2	26.3	11.0	37.3	19.2	1,432
Middle	26.0	4.8	30.9	10.9	4.5	15.5	36.9	9.4	46.3	33.4	883
Secondary or above	21.4	3.2	24.6	16.8	6.3	23.1	38.2	9.4	47.6	48.4	850
Missing	100.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	1
Wealth quintile											
Lowest	20.3	6.4	26.7	0.9	1.1	2.1	21.2	7.5	28.7	7.2	1,237
Second	18.9	5.6	24.6	1.4	0.9	2.2	20.3	6.5	26.8	8.3	1,256
Middle	23.7	6.7	30.5	2.8	1.1	3.9	26.6	7.8	34.4	11.4	1,333
Fourth	23.6	9.1	32.7	8.0	3.0	11.0	31.6	12.1	43.7	25.2	1,185
Highest	16.1	6.3	22.4	14.7	9.5	24.2	30.8	15.8	46.6	52.0	1,171
Total	20.6	6.8	27.4	5.4	3.0	8.4	26.0	9.8	35.8	23.5	6,183

Note: Table is based on the CORE questionnaire.

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

Unmet need for limiting: Includes women who are fecund and not using family planning and who say they do not want another child. In addition, unmet need for limiting includes pregnant women whose current pregnancy was unwanted but who now say they do not want more children or who are undecided whether they want another child. Unmet need for limiting also includes amenorrheic women whose last birth was unwanted but who now say they do not want more children or who are undecided whether they want another child.

[2] Using for spacing is defined as women who are using some method of family planning and say they want to have another child or are undecided whether to have another.

Using for limiting is defined as women who are using and who want no more children. Note that the specific methods used are not taken into account here.

Table 7-5 Need and demand for family planning for all women and for women who are not currently married

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

Background characteristic	Unmet need for family planning[1]			Met need for family planning (currently using)[2]			Total demand for family planning			Percentage of demand satisfied	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total		
Age											
15-19	5.4	0.4	5.7	0.8	0.0	0.8	6.1	0.4	6.5	11.7	2,301
20-24	18.5	0.7	19.2	3.8	0.2	4.0	22.3	0.9	23.2	17.2	1,744
25-29	20.2	2.3	22.6	8.0	1.3	9.3	28.3	3.6	31.8	29.2	1,646
30-34	17.9	4.7	22.6	5.7	1.8	7.5	23.6	6.4	30.1	25.0	1,228
35-39	14.1	8.1	22.2	4.4	5.2	9.6	18.5	13.3	31.8	30.2	1,429
40-44	6.3	12.1	18.4	1.3	5.3	6.6	7.6	17.4	25.0	26.5	940
45-49	2.0	8.7	10.8	0.4	3.2	3.6	2.5	11.9	14.4	25.1	951
Residence											
Total urban	9.5	3.8	13.3	6.1	3.4	9.5	15.6	7.2	22.8	41.6	4,125
Asmara	6.6	3.1	9.7	7.8	4.8	12.6	14.4	7.9	22.3	56.4	1,870
Other Town	11.8	4.4	16.3	4.8	2.2	6.9	16.6	6.6	23.2	29.9	2,255
Rural	14.5	4.4	19.0	1.8	1.0	2.9	16.4	5.5	21.8	13.1	6,113
Zoba											
Debubawi Keih Bahri	9.3	1.7	11.0	2.7	1.3	4.0	12.0	2.9	15.0	26.6	163
Maekel	8.2	3.0	11.2	7.2	4.5	11.7	15.4	7.5	22.9	51.1	2,535
Semenawi Keih Bahri	15.6	3.7	19.2	2.6	0.6	3.2	18.2	4.2	22.4	14.1	1,122
Anseba	14.4	3.7	18.1	3.3	1.7	5.0	17.7	5.4	23.1	21.7	1,436
Gash-Barka	13.9	4.5	18.3	1.8	0.9	2.7	15.7	5.3	21.0	12.7	2,255
Debub	13.3	5.6	18.9	2.2	1.3	3.5	15.5	7.0	22.4	15.7	2,727
Education											
No education	13.8	6.4	20.2	1.1	1.2	2.3	14.9	7.6	22.5	10.2	3,882
Primary	15.1	5.0	20.1	3.0	2.6	5.6	18.1	7.6	25.7	21.8	2,162
Middle	11.9	2.3	14.2	5.5	2.2	7.6	17.4	4.4	21.8	35.0	1,946
Secondary or above	8.2	1.2	9.4	6.6	2.6	9.2	14.8	3.8	18.6	49.5	2,246
Missing	100.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	1
Wealth quintile											
Lowest	14.4	4.5	18.9	0.7	0.8	1.5	15.0	5.4	20.4	7.3	1,746
Second	13.5	4.0	17.5	1.0	0.6	1.6	14.5	4.6	19.1	8.6	1,769
Middle	15.7	4.6	20.3	2.1	0.9	3.0	17.8	5.5	23.3	12.7	2,014
Fourth	12.8	5.0	17.8	4.7	2.0	6.7	17.5	7.0	24.5	27.3	2,223
Highest	7.6	3.0	10.6	7.6	4.6	12.2	15.2	7.6	22.8	53.6	2,485
Total	12.5	4.2	16.7	3.6	2.0	5.5	16.0	6.2	22.2	24.9	10,238

Table 7-5 (*continued*)

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

Background characteristic	Unmet need for family planning[1]			Met need for family planning (currently using)[2]			Total demand for family planning			Percentage of demand satisfied	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total		
WOMEN NOT CURRENTLY MARRIED											
Age											
15-19	0.1	0.0	0.1	0.4	0.0	0.4	0.4	0.0	0.4	86.7	1,899
20-24	0.5	0.1	0.6	0.4	0.0	0.4	0.9	0.1	1.0	37.4	687
25-29	0.0	0.0	0.0	3.2	1.2	4.3	3.2	1.2	4.3	100.0	394
30-34	0.0	0.0	0.0	1.5	1.5	3.0	1.5	1.5	3.0	100.0	260
35-39	0.3	0.5	0.9	0.6	0.9	1.5	1.0	1.4	2.4	63.2	341
40-44	0.0	1.9	1.9	0.0	0.4	0.4	0.0	2.3	2.3	17.0	225
45-49	0.0	0.0	0.0	0.6	1.3	1.9	0.6	1.3	1.9	100.0	250
Residence											
Total urban	0.2	0.1	0.3	1.1	0.5	1.6	1.2	0.7	1.9	84.5	2,096
Asmara	0.1	0.2	0.3	1.0	0.4	1.4	1.1	0.5	1.7	83.2	1,070
Other Town	0.2	0.1	0.3	1.1	0.7	1.8	1.4	0.8	2.1	85.5	1,025
Rural	0.1	0.2	0.3	0.4	0.2	0.6	0.5	0.5	1.0	65.1	1,960
Zoba											
Debubawi Keih Bahri	0.0	0.0	0.0	1.0	0.8	1.8	1.0	0.8	1.8	100.0	53
Maekel	0.2	0.1	0.3	0.9	0.3	1.3	1.1	0.5	1.6	81.0	1,381
Semenawi Keih Bahri	0.0	0.0	0.0	1.4	0.0	1.4	1.4	0.0	1.4	100.0	333
Anseba	0.0	0.2	0.2	0.2	0.4	0.5	0.2	0.5	0.7	77.4	507
Gash-Barka	0.3	0.3	0.7	1.0	1.0	2.0	1.3	1.3	2.6	74.4	715
Debub	0.1	0.2	0.3	0.4	0.2	0.6	0.5	0.3	0.8	66.7	1,067
Education											
No education	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.9	0.9	50.5	866
Primary	0.1	0.3	0.4	1.9	0.7	2.5	2.0	1.0	3.0	85.7	730
Middle	0.2	0.1	0.3	0.9	0.2	1.1	1.2	0.3	1.4	77.7	1,063
Secondary or above	0.2	0.0	0.2	0.5	0.3	0.8	0.6	0.3	1.0	83.6	1,396
Missing	-	-	-	-	-	-	-	-	-	-	0
Wealth quintile											
Lowest	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	100.0	508
Second	0.2	0.0	0.2	0.2	0.0	0.2	0.4	0.0	0.4	47.6	513
Middle	0.0	0.4	0.4	0.6	0.5	1.0	0.6	0.9	1.5	70.2	681
Fourth	0.4	0.3	0.7	0.9	0.8	1.7	1.3	1.1	2.4	69.9	1,038
Highest	0.0	0.1	0.1	1.2	0.3	1.5	1.2	0.4	1.6	95.1	1,314
Total	0.1	0.2	0.3	0.7	0.4	1.1	0.9	0.6	1.4	78.3	4,055

Note: Table is based on the CORE questionnaire.

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

Unmet need for limiting: Includes women who are fecund and not using family planning and who say they do not want another child. In addition, unmet need for limiting includes pregnant women whose current pregnancy was unwanted but who now say they do not want more children or who are undecided whether they want another child. Unmet need for limiting also includes amenorrheic women whose last birth was unwanted but who now say they do not want more children or who are undecided whether they want another child.

[2] Using for spacing is defined as women who are using some method of family planning and say they want to have another child or are undecided whether to have another.

Using for limiting is defined as women who are using and who want no more children. Note that the specific methods used are not taken into account here.

7.4 Ideal Family Size

This section discusses survey responses of women and men concerning their ideal number of children. Respondents who had no children were asked how many children they would like to have if they could choose the number of children to have over their entire lifetime. Those who had living children were asked the number of children they would choose if they could start their childbearing again. Responses to both questions provide an indication of future fertility, while responses to the latter question also contribute to a measure of unwanted fertility.

As Table 7-6 shows, 12 percent of respondents in EPHS2010 gave a non-numeric response, most of them saying "it is God" who decides to how many children they would have. The proportion of women giving non-numeric responses increases with the woman's family size. Women with seven or more children gave more non-numeric responses (one in four) than women with one child (one in ten). Because the more children a woman has, the more likely she is to be older and uneducated, such women are less likely to have formed specific ideas about desired family size.

Eritrean women desire large families and only one in ten women want less than four children (Table 7-6). A four-child family is the modal response (23 percent). Almost 33 percent women want five or six children, 14 percent want seven to nine children, and nine percent want 10 or more children. The desire for large families is not influenced by the size of the current family. For example more than one in ten women with four children, one in seven with five or six children and one in four with even more children consider 10 or more children as the ideal family size. It should be noted that all percentages referring to the ideal family size in Table 7-6 would have been higher if they were based on all women and not just those who gave numeric responses.

Table 7-6 also shows the mean ideal number of children for all women and currently married women by current family size excluding women who gave non-numeric responses. The mean ideal number of children for all women and for currently married women is 5.6 and 6.3 respectively. The mean ideal family size increases with the number of living children, from 5.1 for women with one child to 7.9 for women with seven or more children. The lower mean ideal family size for all women than currently married women is more noticeable before they start childbearing. All childless women want fewer than five children, which is one child less than currently married women.

Eritrean men, on average, prefer to have slightly larger families than women. Among all men age 15-49, ideal family size is 5.8 children, and among married men, 6.9 children. Similarly, currently married men with seven or more children want more children (9.3) than married women with seven or more children (7.9).

There has been a steady decline in women's ideal family size in Eritrea in the last 15 years, from six children in EDHS1995 to 5.8 children in EDHS2002 to 5.6 children in EPHS2010. Ideal family size among men also declined from 6.9 children in EDHS1995 to 6.1 children in EPHS2010.

Table 7-6 Ideal number of children

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

Ideal number of children	Number of living children[1]								Total
	0	1	2	3	4	5	6	7+	
				WOMEN					
0	1.8	1.0	0.5	0.9	1.0	0.6	2.0	1.4	1.2
1	0.3	0.6	0.2	0.4	0.4	0.0	0.0	0.0	0.3
2	4.9	3.7	3.3	0.8	0.7	1.0	0.3	0.6	2.8
3	12.2	9.0	3.7	4.9	1.7	2.0	1.2	0.5	6.6
4	33.2	27.7	26.1	17.7	15.3	7.3	6.8	4.7	22.5
5	14.3	16.4	19.0	18.7	11.0	10.5	6.3	5.7	13.9
6	14.7	16.3	18.7	23.7	24.8	21.1	20.1	10.8	17.8
7	3.0	6.1	5.3	6.3	6.0	10.6	8.2	7.2	5.5
8	3.7	4.2	6.5	6.8	12.8	13.4	16.9	15.0	7.7
9	0.3	0.4	0.7	0.6	1.1	1.9	3.7	5.6	1.2
10+	3.4	5.0	6.7	7.8	11.1	14.9	16.3	24.6	8.5
Non-numeric responses	8.4	9.5	9.2	11.3	14.0	16.7	18.3	23.9	11.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	3,428	1,287	1,263	1,111	958	804	563	824	10,238
Mean[2] ideal number children for:									
All	4.7	5.1	5.5	5.8	6.4	6.9	7.1	7.9	5.6
Number	3,139	1,164	1,147	985	824	670	460	627	9,015
Currently married	5.5	5.4	5.6	5.8	6.5	7.0	7.1	7.9	6.3
Number	433	840	912	808	713	598	420	598	5,323
				MEN[3]					
0	1.3	1.2	0.6	0.5	1.5	0.8	0.0	0.5	1.1
1	0.3	0.0	0.4	0.0	0.0	0.0	0.2	0.5	0.2
2	3.9	1.7	3.5	0.8	1.0	4.2	0.8	1.4	3.1
3	12.8	6.4	5.3	3.2	3.3	2.6	5.0	1.7	9.4
4	27.3	19.8	22.7	16.4	12.5	8.8	7.0	7.7	22.4
5	18.8	19.4	20.6	18.3	9.2	8.8	9.8	7.5	17.1
6	14.5	19.4	16.2	17.3	21.3	12.3	15.7	8.6	15.2
7	3.9	5.1	7.2	8.2	8.1	10.0	5.8	4.4	5.1
8	3.7	5.3	1.7	6.8	10.1	14.9	8.3	8.8	5.2
9	0.7	0.8	0.7	1.4	0.5	1.8	2.9	5.8	1.1
10+	6.6	14.3	9.9	13.4	21.2	22.4	28.8	39.8	11.7
Non-numeric responses	6.3	6.4	11.1	13.6	11.2	13.4	15.7	13.3	8.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	2,637	292	304	260	254	193	144	215	4,299
Mean[2] ideal number children for men 15-49:									
All	5.1	6.2	5.6	6.3	7.0	7.3	8.1	9.3	5.8
Number	2,469	273	270	224	226	167	121	187	3,939
Currently married	6.0	6.5	5.6	6.3	7.1	7.3	8.1	9.3	6.9
Number	126	231	256	217	221	165	121	183	1,521
Mean ideal number children for men 15-59:									
All	5.1	6.2	5.7	6.3	7.1	7.5	7.9	9.5	6.1
Number	2,478	288	299	268	291	249	203	418	4,528
Currently married	5.9	6.4	5.7	6.3	7.1	7.5	7.9	9.5	7.2
Number	135	246	285	261	286	247	203	415	2,077

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

7.5 Ideal Family Size, Unmet Need, and Status

The mean ideal number of children increases as age of the respondents increases for both women and men from 4.7 for women age 15-19 to 6.8 for those age 45-49 and from 5.1 for men age 15-19 to 7.9 age 45-49. The mean ideal number of children among rural women is one child higher than their urban counterparts (6 and 5.1, respectively). Women in Semenawi Keih Bahri have the highest mean ideal family sizes (6.8) and women in Maekel have the lowest (4.9). On the other hand, mean ideal family size decreases with the increase in both level of education and wealth index. According to educational background the highest ideal family size is 6.7 for uneducated and the lowest is 4.5 for women with secondary or above. Similarly women in the lowest wealth quintile want greater family size (6.7 children) than women in the highest wealth quintile (4.8 children). Table 7-7 also shows the differentials in the mean ideal family size across all age groups by background characteristics.

Table 7-7 Mean ideal number of children: Women

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

Background characteristic	Age							Total	Number of women[1]
	15-19	20-24	25-29	30-34	35-39	40-44	45-49		
Residence									
Total urban	4.3	4.6	5.1	5.4	5.6	5.8	6.0	5.1	3,862
Asmara	4.1	4.5	4.9	5.0	5.1	5.3	5.3	4.8	1,798
Other Town	4.5	4.8	5.4	5.7	6.0	6.2	6.5	5.4	2,064
Rural	4.9	5.5	5.9	6.5	6.9	7.2	7.4	6.0	5,153
Zoba									
Debubawi Keih Bahri	4.9	5.6	5.8	6.0	6.8	6.8	6.3	5.9	121
Maekel	4.2	4.5	5.0	5.1	5.3	5.6	5.5	4.9	2,418
Semenawi Keih Bahri	5.4	6.3	6.6	7.3	7.4	7.8	8.6	6.8	1,069
Anseba	5.1	5.6	6.2	6.6	7.5	7.8	7.6	6.3	1,249
Gash-Barka	5.0	5.1	5.6	6.1	6.6	6.6	6.9	5.8	1,655
Debub	4.4	5.0	5.3	5.9	5.9	6.3	6.8	5.4	2,502
Education									
No eduction	5.7	6.0	6.2	6.7	7.1	7.2	7.4	6.7	3,107
Primary	5.1	5.6	5.5	5.9	6.2	6.3	6.4	5.7	1,898
Middle	4.5	5.0	5.4	5.5	5.3	5.5	5.7	5.0	1,832
Secondary or above	4.2	4.5	4.8	4.9	4.9	4.9	4.1	4.5	2,177
Missing	-	6.0	-	-	-	-	-	6.0	1
Wealth quintile									
Lowest	5.2	5.8	6.4	6.9	8.1	7.8	8.0	6.7	1,379
Second	4.9	5.5	6.2	6.9	6.6	7.3	7.0	6.1	1,458
Middle	4.9	5.7	5.8	6.2	6.6	6.6	7.3	5.9	1,751
Fourth	4.5	4.9	5.1	5.8	5.8	6.5	6.4	5.3	2,044
Highest	4.1	4.4	5.0	5.0	5.3	5.4	5.6	4.8	2,383
Total	4.7	5.1	5.5	6.0	6.3	6.6	6.8	5.6	9,015

Note: Table is based on the CORE questionnaire.
[1] Number of women who gave a numeric response.

In general the mean ideal family size for men (5.8) is slightly higher than that of women (5.6). The ideal number of children for men declines as level of education and wealth quintile increase. For example, the mean ideal number of children among men who have completed at least secondary education is 4.8 children compared with 8.7 children among men with no education. Similarly, men in the lowest wealth quintile households want a higher number of children (7.2 children) compared with men in the highest wealth quintile (4.7 children) (Table 7-8).

Table 7-8 Mean ideal number of children: Men

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

Background characteristic	Age							Total	Number of men[1]
	15-19	20-24	25-29	30-34	35-39	40-44	45-49		
Residence									
Total urban	4.4	4.6	4.6	5.1	5.1	6.2	6.4	4.9	1,657
Asmara	3.9	4.2	4.4	4.9	4.7	5.9	5.5	4.5	812
Other Town	4.7	5.1	4.8	5.4	5.6	6.6	7.2	5.3	845
Rural	5.5	5.7	6.5	6.5	6.8	7.7	9.0	6.4	2,281
Zoba									
Debubawi Keih Bahri	6.5	7.3	7.3	8.4	9.8	9.0	10.6	8.2	66
Maekel	4.2	4.4	4.4	5.0	4.8	5.8	5.5	4.7	1,142
Semenawi Keih Bahri	6.7	6.1	7.8	7.6	9.4	8.5	11.7	7.9	465
Anseba	5.7	6.2	6.2	6.5	6.0	7.8	8.5	6.4	549
Gash-Barka	4.9	5.3	5.5	6.0	6.2	7.2	8.1	6.0	582
Debub	5.1	5.2	5.3	5.6	5.9	7.2	7.0	5.5	1,134
Education									
No education	7.3	8.8	8.0	7.9	8.0	8.8	10.1	8.7	457
Primary	5.8	6.2	6.8	6.0	7.2	7.3	8.1	6.7	579
Middle	5.3	5.8	6.4	6.5	6.2	6.6	6.0	5.7	1,119
Secondary or above	4.5	4.6	4.8	5.1	4.9	6.0	5.4	4.8	1,783
Missing	-	-	-	-	20.0	-	-	20.0	0
Wealth quintile									
Lowest	6.1	6.2	6.9	7.4	7.6	8.7	9.9	7.2	642
Second	5.8	6.1	7.0	6.9	7.2	7.6	9.5	6.7	616
Middle	5.2	5.6	6.4	6.2	7.0	7.5	8.2	6.1	684
Fourth	4.7	4.8	5.1	5.0	5.4	6.9	7.1	5.2	895
Highest	4.1	4.4	4.3	5.3	4.9	5.8	5.7	4.7	1,102
Total 15-49	5.1	5.2	5.6	5.9	6.1	7.1	7.9	5.8	3,939
Total men 15-59	5.1	5.2	5.6	5.9	6.1	7.1	7.9	6.1	4,528

Note: Table is based on the CORE questionnaire.
[1] Number of men who gave a numeric response.

7.6 Fertility Planning

The analysis of the level of fertility planning in a society provides some insight into the degree to which couples are able to control their fertility. To measure the level of unwanted fertility in the EPHS2010, mothers of all children born in the preceding five years were asked whether the pregnancy was wanted at the time, wanted at a later time, or not wanted at all. For women who were pregnant at the time of the interview, this question was also asked with reference to the current pregnancy. The procedure required the respondents to recall their wishes at one or more points in the last five years.

In the five years preceding the survey, 77 percent of births were planned (wanted at the time), 19 percent were mistimed (wanted later), and four percent were unwanted. Generally, the proportion of planned births decreases and the proportion of unwanted births increases with an increase in the birth order. Eighty-three percent of the first-order births were wanted when they occurred compared with 67 percent of seventh and higher-order births. On the other hand, only three percent of first-order births were unwanted compared with 14 percent of seventh and higher-order births. The proportion of mistimed births does not vary much by birth order. The proportion of planned births and mistimed births tends to decrease with a woman's age, while the proportion of unwanted births increases with an increase in women's age. For example, the percentage of unwanted births increases from three percent among mothers below age 20 to16 percent among mothers age 45-49 (Table 7-9).

Table 7-9 Fertility planning status

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

Birth order and mother's age at birth	Planning status of birth				Total	Number of births
	Wanted then	Wanted later	Wanted no more	Missing		
Birth order						
1	82.7	13.8	2.5	1.0	100.0	1,549
2	77.4	21.0	1.1	0.5	100.0	1,478
3	78.4	19.9	1.3	0.3	100.0	1,224
4	77.8	19.4	2.3	0.4	100.0	1,048
5	73.4	21.3	4.4	0.9	100.0	821
6	73.8	20.7	5.0	0.5	100.0	587
7+	67.2	18.0	13.9	1.0	100.0	1,062
Mother's age at birth						
<20	77.0	20.1	2.9	0.1	100.0	885
20-24	77.7	20.3	1.4	0.6	100.0	1,926
25-29	78.6	18.4	2.0	1.0	100.0	1,963
30-34	76.3	19.7	3.5	0.6	100.0	1,588
35-39	73.3	16.4	9.6	0.6	100.0	973
40-44	70.3	13.0	15.3	1.4	100.0	382
45-49	70.2	11.6	16.4	1.8	100.0	52
Total	76.6	18.8	4.0	0.7	100.0	7,769

Note: Table is based on the CORE questionnaire.

7.7 Wanted Fertility Rates

The wanted fertility rate measures the potential demographic impact of avoiding unwanted births. It is calculated in the same manner as the total fertility rate but excludes unwanted births from the numerator. A birth is considered wanted if the number of living children at the time of conception is less than the ideal number of children reported by the respondent. The gap between wanted and actual fertility shows how successful women are in achieving their reproductive intentions. This measure may underestimate because women may not want to report an ideal family size that is lower than their actual family size.

The total wanted fertility rate for Eritrea is 4.4, roughly a child less than the total fertility rate (4.8). This means, the total wanted fertility rate is 92 percent of the observed total fertility rate. The differences between total fertility rates and total wanted fertility rates are small for all subgroups (Table 7-10). The total wanted fertility rate declined substantially from 5.7 in EDHS1995 to 4.4 in EDHS2002. However, the total wanted fertility rate and the observed fertility rate remained the same in EPHS2010 as in EDHS2002.

Table 7-10 Wanted fertility rates

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

Background characteristic	Total wanted fertility rates	Total fertility rate
Residence		
Total urban	3.2	3.6
Asmara	2.5	2.8
Other Town	3.9	4.3
Rural	5.1	5.6
Zoba		
Debubawi Keih Bahri	4.1	4.4
Maekel	2.9	3.2
Semenawi Keih Bahri	5.0	5.2
Anseba	5.1	5.6
Gash-Barka	5.1	5.5
Debub	4.5	5.1
Education		
No education	5.1	5.6
Primary	4.6	5.0
Middle	4.0	4.3
Secondary or above	2.9	3.1
Missing	3.3	3.3
Wealth quintile		
Lowest	5.7	6.1
Second	5.3	5.7
Middle	4.7	5.2
Fourth	3.9	4.4
Highest	2.8	3.1
Total	4.4	4.8

Note: Table is based on the CORE questionnaire.
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 4-1.

INFANT AND CHILD MORTALITY 8

Key Findings

- One in every twenty-four Eritrean children dies before their first birthday, and one in every 16 children dies before their fifth birthday.
- Child mortality declined by 54 percent during the period between the EDHS2002 and the EPHS2010, from 48 deaths per 1,000 live births to 22 deaths per 1,000 live births.
- Under-five mortality declined from 93 deaths to 63 deaths per 1,000 live births between EDHS2002 and EPHS2010.
- The neonatal mortality rate was 23 deaths per 1,000 live births; the post-neonatal mortality rate was 19 deaths per 1,000 live births for the five year period preceding the survey.

The information presented in this chapter is important not only for the demographic assessment of the country's population, but also in the design and evaluation of health policies and programs. Furthermore, information on infant and child mortality is important for the improvement of child survival programs and for identifying the most vulnerable subgroups of children.

This chapter presents information on levels, trends, and differentials in mortality among children under-five years of age in Eritrea. The chapter also examines variations in mortality levels according to certain demographic and socioeconomic characteristics that have been shown to influence infant and child mortality (e.g., rural residence, young maternal age at birth, and short birth intervals). Mortality levels are also one of the main indicators of the standard of living or development of a population. Thus, identifying segments of the child population that are at greater risk of dying contributes to efforts directed at improving child survival and lowering the exposure of young children to risk. The reduction of infant and child mortality and the incidence of high-risk pregnancies remain priority targets of the National Health Policy (MOH, 1998).

8.1 Assessment of Data Quality

The EPHS2010 mortality estimates are calculated from information that was collected in the birth history section of the Women's Questionnaire. The birth history section begins with questions about the respondent's experience with childbearing (i.e., the number of sons and daughters living with the mother, the number who live elsewhere, and the number who have died). These questions were followed by a retrospective birth history in which each respondent was asked to list each of her births, starting with the first birth. For each birth, data were obtained on sex, month and year of birth, survivorship status, and current age, or if the child was dead, age at death. This information is used to directly estimate mortality rates.

In this chapter, the following rates are used to assess and measure infant and child mortality:

1. Neonatal mortality: the probability of dying within the first month of life;
2. Postneonatal mortality: the difference between infant and neonatal mortality;
3. Infant mortality: the probability of dying during the first year of life;
4. Child mortality: the probability of dying between the first and fifth birthday;
5. Under-five mortality: the probability of dying before the fifth birthday.

All rates are expressed as deaths per 1,000 live births, except the child mortality rate, which is expressed as deaths per 1,000 children surviving to the first birthday.

The quality of mortality estimates from surveys such as the EPHS 2010 that derive estimates from retrospective birth histories is affected by several factors. These factors include the completeness with which deaths of children are reported, and the extent to which birth dates and ages at death are accurately reported. Omission of either births or deaths is the most serious problem because it directly affects mortality estimates. When selective omission of childhood deaths occurs, it is usually more severe for deaths occurring early in infancy. Errors in reporting of birth dates may cause a distortion of trends over time, while errors in reporting of age at death can distort the age pattern of mortality.

One way such omissions can be detected is by examining the proportion of neonatal deaths and infant deaths. Generally, if there is substantial underreporting of deaths, the result is an abnormally low ratio of neonatal deaths to infant deaths and deaths under seven days to all neonatal deaths. Since underreporting of deaths is likely to be more common for births that occurred a long time before the survey, it is important to explore whether these ratios change markedly over time. The extent to which such errors in survey data manifested themselves in the EDHS2010 is examined below.

Results from Appendix Table C.6 suggest that early infant deaths have not been seriously underreported in Eritrea because the ratios of deaths under seven days to all neonatal deaths are quite high. Seventy-two percent of the neonatal deaths in the five years prior to the EDHS2010 were early neonatal deaths (a ratio of less than 25 percent is generally considered to indicate underreporting of early neonatal deaths).

However, the fact that the ratios show a decline from 72 in both periods 0-4 and 5-9 years before the survey to 66 and 69 in the respective periods 10-14 and 15-19 years preceding the survey, suggests that there is some underreporting of births that occurred for all births that occurred more than five years before the survey. Similar patterns of declining ratios were observed in the relevant periods in the EDHS2002 and EDHS1995. Generally, a slightly lower proportion of early neonatal deaths was observed in the EPHS2010 than in the EDHS2002. Inspection of the ratios shown in Appendix Tables C.6 and Table C.7 indicates that there was no selective underreporting of early neonatal deaths in the EPHS2010 for two reasons. First, the proportion of early neonatal deaths is high for the two most recent five-year periods. Second, the proportion of infant deaths is plausible (Appendix Table C.7).

Another factor that affects childhood mortality estimates is the quality of reporting of age at death. In general, these problems are less serious for periods in the recent past than for those in the more distant past. If age at death is misreported, it will bias the estimates, especially if the net effect of the age misreporting results in transference of deaths from one age bracket to another. For example,

Table 8-1 Early childhood mortality rates

Neonatal, post-neonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey, Eritrea 2010

Years preceding the survey	Approximate calendar-year	Neonatal Mortality (NN)	Post-neonatal mortality (PNN)[1]	Infant Mortality (1q0)	Child Mortality (4q1)	Under-five mortality (5q0)
0-4	2005-2009	23	19	42	22	63
5-9	2000-2004	25	20	45	29	73
10-14	1995-1999	26	26	52	41	91

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

a net transfer of deaths from under one month to a higher age will affect the estimates of neonatal and postneonatal mortality. To minimize errors in the reporting of age at death, interviewers were instructed to record age at death in days if the death took place in the month following the birth, in months if the child died before age two, and in years if the child was two years or older. Table C.6 shows age heaping at ages 7 and 14 days, which is a sign of approximation of age to one and two weeks, respectively. Although age heaping at 14 days may not bias any indicator, the heaping at 7 days is likely to lead to a lower estimate of early neonatal mortality. Appendix Table C.7 shows some evidence of heaping at age 12 months (an approximation of age to one year). This age heaping is almost similar with the most recent five-year periods (5-9) however, it is less than the other two five-year periods (10-14 and 15-19 years prior to survey). The reporting of deaths in the five years preceding the survey show some heaping but does not show substantial heaping, and it is therefore not necessary to adjust the data used to estimate mortality levels.

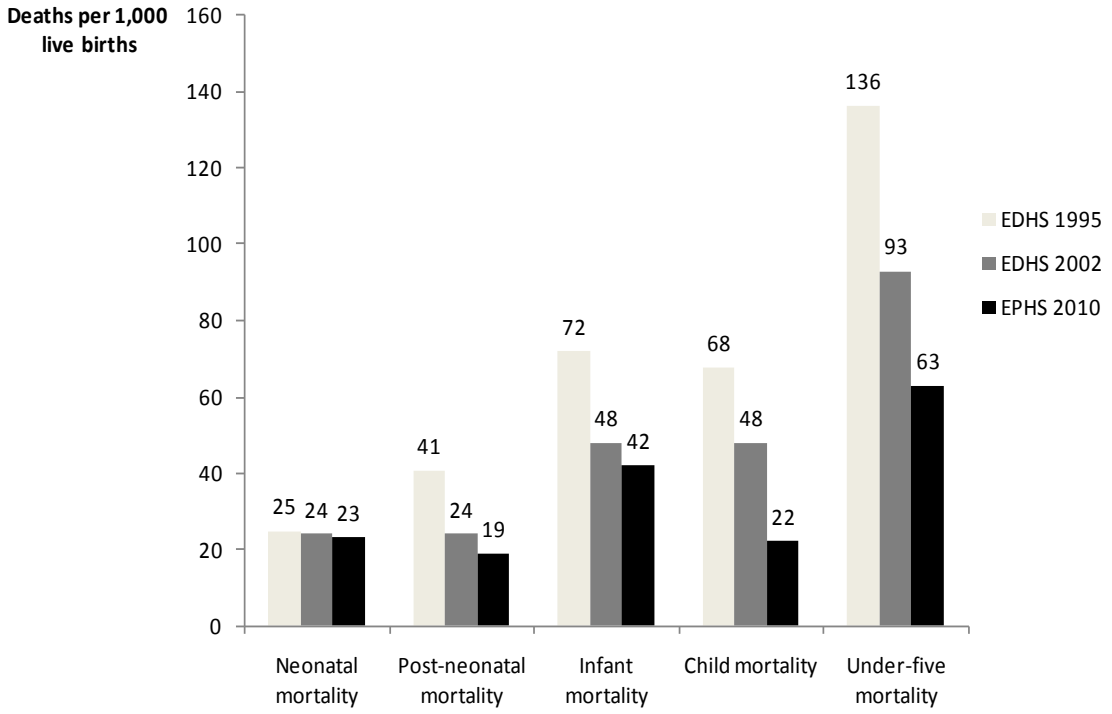
8.2 Early Childhood Mortality Rates, Levels and Trends

Early childhood mortality rates for the 15 years preceding the survey are presented by five-year periods in (Table 8-1). For the most recent period (i.e., 0-4 years before the survey, which corresponds roughly to the period 2006-2009), the infant mortality rate is 42 deat hs per 1,000 live births. This means that one in every 24 babies born in Eritrea does not live to the first birthday. Of those who survive to their first birthday, 22 out of 1,000 die before reaching their fifth birthday. The overall under-five mortality is estimated at 63 deaths per 1,000 live births, which implies that one in every 16 Eritrean babies does not survive to his or her fifth birthday.

Neonatal mortality in the most recent period (0-4 years before the survey) is 23 deaths per 1,000 live births. This rate is slightly higher than post-neonatal deaths (19 per 1,000 live births) during the same period; implying that Eritrean children who survived the first month of life have a lower risk of dying in the remaining 11 months of the first year of life. This indicates that 55 percent of infant deaths in Eritrea occur during the first month of life. Two-thirds of the deaths under five occur during the first year of life.

Although under-five mortality in Eritrea was high in the past, it has declined substantially as shown in Table 8-1. Between the two most recent five-year periods (0-4 and 5-9), there was a decline in under-five mortality of 10 per 1,000 live births, and during the previous two five-year periods there was a decline of 18 per 1,000 live births. Infant mortality has declined 3 per 1,000 live births between the most recent five-year periods, and a decline of 7 per 1,000 live births during the previous two five-year periods.

Figure 8-1 Trends in childhood mortality rates



Another way of examining trends in mortality is by comparing the EPHS2010 results with findings from other sources, such as the EDHS2002 and EDHS1995 in which data were collected using the same techniques and estimates were calculated using the same methodology. Comparison of estimates of infant mortality from the EPHS2010 and EDHS2002 (Figure 8-1) shows there has been tremendous improvement in early childhood mortality in Eritrea. The under-five mortality rate has declined significantly by 32 percent from 93 deaths per 1000 live births in EDHS 2002 to 63 deaths per 1000 live births in EPHS2010. The decline in child mortality is even more pronounced; from 48 deaths per 1000 children surviving age one in EDHS2002 to 22 deaths in EPHS2010, a decline of 54 percent.

8.3 Differentials in Mortality

Differentials in early childhood mortality indicators are presented in Table 8-2 and Figure 8-2. For all but one variable, mortality estimates are calculated for a ten-year period before the survey (approximately 2000-2009), so that the rates are based on a sufficient number of cases in each subgroup to ensure adequate statistical precision of estimates. Five-year rates are presented for size of child at birth in Table 83 because information for this indicator was collected only for births since January 1997.

Table 8-2 Early childhood mortality rates by socio-economic characteristics

Neonatal, post-neonatal, infant, child, and under-five mortality rates for the 10-year period preceding the survey, by background characteristic, Eritrea 2010

Background characteristic	Neonatal mortality (NN)	Postneonatal mortality (PNN)[1]	Infant mortality (1q0)	Child mortality (4q1)	Under-five mortality (5q0)
Residence					
Urban	23	19	41	18	59
Rural	25	20	45	28	72
Zoba					
Debubawi Keih Bahri	40	35	75	28	101
Maekel	20	14	34	13	47
Semenawi Keih Bahri	29	28	56	38	92
Anseba	28	19	47	21	67
Gash-Barka	26	18	45	30	73
Debub	20	19	40	24	63
Mother's education					
No education	24	21	45	30	74
Primary	30	21	51	23	73
Middle	20	14	34	15	49
Secondary	20	14	34	11	44
Higher	14	10	24	20	43

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

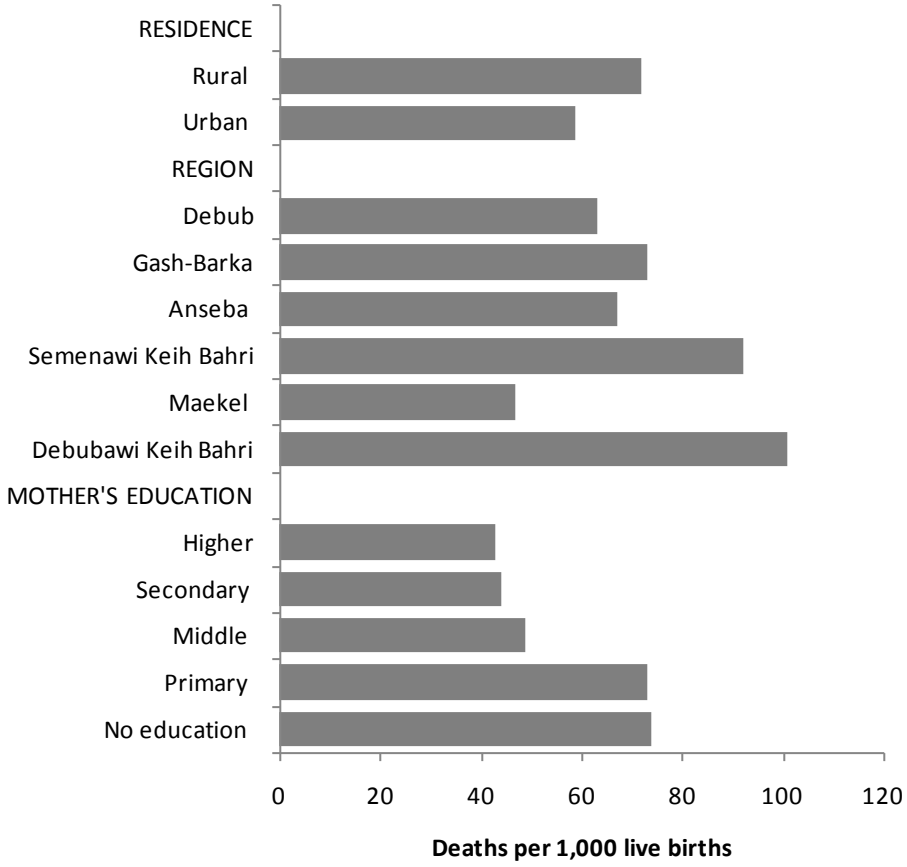
8.3.1. Socio-economic differentials

Infant and under-five mortality rates declined in all sub-groups. Mortality levels for all indicators in urban areas are consistently lower than those in rural areas (Table 8-2 and Figure 8-2). For example, child mortality in urban areas is 36 percent lower than in rural areas.

The EPHS2010 results show wide zoba differences in all mortality indicators. Under-five mortality ranges from a low of 47 deaths per 1,000 live births in Maekel to a high of 101 deaths per 1,000 in Debubawi Keih Bahri. For infant mortality, only Maekel has a rate under 35 deaths per 1,000, whereas other zobas have higher mortality, ranging from 40 deaths per 1,000 in Debub to 75 deaths per 1,000 in Debubawi Keih Bahri. Children in Debubawi Keih Bahri and Semenawi Keih Bahri are generally at especially high risk of dying in early childhood.

The infant and under-five mortality levels is significantly higher among children born to mothers who have never attended school than children born to mothers with secondary or higher level of education. The effect of mother's education is greater on child mortality and postneonatal mortality than on neonatal, infant and under-five mortality (Table 8-2). The child mortality rate for children whose mothers have a secondary education is 63 percent lower than that of children whose mothers have no education. The gap between children of mothers with middle school and children of mothers with no education is 50 percent. The corresponding figures for post-neonatal and under-five mortality is almost the same (33 to 34 percent), and for infant mortality, 24 percent. The gaps in neonatal and postneonatal mortality rates between infants whose mothers have some secondary education and infants whose mothers have no education is 17 percent and 33 percent respectively. This gap showed a similar pattern when comparing infants whose mothers have some middle level of education and infants whose mothers have no education.

Figure 8-2 Under-five mortality by background characteristics



This pattern of mortality differentials is not unexpected and is due to the fact that the causes of neonatal mortality are not merely biological in nature and are influenced by socioeconomic factors; the causes of child mortality and under-five mortality are more likely to be non-biological factors. Similarity in mortality rates may be due to antenatal care services.

For socioeconomic characteristics for which comparisons can be made between the EDHS2002 and the EPHS2010, there is a marked decline in all mortality indicators.

8.3.2. Demographic differentials

the demographic characteristics of both mother and child have been found to play an important role in the survival probability of children. Table 8-3 presents early childhood mortality rates by demographic characteristics (sex of child, mother's age at birth, birth order, previous birth interval, and birth size).

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, Eritrea 2010

Demographic characteristic	Neonatal mortality (NN)	Post-neonatal mortality (PNN)[1]	Infant mortality (1q0)	Child mortality (4q1)	Under-five mortality (5q0)
Child's sex					
Male	30	20	50	27	75
Female	18	18	37	22	58
Mother's age at birth					
<20	37	19	55	22	76
20-29	21	17	38	23	60
30-39	22	23	45	26	70
40-49	47	16	63	49	109
Birth order					
1	31	19	50	18	67
2-3	18	16	33	25	58
4-6	25	21	46	27	72
7+	29	27	56	32	86
Previous birth interval[2]					
<2 years	28	31	58	34	91
2 years	22	17	38	27	64
3 years	21	13	34	22	56
4+ years	14	15	29	20	48
Birth size[3]					
Small/very small	38	19	57	-	-
Average or larger	23	12	35	-	-
DK/Missing	19	16	35	-	-

[1] Computed as the difference between the infant and neonatal mortality rates.
[2] Excludes first-order births.
[3] Rates for the five-year period before the survey.

The early childhood mortality indicators appear to be consistently higher for male children than for female children (Table 8-3). Neonatal mortality is 40 percent higher and infant mortality is 26 percent higher for males than females. The EDHS2002 results showed a similar mortality pattern by sex; except during the postneonate period, where both sexes have an equal chance of dying (28 per 1000). However the differences were slightly higher in the EPHS2010 than in the EDHS2002. This pattern is consistent with the biological reasons that male mortality is expected to be higher than female mortality.

The hypothesis "too early and too late increases child mortality" is generally supported in the EPHS2010. Evidence from Table 8-3 suggests that in Eritrea, the children whose mothers are on the two extreme groups have higher risk of dying for neonate, infancy and under-five mortality levels. The safest age for childbearing ranges from 20 to 29 which is a similar finding as in EDHS2002. Compared with a child's risk of dying before the first month of life for a child born to mothers age 20-29, having a child before age 20 increases the child's risk of dying by 43 percent and having a child at age 40-49 increases the child's risk of dying by 55 percent.

The effect of birth order operates mostly during neonate, with second- and third-order births having the lowest risk of dying in the first month of life. First-order births, on the other hand, have a 72 percent greater risk of dying (31 deaths per 1,000 births) before the first month of life than second- and third-order births. First births and seventh- and higher-order births generally have the higher early childhood mortality than other birth orders.

Short birth intervals are associated with increased risk of dying. Children born less than two years after a previous birth have 138 percent higher risk of dying during postneonate than those born after an interval of at least three years. Moreover, the risk of dying before age five is higher (63 percent greater) when a similar comparison of interval is employed. These results reinforce the need to promote child spacing mechanisms such as breast feeding and family planning as ways of ensuring child survival.

Birth weight is a factor often associated with the child survival, particularly during the first year. Since few women in Eritrea give birth in a health facility (34 percent), there was no birth weight recorded for most children. As a measure of birth size, women were asked whether, in their judgment, the size of their baby at birth was very small, small, average, or larger than average. Babies reported as small or very small at birth have higher mortality rates than those reported as average or large at birth. The childhood mortality levels in babies reported as small or very small is 65 and 63 percent higher than those reported as average or larger at birth during neonate and infancy, respectively.

8.4 Early Childhood Mortality by Women's Status

Women's status, as measured by their ability to control resources and make decisions, is associated with infant and child mortality levels. In the EPHS2010, women were asked questions related to women's autonomy (Chapter 15). The questions included the number of household decisions in which the woman participates in the final say and the number of reasons the woman thinks wife beating is justified. A woman is considered more independent if she participates in a large number of household decisions. On the other hand, the more reasons she perceives wife beating as justified, the less independent she is.

The relationship between women's status and early childhood mortality takes on an inverted U-shape, (Table 8-4). Though it is not expected, increase in participation in decision making is related to an increase in childhood mortality levels. Nevertheless, the children of the most independent women (participate in more than four decision making arenas) have mortality levels slightly lower than the group second to most independent. This is more pronounced in under-five mortality which showed a decrease of 22 percentage points. However, the children of most independent women still have similar mortality levels to that of the children of the least independent group regarding child mortality level.

Attitudes toward wife beating are a reflection 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 favorable mortality profile for their children. Table 8-4 shows the pattern of the relationship. Generally, children of lower and higher-status women have lower levels of mortality. The higher childhood mortality appeared in those children whose mothers put three to four justifications of wife-beating. The infant mortality rate for children of mothers who consider wife beating unjustified for any reason is 31 per 1,000 for the 2 year period before the survey compared with 72 per 1,000 for children whose mothers agree with three to four of the specified reasons for wife beating, a difference of 41 percentage points. A similar relationship is observed between women's status and levels of child mortality and under-five mortality (Table 8-4).

Table 8-4 Early childhood mortality rates by women's empowerment

Infant, child, and under-five mortality rates for the 2-year period preceding the survey, by indicators of women's empowerment, Eritrea 2010

Empowerment indicator	Infant mortality (1q0)	Child mortality (4q1)	Under-five mortality (5q0)
Number of decisions in which women participate[1]			
0	14	21	35
1-2	42	20	61
3-4	56	27	81
5-6	48	21	68
Number of reasons for which wife-beating is justified[2]			
0	31	22	52
1-2	62	24	85
3-4	72	25	95
5	45	14	58

Note: Table is based on both CORE and MMM questionnaires.
[1] Restricted to currently married women. See Table 15-7 for the list of decisions.
[2] See Table 15-9 for the list of reasons.

8.5 High-Risk Fertility Behavior

Findings from scientific studies have confirmed that there is a strong relationship between patterns of fertility and children's survival risks. Typically, the risk of death in early childhood increases among children born to mothers who are too young or too old, children born after too short a birth interval, and children who are of high birth order. For the purpose of this analysis, a mother is classified as "too young" if she is less than 18 years of age, and "too old" if she is over 34 years at the time of the birth. A "short birth interval" is one in which a birth occurs less than 24 months after a preceding birth; and a child is of "high birth order" if the mother has previously given birth to three or more children (i.e., the child is of birth order four or higher).

First births, although often at increased risk, are in the "not-in-any-high-risk" category in this analysis because they are not considered an avoidable risk. The risk factors examined are of interest for health policy because they are avoidable at little or no cost.

Fifty-eight percent of births in the five years preceding the survey have elevated mortality risks that are avoidable (35 percent in single high-risk categories and 23 percent in multiple high-risk categories) (Table 8-5); a slight decline from 61 percent in the EDHS2002 and 65 percent in the EDHS1995. One-fourth of the births were not in any high-risk category which is the same as that of EDHS2002 and 16 percent are first births to mothers age 18-34, and are considered an unavoidable risk.

Among single high-risk categories, the highest proportion of births classified as high risk are those of birth order four or higher (23 percent). The single category associated with the highest risk ratio (1.4) is mother's age under 18, followed by births occurring less than 24 months after a previous sibling (1.2) which shows a slight decrease in both values and no change in order of single high-risk categories as compared to the EDHS2002.

Since many births can be classified in more than one high-risk category, it makes sense for programming purposes to focus on births in the multiple high-risk categories. Among multiple high-risk

categories, the largest proportion of births is fourth—or higher—order births to women 35 and older (13 percent). The category with the highest multiple-risk ratio (3.0) is higher-order births to younger women (below age 18) with a short birth interval (less than 24 months). This category involves less than one-half of one percent of all births. The second highest risk ratio in the multiple high-risk category is for higher-order births after a short birth interval and births to 35 and older after short birth interval (2.0). This category involves 6 percent and 0.3 percent of births, a similar result as compared to EDHS2002.

The last column of Table 8-5 shows the distribution of currently married women by category of increased risk if they were to conceive at the time of the survey. Although many women are protected from conception due to use of family planning, postpartum insusceptibility, and prolonged abstinence, in this analysis, only those who have been sterilized are included in the not-in-any-high-risk category. The criteria for placing women into specific risk categories have been adjusted to take into account gestation.

Overall, only 16 percent of currently married women in Eritrea are not in any high-risk category, while 77 percent have the potential of giving birth to a child at elevated risk of dying (Table 8-5). Forty-seven percent of married women are in multiple high-risk categories.

Table 8-5 High-risk fertility behavior

Percent distribution of children born in the five years preceding the survey by category of elevated risk of mortality and the risk ratio, and percent distribution of currently married women by category of risk if they were to conceive a child at the time of the survey, Eritrea 2010

Risk category	Births in the 5 years preceding the survey		Percentage of currently married women
	Percentage of births	Risk ratio[1]	
Not in any high risk category	25.7	1.00	16.1
Unavoidable risk category			
First order births between ages 18 and 34 years	16.2	1.18	7.4
Single high-risk category			
Mother's age <18	4.3	1.39	1.0
Mother's age >34	1.5	1.06	4.2
Birth interval <24 months	7.0	1.15	9.4
Birth order >3	22.6	1.00	14.5
Subtotal	35.4	1.08	29.2
Multiple high-risk category			
Age <18 & birth interval <24 months	0.4	2.96	0.3
Age >34 & birth interval <24 months	0.3	1.98	0.3
Age >34 & birth order >3	13.4	1.08	31.3
Age >34 & birth interval <24 months & birth order >3	2.7	1.82	6.1
Birth interval <24 months & birth order >3	6.0	1.99	9.3
Subtotal	22.8	1.45	47.2
In any avoidable high-risk category [2]	58.2	1.23	76.5
Total	100.0	na	100.0
Number of births/women	20,760	na	6,183[a]

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

REPRODUCTIVE HEALTH 9

Key Findings

- Antenatal care coverage increased from 71 percent in 2002, to 88 percent in 2010, and the increase has occurred in all subgroups.
- Ninety-six percent, 78 percent, and 88 percent of women who had antenatal care reported that their weight, height and blood pressure, respectively, were measured.
- The most common reasons or barrier for not seeking care for delivery in health facilities were getting money for transportation (39 percent), having to take transportation (36 percent), and distance of health facility (33 percent).
- Twenty-nine percent of pregnant women had to travel on foot, be carried by a stretcher or use animals to access obstetric care services.
- Eighty-percent of urban women who gave birth in the five years preceding the survey had four plus antenatal visits, while only 47 percent of their rural counterparts had four plus visits.
- Less than one percent of the woman respondents stated that non-availability of a female provider in delivery service was a barrier to accessing delivery care in a health facility.

Women of childbearing age and children under 15 years constitute about 60 percent of the total population in developing countries. Thus, improving the health status of these groups means improving the health status of the majority of people. Many health problems of women are related to labor and delivery and can be prevented with appropriate antenatal, delivery, and postnatal care. Most childhood health problems are also easily preventable. For these reasons, maternal and child health care is one of the highest priorities of the Ministry of Health Eritrea (MOHE). Three-fourths of all health facilities in the country provide mainly preventive services including antenatal care, delivery, postnatal care, immunizations, growth monitoring, health education, and family planning. Therefore, the findings of the 2010 EDHS will be extremely useful to the MOHE and other organizations interested in health programs for planning, monitoring, and evaluating maternal and child health care in Eritrea. The first part of this chapter focuses on maternal health. The 2010 EPHS results on pregnancy care, delivery care, pregnancy complications, and postnatal care for recent births are presented.

9.1 PREGNANCY CARE

The 2010 EPHS collected a range of information on the type of care that Eritrean women received during pregnancy, including components of antenatal care and tetanus toxoid vaccinations. Information on delivery care, and postpartum care was also collected for all births which occurred within five years before the survey; information about antenatal care was restricted only to the last birth in that period.

9.1.1 Antenatal care coverage and providers

Antenatal care (ANC) is provided to enhance healthy motherhood through early detection of risk factors and to take timely intervention when necessary. One of the major goals of antenatal care is to identify and treat problems that may occur during pregnancy such as anemia, high blood pressure, and genital infections. During ANC visits screening for complications is done and advice given on a range of issues including place of delivery and referral of women with complications. In the 2010 EPHS, 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.

Eighty-nine percent of women who had a live birth in the five years before the survey attended antenatal care for the most recent birth. Midwives, nurses and associate nurses provided antenatal care to 77 percent of mothers; doctors provided care to 11 percent. Traditional birth attendants (TBA) played a negligible role in the provision of antenatal care (less than 1 percent). ANC coverage by a skilled provider increased from 48 percent in 1995 to 89 percent in 2010; eleven percent of mothers remaining unreached in 2010 (Table 9-1, Figure 9-1). The increase in antenatal care has occurred in all subgroups. It is encouraging to note that there has been an increase in antenatal care coverage in all zobas, and among women with no education. The overall increase in antenatal care in the country is due almost entirely to a tremendous increase in antenatal care capacity and coverage for all, including uneducated women.

Figure 9-1 **Antenatal care by survey years**

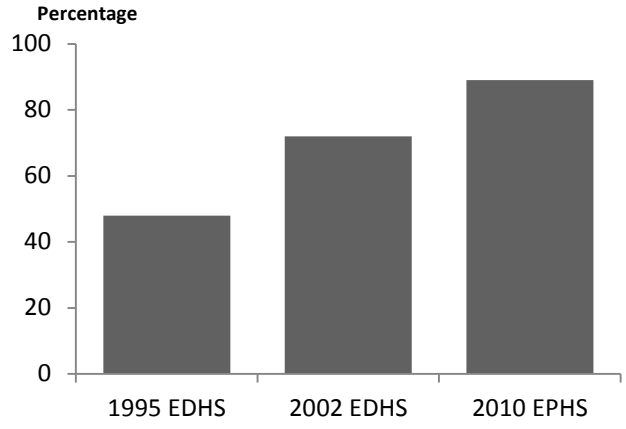


Table 9-1 Antenatal care

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

Background characteristic	Doctor	Nurse/ midwife	Associate nurse/midwife	Community health worker	Traditional birth attendant	Other	No one	Missing	Total	Percentage receiving antenatal care from a skilled provider	Number of women
Mother's age at birth											
<20	7.8	59.4	20.3	1.4	0.2	0.2	10.8	0.0	100.0	87.4	1,544
20-34	11.8	59.2	18.7	1.8	0.2	0.1	8.2	0.1	100.0	89.7	9,356
35-49	10.4	55.3	19.4	1.9	0.1	0.0	12.4	0.4	100.0	85.2	2,917
Birth order											
1	13.3	57.8	19.3	1.5	0.2	0.1	7.7	0.1	100.0	90.4	2,554
2-3	12.2	58.9	18.6	1.8	0.2	0.0	8.1	0.1	100.0	89.8	4,758
4-5	9.8	60.0	17.9	2.0	0.2	0.1	9.8	0.2	100.0	87.7	3,292
6+	8.8	56.5	20.4	1.7	0.1	0.1	12.2	0.2	100.0	85.7	3,213
Residence											
Total urban	21.6	64.9	10.8	0.9	0.0	0.0	1.6	0.1	100.0	97.3	4,448
Asmara	36.3	55.2	5.9	1.0	0.0	0.1	1.2	0.2	100.0	97.4	1,640
Other Town	13.1	70.5	13.7	0.8	0.0	0.0	1.8	0.1	100.0	97.3	2,808
Rural	6.0	55.3	22.9	2.2	0.2	0.1	13.1	0.2	100.0	84.2	9,369
Zoba											
Debubawi Keih Bahri	6.5	33.7	21.0	6.1	0.3	0.0	32.4	0.0	100.0	61.2	209
Maekel	26.2	62.1	7.3	1.5	0.1	0.0	2.7	0.1	100.0	95.6	2,533
Semenawi Keih Bahri	14.9	53.4	16.6	0.4	0.1	0.0	14.4	0.2	100.0	84.9	1,632
Anseba	5.0	56.3	30.6	2.0	0.2	0.0	5.8	0.1	100.0	92.0	2,133
Gash-Barka	11.6	46.3	26.8	2.7	0.4	0.1	11.9	0.3	100.0	84.7	3,445
Debub	2.6	71.3	14.3	1.4	0.0	0.1	10.2	0.1	100.0	88.2	3,864
Mother's education											
No education	6.7	49.6	24.5	2.2	0.2	0.1	16.5	0.2	100.0	80.8	6,234
Primary	8.6	65.7	18.5	1.5	0.1	0.1	5.5	0.1	100.0	92.7	3,429
Middle	13.2	69.7	12.6	1.4	0.2	0.1	2.6	0.1	100.0	95.5	2,295
Secondary or above	27.7	60.4	9.4	1.3	0.0	0.0	1.0	0.2	100.0	97.5	1,856
Wealth quintile											
Lowest	5.2	46.7	27.1	2.1	0.3	0.0	18.2	0.3	100.0	79.0	2,518
Second	5.9	50.4	24.8	2.3	0.2	0.0	16.2	0.2	100.0	81.1	2,944
Middle	8.3	60.4	21.0	1.8	0.2	0.1	8.0	0.1	100.0	89.8	3,075
Fourth	10.1	72.2	12.9	1.6	0.0	0.1	3.0	0.1	100.0	95.3	2,951
Highest	28.6	60.9	7.9	1.0	0.1	0.0	1.1	0.2	100.0	97.5	2,329
Total	11.1	58.4	19.0	1.8	0.2	0.1	9.4	0.2	100.0	88.5	13,817

Note: Table is based on all the women who had a live birth in the five years preceding the survey in both CORE and MMM questionnaires.
If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation.
[1] Skilled provider includes doctor, nurse, midwife, and associate nurse/midwife.

Maternal age at birth, birth order, and residence are related to use of antenatal care. Older women have very slightly lower antenatal care coverage (85 percent) than younger women (87 percent). Differences by birth order are in the direction one would expect but are very small: 90 percent for the first order, and 86 percent for 6+ birth order.

There is a larger difference of antenatal care coverage among urban (97 percent) and rural (84 percent) women, but only on the order of ten percent (13%). The proportion of antenatal care provided by doctors differs among urban (21 percent) and rural women (6 percent), urban seeing more than three times the coverage than in rural areas.

Maekel leads other zobas in antenatal coverage with 96 percent, followed by Anseba (92 percent), Debub (88 percent), and Semenawi Keih Bahri and Gash-Barka (85 percent each). Debubawi Keih Bahri has the lowest ANC coverage (61 percent).

Antenatal care coverage is highest among the most educated women and those in the highest wealth quintile. For example, 81 of percent mothers with no education, as compared to 97 percent of women with secondary education utilize antenatal services.

9.1.2 Number and timing of antenatal visits and source where ANC was received

Health professionals recommend that the first antenatal visit should occur within the first trimester of the pregnancy and continue, having four more up to the 36th week or until birth. The earlier the first visit and the higher the quality of focused antenatal care, the better the prospects of the pregnancy due to timely detection of risk factors and provision of appropriate interventions. Ideally four visits should be made during pregnancy for women without complications, with more visits as advised by the provider for women identified with complications.

Data in Table 9-2 shows that 80 percent of total urban, and 47 of total rural women with a birth in the five years preceding the survey made four or more antenatal care visits for the last birth. A higher proportion of urban women (39 percent) than rural women (21 percent) are starting ANC in the first trimester, with a near majority from Asmara (49 percent) attending. The median number of months pregnant at first ANC visit was four for urban women and five for rural women, the majority of women in both urban and rural areas had their first ANC visit in the second trimester.

9.1.3 Components of antenatal care

Pregnancy complications are an important cause of maternal and perinatal morbidity and mortality. Thus, informing pregnant women about danger signs associated with pregnancy and the appropriate action that they should take is an essential component of antenatal care.

In 2010 EPHS, all women who had a live birth in the five years preceding the survey were asked whether they had ANC or not. If they did they were asked whether they had received iron tablet supplements during pregnancy, and whether they had received anti-malarial drugs during their last pregnancy. Table 9-3 shows the components of antenatal care including the routine measurements and tests, supplementation and about the information that should be provided to pregnant women in Eritrea.

Table 9-2 Number of antenatal care visits and timing of first visit

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

	Residence				
Number and timing of ANC visits	Total urban	Asmara	Other Town	Rural	Total
Number of ANC visits					
None	1.7	1.4	1.8	13.2	9.5
1	1.0	0.6	1.2	3.5	2.7
2-3	17.1	9.7	21.5	36.1	30.0
4+	79.7	87.9	74.9	46.9	57.4
Don't know/missing	0.5	0.4	0.6	0.3	0.4
Total	100.0	100.0	100.0	100.0	100.0
Number of months pregnant at time of first ANC visit					
No antenatal care	1.7	1.4	1.8	13.2	9.5
<4	39.1	48.8	33.4	20.5	26.5
4-5	44.5	42.4	45.8	44.0	44.2
6-7	13.8	7.0	17.8	20.9	18.6
8+	0.8	0.3	1.1	1.2	1.1
Don't know/missing	0.1	0.0	0.2	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0
Number of women	4,448	1,640	2,808	9,369	13,817
Median months pregnant at first visit (for those with ANC)	4.4	4.0	4.6	5.1	4.8
Number of women with ANC	4,372	1,617	2,754	8,126	12,498

Note: Table is based on all the women who had a live birth in the five years preceding the survey in both CORE and MMM questionnaires.
Excludes women who did not receive antenatal care during the most recent birth.

Among women who had a birth in the five years preceding the survey, 65 percent reported that they were informed about pregnancy complications. Ninety-six, 78, and 88 percent reported that their weight, height, and blood pressure, respectively, were measured. Women's education level is proportional to the provision of these ANC services, meaning there was a disproportionate representation of highly educated women among those whose weight, height, and blood pressure were measured. Ninety-three percent of women with no education saw their weight measured as compared to 99 percent for those with secondary education and above.

Blood and urine tests are becoming a routine part of ANC services. Approximately 73 percent of pregnant women reported giving urine and 64 percent reported giving blood samples which are increases from the 2002 figures of 47 and 50 percent, respectively.

More women in Asmara (80 percent), and more women in the highest education quintile (80 percent) were informed about pregnancy complications compared with rural women (58 percent), and uneducated women (53 percent). According to zobas, more women from Maekel (80 percent) were informed about signs of pregnancy complications than women in Gash-Barka (48 percent), and Anseba (54 percent), the lowest two.

Table 9-3 Components of antenatal care

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

Background characteristic	Among women with a live birth in the last five years, the percentage who during the pregnancy of their last birth:		Among women who received antenatal care for their most recent birth in the last five years, the percentage with selected services:								
	Took iron tablets or syrup	Number of women with a live birth in the last five years	Informed of signs of pregnancy complications	Weight measured	Height measured	Blood pressure measured	Urine sample taken	Blood sample taken	Given information about breastfeeding	Prevention of mother to child transmission of HIV	Number of women with ANC for their most recent birth
Mother's age at birth											
<20	59.2	529	63.6	96.1	76.6	87.4	75.8	65.6	65.5	69.8	487
20-34	57.0	3,186	65.6	96.0	78.3	89.3	73.3	64.7	67.9	74.1	2,915
35-49	57.2	995	61.2	94.6	79.6	87.9	68.1	61.7	68.0	72.4	855
Birth order											
1	57.5	885	65.0	96.2	80.2	89.0	77.3	68.6	68.6	73.0	824
2-3	57.5	1,602	65.8	96.5	79.2	90.0	74.7	66.7	68.6	74.7	1,465
4-5	56.5	1,129	66.1	94.6	77.1	88.6	73.4	64.8	67.2	72.6	1,023
6+	57.4	1,093	60.4	95.2	77.0	86.9	64.0	55.8	65.8	72.0	945
Residence											
Asmara	63.9	533	79.8	99.8	93.9	98.2	96.3	95.4	88.5	91.8	527
Other Town	60.0	938	75.5	97.6	82.6	95.0	92.4	85.4	79.9	86.9	919
Rural	55.4	3,238	58.1	94.3	74.1	85.0	61.6	51.4	59.7	65.3	2,812
Zoba											
Debubawi Keih Bahri	74.3	76	57.5	92.0	79.4	85.0	56.1	55.2	59.7	50.4	52
Maekel	65.4	838	80.3	99.8	91.4	97.9	94.3	91.4	86.8	91.3	815
Semenawi Keih Bahri	65.3	555	60.3	91.4	74.0	87.1	63.0	51.9	62.3	64.0	467
Anseba	72.3	730	54.3	98.0	77.9	87.4	62.7	49.0	64.0	70.0	698
Gash-Barka	40.6	1,189	48.0	92.1	70.2	81.2	58.6	50.1	49.8	60.1	1,040
Debub	54.5	1,323	76.1	96.6	78.6	90.8	80.1	72.0	74.7	79.1	1,186
Mother's education											
No education	51.6	2,156	53.4	92.7	73.2	82.4	58.2	48.3	55.5	59.9	1,796
Primary	60.3	1,124	67.6	96.9	75.7	90.3	72.4	62.7	69.3	77.0	1,061
Middle	63.6	782	73.4	98.2	83.1	94.8	88.8	81.5	79.0	85.7	760
Secondary or above	63.3	646	79.9	99.2	91.9	97.3	94.0	90.8	85.5	90.1	639
Wealth quintile											
Lowest	49.7	917	50.3	92.8	73.3	82.2	50.1	38.1	50.2	54.3	740
Second	52.9	967	50.7	91.9	70.2	81.8	59.2	48.4	56.2	60.1	825
Middle	60.7	1,038	61.1	95.0	76.0	86.9	68.5	57.5	61.9	71.7	954
Fourth	60.6	1,008	76.4	98.8	81.5	94.1	85.6	79.6	79.8	85.8	971
Highest	62.6	780	82.3	99.4	91.1	98.2	97.1	95.1	88.8	91.8	767
Total	57.3	4,709	64.5	95.7	78.4	88.8	72.6	64.2	67.6	73.3	4,257

Note: Table is based on all the women who had a live birth in the five years preceding the survey in the CORE questionnaires.

The data in general also indicated that the likelihood of these measurements and tests being performed increases with mother's education. In all categories of test and measurement, women with secondary or above saw greater proportions of their numbers participating than all other groups. For every test or measure the rate of participation was always higher than for the next less educated group. There are no exceptions.

There was little variation with respect to differences in birth order. For example, 89 percent with first birth order had their blood pressure taken, while for 6+ birth order it was 87 percent. Percentage of women in Asmara who gave blood and urine samples for testing was higher (95 and 96 percent respectively) than their rural counterparts (62 and 51 percent respectively).

As part of antenatal care, Table 9-3 also shows that supplemental iron was given to 57 percent of pregnant mothers, differing most by residence. It also shows that receiving supplemental iron tablets was related to residence: 64 percent of Asmara women receiving them, 60 percent of other urban women receiving them, and 55 percent of rural women receiving them. There is also a difference of level according to education, higher educational level associated with higher use of iron supplementation: 52 percent for women with lower education, and 63 percent of women with middle and secondary education. In EPHS 2010, iron supplementation did not show special relations by age, as the coverage for all age groups is similar (58 percent).

In malaria-endemic areas in Eritrea such as Gash-Barka and Debub, iron supplementation is important to prevent anemia in pregnancy. However, among all the Zobas, the coverage for Gash-Barka and Debub was the lowest (41 and 55 percent, respectively).

9.1.4 Tetanus toxoid immunization

Provision of tetanus toxoid vaccine (TT) is one component of ANC services, and is provided to pregnant and non-pregnant women of childbearing age in Eritrea. TT is given to prevent tetanus in newborns and women during delivery in unhygienic environments. For a minimum protection against tetanus, a pregnant woman should have at least two doses of TT. Table 9-4 shows coverage distributions.

Table 9-4 shows that for the last birth in the five years before the survey, 26 percent of participating mothers received at least two tetanus toxoid (TT) injection, compared to 35 percent for 2002 EDHS. TT immunization coverage is affected by birth order, residence, education, and household wealth. TT coverage (for two doses) decreases with increasing birth order, 18 percent for 6+ orders and 49 percent for first birth order. Two doses of TT were higher among women in Asmara (43 percent) than among women in rural areas (23 percent). It was also highest among women in the highest wealth quintile (36 percent) and lowest for the women in the lowest wealth quintile (20 percent). Although Debubawi Keih Bahri has the lowest antenatal care coverage (61 percent), it had the highest coverage for two or more TT injects (39 percent) among all the zobas. Anseba had the lowest coverage of two or more TT (19 percent).

Table 9-4 Tetanus toxoid injections

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

Background characteristic	Number of injections					Percentage whose last birth was protected against neonatal tetanus	Number of mothers with live birth
	None	One injection	Two or more injections	Missing	Total		
Mother's age at birth							
<20	42.2	15.3	42.5	0.0	100.0	57.8	529
20-34	61.6	12.2	25.4	0.8	100.0	37.6	3,186
35-49	69.4	9.6	19.5	1.4	100.0	29.1	995
Birth order							
1	38.8	11.9	48.6	0.7	100.0	60.5	885
2-3	57.7	16.7	24.9	0.7	100.0	41.6	1,602
4-5	71.0	9.5	18.4	1.2	100.0	27.8	1,129
6+	73.8	7.7	17.6	0.9	100.0	25.3	1,093
Residence							
Total urban	50.7	15.7	32.0	1.7	100.0	47.6	1,472
Asmara	36.6	17.3	42.6	3.5	100.0	59.9	533
Other Town	58.7	14.7	25.9	0.7	100.0	40.6	938
Rural	65.8	10.3	23.4	0.5	100.0	33.7	3,238
Zoba							
Debubawi Keih Bahri	41.4	18.0	39.2	1.4	100.0	57.2	76
Maekel	42.8	18.2	36.4	2.6	100.0	54.6	838
Semenawi Keih Bahri	57.0	12.2	30.3	0.6	100.0	42.4	555
Anseba	70.9	9.4	19.4	0.2	100.0	28.8	730
Gash-Barka	60.3	11.6	27.0	1.1	100.0	38.6	1,189
Debub	70.7	9.4	19.9	0.0	100.0	29.3	1,323
Mother's education							
No education	66.5	9.3	23.4	0.8	100.0	32.7	2,156
Primary	64.6	10.7	24.1	0.6	100.0	34.8	1,124
Middle	53.5	16.2	29.0	1.3	100.0	45.2	782
Secondary or above	45.9	18.0	35.1	0.9	100.0	53.1	646
Wealth quintile							
Lowest	72.8	6.4	20.2	0.5	100.0	26.7	917
Second	63.2	10.8	25.6	0.4	100.0	36.4	967
Middle	62.8	11.8	24.6	0.8	100.0	36.4	1,038
Fourth	58.5	14.9	25.7	0.9	100.0	40.6	1,008
Highest	45.6	16.5	36.1	1.8	100.0	52.6	780
Total	61.1	12.0	26.1	0.9	100.0	38.1	4,709

Note: Table is based on all the women who had a live birth in the five years preceding the survey in the CORE questionnaires.
[1] Includes mothers with two injections during the pregnancy of her last birth, or two or more injections (the last within 3 years of the last live birth), or three or more injections (the last within 5 years of the last birth), or four or more injections (the last within ten years of the last live birth), or five or more injections prior to the last birth.

9.2 Delivery Care

The objective of providing safe delivery services is to protect the life and health of the mother and her baby. An important component of efforts to reduce the health risk to mothers and children is to increase the proportion of babies delivered under the supervision of health professionals. Proper medical attention under hygienic conditions during delivery can reduce the risk of complications and infections that may cause death or serious illness to the mother, the baby, or both. Percent distribution of live births in the five years preceding the survey by the delivery care, place of delivery, assistance at delivery, and delivery characteristics for births in the five years preceding the survey are presented in Table 9-5, Figure 9-2, and Table 9-7.

9.2.1 Place of delivery

Proper medical attention and hygienic conditions during delivery and skilled care during delivery can reduce the risk of complications and infections that can cause the death or serious illness of the mother and/or the newborn baby. An important strategy and component of efforts to reduce health risks to mothers and children is increasing the proportion of babies that are delivered in health facilities. Table 9-5 presents the percent distribution of all live births in the five years preceding the survey by place of delivery.

The biggest challenge with increasing the utilization of obstetric care services is reflected in Table 9-5 which shows 66 percent of women reported delivering at home. Among those who reported having delivered their last child in a facility, including the private sector, 73 percent were urban residents, 81 percent had secondary or above education, and 90 percent were in the highest wealth quintile.

The facility delivery progress 2002 to 2010 in Eritrea is remarkable and has increased in five out of the six zobas. Almost all deliveries in health facilities are happening in public sector facilities (32 percent of total births). The private sector plays a negligible role in delivery services (1 percent of total births). The likelihood of delivering in a health facility decreases with increasing birth order. Forty-eight percent of first order births delivered in health facilities, as compared to only 23 percent of the 6+ birth orders.

Figure 9-2 **Percentage of Skilled Attended Deliveries by survey**

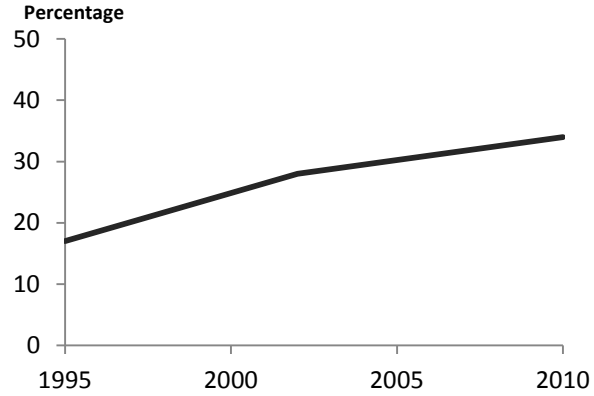


Table 9-5 Place of delivery

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

Background characteristic	Health facility		Home	Other	Missing	Total	Percentage delivered in a health facility	Number of births
	Public sector	Private sector						
Mother's age at birth								
<20	34.5	0.9	64.4	0.0	0.2	100.0	35.4	844
20-34	32.9	1.3	65.3	0.2	0.4	100.0	34.2	4,912
35-49	29.1	1.3	69.2	0.2	0.2	100.0	30.4	1,257
Birth order								
1	46.1	2.1	51.2	0.1	0.5	100.0	48.2	1,427
2-3	34.2	1.1	64.3	0.1	0.3	100.0	35.3	2,431
4-5	28.2	0.6	70.7	0.2	0.2	100.0	28.8	1,670
6+	21.1	1.4	77.0	0.1	0.4	100.0	22.5	1,485
Residence								
Total urban	71.4	1.8	26.6	0.1	0.2	100.0	73.2	2,124
Asmara	88.7	3.8	7.3	0.0	0.1	100.0	92.5	755
Other Town	61.9	0.6	37.2	0.1	0.2	100.0	62.5	1,369
Rural	15.5	1.0	82.9	0.2	0.4	100.0	16.5	4,889
Zoba								
Debubawi Keih Bahri	33.0	0.4	66.6	0.0	0.0	100.0	33.4	114
Maekel	69.8	2.9	27.2	0.0	0.2	100.0	72.6	1,202
Semenawi Keih Bahri	29.1	0.2	70.3	0.0	0.3	100.0	29.3	864
Anseba	23.7	1.5	74.7	0.1	0.1	100.0	25.1	1,119
Gash-Barka	17.1	0.5	81.6	0.1	0.7	100.0	17.6	1,813
Debub	30.1	1.3	68.0	0.4	0.3	100.0	31.4	1,901
Mother's education								
No education	15.2	0.4	83.9	0.2	0.3	100.0	15.6	3,288
Primary	27.8	1.6	70.2	0.1	0.4	100.0	29.4	1,698
Middle	53.8	1.5	44.3	0.0	0.3	100.0	55.3	1,104
Secondary or above	77.1	3.4	19.1	0.1	0.3	100.0	80.5	919
Antenatal care visits								
None	5.7	0.0	93.4	0.3	0.6	100.0	5.7	445
1-3	17.6	1.0	81.2	0.3	0.0	100.0	18.6	1,542
4+	48.3	1.9	49.6	0.1	0.1	100.0	50.2	2,699
Don't know/missing	35.3	0.0	64.7	0.0	0.0	100.0	35.3	22
Wealth quintile								
Lowest	7.7	0.9	90.9	0.2	0.3	100.0	8.6	1,426
Second	11.6	0.6	87.1	0.1	0.6	100.0	12.2	1,485
Middle	21.7	1.1	76.4	0.3	0.5	100.0	22.8	1,542
Fourth	48.0	0.7	51.3	0.1	0.0	100.0	48.6	1,442
Highest	86.3	3.4	10.0	0.0	0.3	100.0	89.8	1,119
Total	32.4	1.2	65.9	0.1	0.3	100.0	33.7	7,013

Note: Table is based on all the live births in the five years preceding the survey in the CORE questionnaires.
[1] Includes only the most recent birth in the five years preceding the survey

There are marked variations between urban and rural areas in the proportion of births delivered in health facilities. The EPHS 2010 shows that 17 percent of rural area women delivered in health facilities, as compared to 63 percent in other towns, and 93 percent of Asmara mothers.

In 2010 EPHS, 18 percent of mothers from Gash-Barka delivered in health facilities, as compared to only 9 percent in 2002. Anseba delivery coverage in health facilities in 2010 was 25 percent as compared to 14 percent in 2002; an increase of 79 percent. Similarly, in Semenawi Keih Bahri coverage was 29 percent in 2010 and 19 percent in 2002. Maekel facility delivery coverage was 73 percent in 2010, and 67 percent in 2002. Debub coverage was 31 percent in 2010, compared to 20 percent in 2002. Only Debubawi Keih Bahri's coverage has reduced from that of 2002 coverage, from 42 percent in 2002 to 33 percent in 2010, a nine percent decrease.

The differences in delivery coverage by zoba in the 2010 EPHS are high. The lowest delivery coverage is seen in Gash-Barka (18 percent) and the highest in Maekel (73 percent). Here, as is seen in Table 99, distance was a barrier reported by 40 percent of Gash-Barka women as compared to only nine percent of Maekel women. The likelihood for mothers to deliver in a health facility increases with an increase in education level and the level of household wealth. Ninety percent of the highest wealth quintile women were delivered by skilled birth attendants as compared to only nine percent in the lowest wealth quintile. The percentage of births delivered in health facilities increased from 17 percent in 1995, to 28 percent in 2002, and to 34 percent in 2010. The increase is also notable in all subgroups shown in Table 9-6.

9.3 Delivery Assistance

The type of assistance a woman receives during childbirth has important health consequences for both mother and child. Skilled attendance at all births is considered to be the single most critical intervention for ensuring safe motherhood. It hastens the timely delivery of emergency obstetric and newborn care when life-threatening complications arise. The term 'skilled attendant' refers exclusively to people with midwifery skills (for example, doctors, midwives, and nurses) who have been trained to proficiency in the skills necessary to manage normal deliveries and diagnose, manage, or refer obstetric complications. They must be able to recognize the onset of complications, perform essential interventions, start treatment, and supervise the referral of mother and baby for interventions that are beyond their competence or not possible in the particular setting.

In addition, the proportion of births attended by skilled providers is a measure of the health system's effectiveness, accessibility, and quality of care for its people. Delivery assisted by skilled providers is the most important proven intervention in reducing maternal mortality and one of the MDG indicators to track national effort and accountability towards safe motherhood.

Table 9-6 shows the percent distribution of births in the five years preceding the survey by type of assistance during delivery, according to women's background characteristics. Thirty-two percent of births were assisted by a skilled provider – seven percent by a doctor and 25 percent by a nurse or midwife. Forty-six percent of the women were attended by traditional birth attendants (TBA) and 20 percent by relatives or friends. Skilled assistance at delivery increased in the last eight years from 28 percent in 2002 to 32 percent in 2010.

Table 9-6 Assistance during delivery

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

Background characteristic	Person providing assistance during delivery								Percentage delivered by a skilled provider	Percentage delivered by C-section	Number of births
	Doctor	Nurse/ midwife	Auxiliary nurse/ midwife	Traditional birth attendant	Relative/ other	No one	Don't know/ missing	Total			
Mother's age at birth											
<20	7.6	24.6	3.5	40.5	23.8	0.0	0.0	100.0	35.8	3.2	844
20-34	7.2	25.3	2.1	46.0	18.7	0.2	0.4	100.0	34.7	2.9	4,912
35-49	6.3	22.3	2.3	48.5	20.0	0.4	0.2	100.0	30.9	2.1	1,257
Birth order											
1	11.9	33.5	3.1	36.1	15.0	0.0	0.5	100.0	48.5	6.3	1,427
2-3	7.5	25.7	2.7	44.0	19.8	0.1	0.3	100.0	35.8	2.8	2,431
4-5	5.0	22.3	1.9	50.4	19.8	0.3	0.2	100.0	29.3	1.4	1,670
6+	4.2	17.4	1.4	52.7	23.2	0.6	0.4	100.0	23.0	1.0	1,485
Place of delivery											
Health facility	20.9	72.0	6.5	0.3	0.3	0.0	0.0	100.0	99.4	8.3	2,361
Elsewhere	0.1	0.7	0.2	69.2	29.5	0.3	0.0	100.0	1.0	0.0	4,628
Missing	0.0	6.3	0.0	4.6	0.0	0.0	89.2	100.0	6.3	0.0	24
Residence											
Total urban	16.1	55.1	2.6	19.8	6.0	0.1	0.2	100.0	73.9	5.8	2,124
Asmara	23.4	67.6	2.1	4.9	1.8	0.0	0.1	100.0	93.1	9.7	755
Other Town	12.1	48.3	2.9	28.0	8.3	0.2	0.3	100.0	63.3	3.6	1,369
Rural	3.2	11.5	2.2	57.0	25.4	0.3	0.4	100.0	16.9	1.5	4,889
Zoba											
Debubawi Keih Bahri	4.6	22.5	7.2	63.3	2.3	0.1	0.0	100.0	34.3	0.8	114
Maekel	18.3	53.3	2.1	22.4	3.9	0.0	0.1	100.0	73.6	8.4	1,202
Semenawi Keih Bahri	7.7	20.6	2.0	62.8	6.6	0.0	0.3	100.0	30.3	1.4	864
Anseba	3.9	18.7	2.6	64.1	10.2	0.3	0.2	100.0	25.2	2.0	1,119
Gash-Barka	4.0	10.2	3.6	67.6	13.4	0.4	0.7	100.0	17.8	0.9	1,813
Debub	4.6	26.1	1.0	20.1	47.7	0.3	0.3	100.0	31.7	2.3	1,901
Mother's education											
No education	3.2	10.8	2.2	61.5	21.7	0.4	0.3	100.0	16.1	1.0	3,288
Primary	5.7	22.4	1.8	45.0	24.5	0.1	0.4	100.0	29.9	1.8	1,698
Middle	11.5	41.7	2.6	28.0	16.0	0.0	0.2	100.0	55.8	5.3	1,104
Secondary or above	18.4	58.7	3.3	12.4	6.7	0.0	0.4	100.0	80.5	8.2	919
Wealth quintile											
Lowest	1.2	5.9	1.5	67.1	23.2	0.7	0.3	100.0	8.6	0.7	1,426
Second	1.9	9.0	2.1	61.2	25.2	0.2	0.5	100.0	12.9	0.6	1,485
Middle	4.6	15.5	3.0	49.8	26.5	0.1	0.5	100.0	23.1	1.0	1,542
Fourth	10.7	35.8	3.0	35.0	15.4	0.1	0.0	100.0	49.5	3.2	1,442
Highest	20.2	68.0	1.9	6.3	3.2	0.0	0.3	100.0	90.1	10.2	1,119
Total	7.1	24.7	2.3	45.8	19.5	0.2	0.3	100.0	34.1	2.8	7,013

Note: Table is based on all the live births in the five years preceding the survey in the CORE questionnaires.
If the respondent mentioned more than one person attending during delivery, only the most qualified person is considered in this tabulation.
[1] Skilled provider includes doctor, nurse, midwife and associate nurse/midwife.

The data in Table 9-6 indicates that as age of mother and birth order increase, births were less likely to occur under the supervision of health professionals. For example, health professionals attend 48 percent of first births and only 23 percent of deliveries for 6+ or higher births orders. Residence, education, and household wealth also influence the provision of delivery care by health professionals. For example, 74 percent of the urban respondents delivered with the assistance of skilled providers, as compared to only 17 percent of rural women. Ninety percent of the highest wealth quintile compared to only nine percent of the lowest quintile delivered with the assistance of skilled providers.

9.3.1 Assistance during delivery

Due to the fact that the majority of respondents (66 percent) reported delivering at home, the most commonly reported assistance given during delivery was from traditional birth attendants (46 percent), followed by nurse/midwives (25 percent). Skilled providers attended more births of mothers age <20 (36 percent) and first order births (49 percent). Skilled providers also attended 74 percent of births in urban areas compared with 17 percent of births in rural areas. In rural areas the most common birth attendants reported were non-skilled providers, i.e., traditional birth attendants, relatives or other persons (82 percent). A large proportion of highly educated women had their births assisted by a skilled provider (77 percent), as did mothers in the highest wealth quintile (88 percent).

9.3.2 Caesarean section deliveries

Caesarean section (C-section) is a surgical intervention to prevent or treat life-threatening maternal or perinatal complications Table 9-6 shows that almost three percent of births in the five years preceding the survey were by caesarean section, and the rate, that was three percent. C-section rates below five percent are thought to be a reflection of limited access to maternal health services, and more than 15 percent is not recommended. Therefore, this finding suggests that many Eritrean women do not have access to life-saving emergency obstetrical care. C-section delivery is less common among rural women (2 percent), women with a large number of children 6+, women with no education (1 percent) , and women in the lower quintiles of wealth indexes (<1 percent). C-section rate among women with secondary and higher education is eight percent, women in highest wealth quintile 10 percent, and for those women with middle level education five percent while for women with primary education two percent and one percent among those with no education. C-section delivery rate is less than one percent in all zobas except in Maekel with eight percent, and Debub with 2.3 percent.

9.4 Postpartum/Postnatal Care

A large proportion of maternal and neonatal deaths occur during the first 12 and 48 hours after delivery. Thus, postpartum/postnatal care is important both for the mother and the baby. Postpartum care treats complications arising from delivery and post-delivery, and provides the mother and the family with information on how to detect and care for herself and her child. It is recommended that all women in Eritrea receive a check-up within six hours, six days and six weeks after delivery. To assess the extent of postnatal care utilization, respondents were asked, referring to the last birth in the five years preceding the survey, whether they had received a health check-up after delivery, the timing of the first check-up, and the type of health provider performing the postnatal check-up.

Table 9-7 shows the percent distribution of women whose last birth in the five years preceding the survey occurred according to timing of postnatal care. The data indicate that postnatal care was rare in Eritrea, with 18 percent receiving care within six weeks, and only five percent within two days. There was no variation in the utilization of postnatal care services within the first two days after birth, by mother's age. That is, for all age groups only five percent of each group received postnatal care within two days. Similarly, only five percent of respondents whose birth order was more than one received postnatal care within two days. Zoba variation on utilization of timely postnatal care within two days ranges from the lowest (2 percent) in Debub to highest 10 percent in Debubawi Keih Bahri. Six percent of the women in the fourth quintile compared to five percent each for the other three quintiles received postpartum/postnatal care within two days.

As noted earlier, the majority (82 percent) of respondents did not receive any postnatal checkup. However, for the 18 percent who did, most received care from a skilled provider (15 percent), followed by a TBA (4 percent)[1] (Table 9-8).

[1] More than the 18% total due to rounding.

Table 9-7 Timing of first postnatal checkup

Among women age 15-49 giving birth in the five years preceding the survey, the percent distribution of the mother's first postnatal check-up for the last live birth by time after delivery, according to background characteristics, Eritrea 2010

Background characteristic	Time after delivery of mother's first postnatal checkup					No postnatal checkup	Total	Number of women
	Less than 4 hours	4-23 hours	2 days	3-41 days	Don't know/ missing			
Mother's age at birth								
<20	1.0	1.1	2.1	13.4	0.1	82.3	100.0	1,544
20-34	1.6	1.1	2.5	13.9	0.1	80.8	100.0	9,356
35-49	1.7	1.3	2.0	11.0	0.2	83.8	100.0	2,917
Birth order								
1	1.1	0.9	2.2	15.0	0.1	80.7	100.0	2,554
2-3	1.5	1.4	2.3	14.6	0.2	80.1	100.0	4,758
4-5	1.9	1.0	2.4	12.6	0.1	82.0	100.0	3,292
6+	1.6	1.1	2.4	10.7	0.2	84.1	100.0	3,213
Residence								
Total urban	1.5	1.4	2.5	21.6	0.1	72.9	100.0	4,448
Asmara	1.8	1.9	3.0	22.3	0.3	70.7	100.0	1,640
Other Town	1.4	1.1	2.1	21.2	0.1	74.2	100.0	2,808
Rural	1.6	1.0	2.2	9.3	0.1	85.7	100.0	9,369
Zoba								
Debubawi Keih Bahri	4.0	2.7	3.1	13.5	0.4	76.4	100.0	209
Maekel	1.6	2.0	4.3	22.7	0.4	69.0	100.0	2,533
Semenawi Keih Bahri	2.5	1.6	3.3	17.6	0.1	74.9	100.0	1,632
Anseba	2.2	0.9	2.2	9.5	0.0	85.2	100.0	2,133
Gash-Barka	1.2	0.9	2.2	8.6	0.0	87.0	100.0	3,445
Debub	0.9	0.6	0.7	11.4	0.1	86.2	100.0	3,864
Education								
No education	1.5	1.0	2.1	8.4	0.1	87.0	100.0	6,234
Primary	1.9	1.1	2.3	13.1	0.2	81.5	100.0	3,429
Middle	1.6	1.5	2.8	19.1	0.0	75.0	100.0	2,295
Secondary or above	1.0	1.4	2.4	22.9	0.3	72.0	100.0	1,856
Missing	0.0	0.0	0.0	0.0	0.0	100.0	100.0	3
Wealth quintile								
Lowest	1.6	0.8	2.1	6.6	0.0	88.9	100.0	2,518
Second	1.6	1.0	2.0	8.1	0.2	87.1	100.0	2,944
Middle	1.6	0.9	2.2	11.0	0.1	84.2	100.0	3,075
Fourth	1.7	1.5	3.0	19.0	0.2	74.6	100.0	2,951
Highest	1.2	1.4	2.2	22.8	0.2	72.2	100.0	2,329
Total	1.6	1.1	2.3	13.3	0.1	81.6	100.0	13,817

Note: Table is based on all the women who had a live birth in the five years preceding the survey in both CORE and MMM questionnaires.
[1] Includes women who received a checkup after 41 days

Table 9-8 Type of provider of first postnatal checkup

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

Background characteristic	Type of health provider of mother's first postnatal checkup						No postnatal checkup	Total	Number of women
	Doctor/ nurse/ midwife	Auxiliary nurse/midwife	Community health worker	Traditional birth attendant	Other	Don't know/ missing			
Mother's age at birth									
<20	10.5	2.5	1.0	3.6	0.1	0.0	82.3	100.0	1,544
20-34	12.7	2.1	0.7	3.5	0.1	0.0	80.8	100.0	9,356
35-49	10.7	1.6	0.4	3.4	0.1	0.0	83.8	100.0	2,917
Birth order									
1	13.1	2.6	0.8	2.7	0.1	0.0	80.7	100.0	2,554
2-3	13.5	2.3	0.8	3.4	0.0	0.0	80.1	100.0	4,758
4-5	11.7	1.7	0.7	3.6	0.2	0.0	82.0	100.0	3,292
6+	9.4	1.6	0.4	4.3	0.1	0.0	84.1	100.0	3,213
Residence									
Total urban	22.6	2.3	0.5	1.8	0.0	0.0	72.9	100.0	4,448
Asmara	25.1	1.9	0.6	1.7	0.0	0.0	70.7	100.0	1,640
Other Town	21.1	2.5	0.4	1.8	0.0	0.0	74.2	100.0	2,808
Rural	7.1	2.0	0.8	4.3	0.1	0.0	85.7	100.0	9,369
Zoba									
Debubawi Keih Bahri	10.2	8.6	2.2	2.4	0.1	0.0	76.4	100.0	209
Maekel	24.2	2.8	0.4	3.6	0.0	0.0	69.0	100.0	2,533
Semenawi Keih Bahri	14.6	2.1	0.5	7.9	0.1	0.0	74.9	100.0	1,632
Anseba	7.0	2.3	2.2	3.3	0.0	0.0	85.2	100.0	2,133
Gash-Barka	6.8	1.9	0.4	3.8	0.1	0.0	87.0	100.0	3,445
Debub	10.6	1.2	0.3	1.5	0.2	0.0	86.2	100.0	3,864
Education									
No education	6.1	1.9	0.6	4.3	0.1	0.0	87.0	100.0	6,234
Primary	12.0	1.8	1.0	3.5	0.2	0.0	81.5	100.0	3,429
Middle	18.9	2.2	0.5	3.2	0.1	0.0	75.0	100.0	2,295
Secondary or above	23.5	2.8	0.5	1.2	0.0	0.0	72.0	100.0	1,856
Missing	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	3
Wealth quintile									
Lowest	3.6	1.4	0.8	5.2	0.1	0.0	88.9	100.0	2,518
Second	5.4	1.9	1.1	4.5	0.0	0.0	87.1	100.0	2,944
Middle	9.1	2.4	0.5	3.6	0.2	0.0	84.2	100.0	3,075
Fourth	19.4	2.5	0.4	2.9	0.1	0.0	74.6	100.0	2,951
Highest	24.1	2.0	0.5	1.3	0.0	0.0	72.2	100.0	2,329
Total	12.0	2.1	0.7	3.5	0.1	0.0	81.6	100.0	13,817

Note: Table is based on all the women who had a live birth in the five years preceding the survey in both CORE and MMM questionnaires.
[1] Includes women who received a checkup after 41 days

9.5 Problems in Accessing Health Care

Many factors can prevent women from getting medical advice or treatment for themselves when they are sick or have complications. Information on such factors is particularly important in understanding and addressing the barriers women may face in seeking care. In the 2010EPHS, 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 transportation, not wanting to go alone, concern that there may not be a female health provider, and concern that there may not be a health provider available.

The most common reasons or barriers for not seeking delivery service reported by respondents were getting money for treatment (39 percent), having to take transport (35 percent), and distance to health facility (33 percent). Around 23 percent women responded that they did not want to go alone, and 20 percent mentioned queuing for treatment as barriers to seeking care. This calls for quality improvement in the facilities. Twelve percent of respondents also stated that poor quality of care was barrier as well. Ten percent of women responded that they did not know where to go and 11 percent mentioned getting permission from husband were barriers.

Regardless of the number of living children, marital status, or employment status, all respondents identified getting money for treatment as the main barrier to accessing healthcare. More respondents in the youngest age group (15-19), from rural areas, with no education and from the lowest and second wealth quintile reported having to take transport as the main barrier to accessing health care. Apart from Debubawi Keih Bahri and Semenawi Keih Bahri respondents who most often stated “distance”, the other regional respondents identified getting money for treatment as the main barrier.

9.5.1 Delivery preparedness

Mothers are encouraged to develop a delivery and emergency readiness plan in case of emergency by health workers during antenatal care. The 2010 EPHS asked mothers if they were prepared to deliver in a health facility, if they knew the telephone number of the health facility, prepared means of transportation to the health facility, and had baby cloth and extra food for postpartum period (Table 9-10). Over 90 percent of respondents were prepared in at least one of the categories. Forty-five percent of all respondents were prepared to deliver in a health facility. Eighty-seven percent prepared baby clothes, and 81 percent had prepared extra food for the postpartum period. Only 15 percent reporting knowing the telephone number of the health facility or service provider.

Arranging for transportation to the health facility varied by residence, educational level, and wealth quintile. Only 20 percent of respondents living in rural areas where facilities tend to be far away reported arranging transportation, compared to 66 percent of urban residents. Fifteen percent of the no education group reported arranging transportation while the 78 percent of the highly educated respondents had done so. Similarly, only 10 percent of respondents in the lowest wealth quintile compared to 82 percent of the highest quintile reported arranging transportation.

Table 9-9 Problems in accessing health care

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

Background characteristic	Problems in accessing health care										
	Knowing where to go	Getting permission to go for treatment	Getting money for treatment	Distance to health facility	Having to take transport	Not wanting to go alone	Concern no female provider available	Queuing in line for treatment	Quality of the health service	At least one problem accessing health care	Number of women
Age											
15-19	13.0	14.5	32.6	30.5	32.9	26.8	12.9	17.5	10.6	56.0	2,301
20-34	9.2	10.5	38.2	32.3	34.8	22.2	12.0	19.9	12.9	58.2	4,618
35-49	10.0	10.3	45.0	34.3	37.8	22.8	12.0	20.1	11.8	60.9	3,320
Number of living children											
0	11.4	12.3	30.5	26.1	29.2	23.6	12.1	17.9	11.2	53.0	3,564
1-2	9.1	10.6	40.9	33.1	36.0	22.0	10.9	18.6	12.0	59.1	2,553
3-4	9.3	10.0	43.9	34.1	36.1	21.3	11.8	20.2	11.9	60.3	2,008
5+	10.9	11.9	47.2	41.3	44.2	26.9	14.3	22.0	13.7	65.5	2,113
Marital status											
Never married	10.5	11.6	28.4	22.4	25.6	21.6	10.2	16.5	10.3	50.7	2,878
Married or living together	10.8	12.1	42.9	37.9	40.6	24.9	13.6	21.2	13.2	61.9	6,183
Divorced/separated/ widowed	7.1	6.6	45.8	29.1	31.5	20.0	9.5	17.2	10.0	60.2	1,177
Employed last 12 months											
Not employed	11.7	13.3	40.6	35.6	38.1	25.7	14.3	20.3	13.3	60.4	7,861
Employed for cash	5.0	5.0	31.8	16.7	20.7	12.8	5.1	15.7	7.9	47.9	1,703
Employed not for cash	7.7	4.9	41.4	37.2	40.7	23.8	6.2	18.7	8.0	64.6	673
Missing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1
Residence											
Total urban	4.3	4.2	24.2	8.1	10.6	10.5	4.1	13.7	6.4	40.4	4,125
Asmara	3.0	3.0	21.3	5.8	8.3	9.1	2.4	15.3	5.3	39.6	1,870
Other Town	5.3	5.3	26.6	10.0	12.4	11.7	5.6	12.4	7.3	41.2	2,255
Rural	14.4	16.1	49.3	49.1	52.1	32.1	17.6	23.2	15.9	70.8	6,113
Zoba											
Debubawi Keih Bahri	15.5	21.7	38.1	45.5	44.8	43.3	27.4	23.7	20.6	63.5	163
Maekel	2.7	2.4	23.7	9.2	12.0	9.5	2.3	12.6	4.5	41.7	2,535
Semenawi Keih Bahri	11.5	14.1	37.3	42.6	41.4	30.2	17.7	22.3	12.9	63.4	1,122
Anseba	23.8	32.2	59.8	48.5	57.4	46.1	31.0	38.1	25.0	76.0	1,436
Gash-Barka	11.8	11.6	42.2	40.4	42.0	22.9	12.6	15.2	14.7	62.3	2,255
Debub	8.2	6.7	41.0	34.4	36.8	20.8	8.0	17.9	9.1	59.7	2,727
Education											
No education	15.7	18.5	55.0	51.5	53.5	35.2	21.2	25.9	17.9	73.6	3,882
Primary	10.9	10.7	43.3	35.0	38.6	23.5	12.5	20.0	12.2	63.5	2,162
Middle	6.2	7.0	27.0	19.5	22.9	15.3	5.0	13.1	6.7	46.9	1,946
Secondary or above	3.8	3.4	18.3	8.8	11.7	10.0	2.5	13.0	6.5	37.9	2,246
Missing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1
Wealth quintile											
Lowest	19.5	21.7	57.3	64.3	65.9	41.8	25.4	28.9	21.0	80.1	1,746
Second	17.5	18.5	53.9	53.7	56.7	36.7	20.2	26.1	18.4	73.9	1,769
Middle	11.2	12.8	44.9	36.8	40.6	25.9	13.9	20.9	13.2	65.4	2,014
Fourth	4.2	4.7	32.2	17.3	21.0	12.4	4.3	11.9	5.9	49.3	2,223
Highest	3.5	3.7	17.5	5.4	7.3	8.9	3.0	13.4	5.8	35.3	2,485
Total	10.3	11.3	39.2	32.6	35.4	23.4	12.2	19.4	12.1	58.6	10,238

Note: Table is based on all the women in the CORE questionnaires.

Table 9-10 Delivery preparations

Percent distribution of live births in the five years preceding the survey, percentage of women who reported that they have made delivery preparations, according to background characteristics, Eritrea 2010

Background characteristic	Problems in accessing health care							
	Delivery in a health facility by skilled birth attendant	Knowing the telephone no. of health facility or service provider	Arranging means of transport to health facility when labor starts	Keeping some money aside for transport for other expenses	Baby clothes	Extra food for after delivery	At least one of these preparations	Number of women
Age								
15-19	44.0	11.7	33.0	35.6	86.3	85.8	95.7	233
20-34	47.0	16.2	35.6	45.1	87.4	81.8	93.2	4,651
35-49	40.9	13.0	29.3	37.5	85.5	78.1	91.5	2,129
Number of living children								
0	55.1	18.4	40.6	41.9	79.1	76.2	90.9	55
1-2	54.8	18.8	41.2	49.1	89.2	83.8	95.2	2,385
3-4	46.4	17.0	35.0	44.8	86.5	80.2	91.9	2,296
5+	33.3	9.1	24.1	33.2	84.7	78.4	91.0	2,277
Marital status								
Never married	78.5	37.3	67.0	65.3	89.0	87.6	97.4	85
Married or living together	44.5	14.8	33.3	42.3	86.7	80.8	92.8	6,563
Divorced/separated/ widowed	48.3	14.9	32.3	40.5	87.9	78.8	90.9	365
Employed last 12 months								
Not employed	42.8	13.2	31.5	40.8	85.8	79.2	91.9	5,798
Employed for cash	69.1	31.1	53.7	60.5	91.9	86.1	96.7	740
Employed not for cash	34.8	12.2	27.3	34.6	90.3	92.2	96.7	472
Missing	100.0	100.0	100.0	100.0	100.0	100.0	100.0	2
Residence								
Total urban	81.3	35.1	65.5	74.0	95.1	88.7	98.1	2,124
Asmara	96.7	53.1	84.6	86.3	96.9	90.5	99.9	755
Other Town	72.9	25.1	54.9	67.2	94.1	87.6	97.1	1,369
Rural	29.3	6.4	19.8	28.8	83.2	77.4	90.4	4,889
Zoba								
Debubawi Keih Bahri	35.6	10.4	20.6	28.9	77.9	56.8	83.8	114
Maekel	85.4	43.7	71.7	75.0	95.9	90.2	99.4	1,202
Semenawi Keih Bahri	43.6	6.5	26.4	38.1	85.0	72.4	91.5	864
Anseba	37.3	5.7	24.1	32.6	81.2	71.9	87.9	1,119
Gash-Barka	26.4	2.9	20.3	31.3	82.2	76.9	89.3	1,813
Debub	43.1	18.3	31.9	41.1	90.1	89.2	95.7	1,901
Education								
No education	24.8	3.2	14.8	24.8	79.8	73.2	87.9	3,288
Primary	46.3	11.1	34.1	42.5	90.3	83.4	95.0	1,698
Middle	66.0	28.0	52.5	62.5	94.6	89.9	97.9	1,104
Secondary or above	90.1	49.2	77.6	81.6	95.7	92.4	99.5	919
Missing	66.7	0.0	0.0	0.0	100.0	100.0	100.0	4
Wealth quintile								
Lowest	15.5	1.0	10.3	19.8	79.1	74.3	86.7	1,426
Second	23.7	2.3	14.6	24.2	78.6	74.2	87.6	1,485
Middle	38.4	6.4	25.2	33.9	88.0	77.6	93.6	1,542
Fourth	65.1	21.1	47.5	58.0	93.5	88.0	97.6	1,442
Highest	94.5	54.2	82.4	87.4	97.1	93.1	99.7	1,119
Total	45.1	15.1	33.6	42.5	86.8	80.8	92.7	7,013

Note: Table is based on all the live births in the five years preceding the survey in the CORE questionnaires.

9.6 Experience of Complications During Pregnancy

Women were asked about the experiences of complications they faced during their most recent pregnancy (Table 9-11). Forty-three percent of respondents experienced at least one complication. The most common complication reported was anemia (24 percent), followed by fever (19 percent), swelling (13 percent), and 21 percent had anemia as a complication during pregnancy. Anemia occurred in all age groups, but was higher in the 6+ birth order group (27 percent), than on the first birth order (22 percent). Thirteen percent of mothers reported experienced swelling, six percent convulsions and two percent had high blood pressure complications during their pregnancy.

9.6.1 Duration of labor

Table 9-12 shows the duration of labor among women 15 to 49 age group. Labor and delivery takes a general average of 12 or less, often being longer for prima gravidae or younger expecting mothers. The majority (86 percent) reported being in labor less than 12 hours. Very rarely did anyone report being in labor more than 24 hours (<1 percent).

9.6.2 Prevalence and treatment of delivery complications

Table 9-13 indicates that women age 15-49 with live births in the 5 years preceding the survey, those who experienced complications during delivery for the most recent birth, and percentage among those with complications who sought treatment, according to background characteristics,

Most of the complications experienced during delivery were convulsions and fever. The percentage of women who experienced convulsions during delivery was six percent, and the percentage who actually sought treatment for it was 27 percent. Over one third of respondents reporting to have experienced fever sought treatment for it.

9.6.3 Means of transportation and distance to health facility

Table 9-14 shows that 29 percent of women travelled to health facilities on foot, stretcher or on pack animals, 19 percent used ambulances, and 52 percent used other vehicles. The report of using an ambulance was high in Debubawi Keih Bahri (29 percent), and least reported in Anseba (8 percent). In regard to how long it takes to get to the facility, 95 percent of women reported that it took them less than 2 hours to reach the nearest health facility for delivery services, while only 1 percent reported taking five or more hours to reach the nearest health facility

Table 9-11 Pregnancy complications

Among women age 15-49 with live births in the 5 years preceding the survey, percentage of women who experienced complications during pregnancy for the most recent birth, according to background characteristics, Eritrea 2010

Background characteristic	Pregnancy complications										
	Bleeding	Excessive vomiting	Convulsions	Swelling	Fever	Pain/ urine	Jaundice	High blood pressure	Anemia	At least one of the complications	Number of women
Age											
15-19	1.7	13.8	8.0	12.4	17.7	11.8	6.6	3.5	20.9	42.1	596.8
20-34	3.0	12.6	5.9	12.4	18.7	9.4	4.4	1.9	22.9	42.9	8,878.4
35-49	4.2	11.1	7.3	14.1	20.8	11.2	4.6	2.0	26.1	44.6	4,341.8
Birth order											
1	2.5	14.3	5.7	13.0	17.5	8.9	4.5	2.6	21.4	43.1	3,095.6
2-3	3.0	12.2	5.3	11.8	17.3	9.1	4.2	1.8	22.4	42.1	4,560.4
4-5	3.8	11.6	6.6	13.1	20.0	10.1	4.5	1.9	25.0	43.4	3,165.6
6+	4.1	10.5	8.7	14.4	23.6	12.6	5.3	1.8	27.3	45.6	2,995.3
Marital status											
Never married	3.1	11.2	5.5	12.5	15.8	8.6	4.2	2.6	21.3	41.8	2,414.5
Married or living together	3.4	12.3	6.8	13.1	20.4	10.8	4.7	1.8	24.5	43.8	10,155.3
Divorced/separated/ widowed	3.3	12.9	4.9	12.5	17.3	6.7	4.6	2.3	23.4	42.6	1,247.2
Employed last 12 months											
Not employed	3.3	12.3	6.9	12.5	20.2	10.5	4.6	1.8	24.3	43.6	11,068.7
Employed for cash	3.9	11.7	4.3	14.6	15.0	8.0	4.3	2.4	21.3	42.4	1,817.8
Employed not for cash	2.8	11.0	4.5	13.9	16.8	9.1	5.0	3.3	22.9	42.6	928.3
Missing	0.0	0.0	0.0	47.8	0.0	0.0	0.0	0.0	0.0	47.8	2.2
Residence											
Total urban	3.3	12.8	3.4	14.8	13.9	8.0	3.8	3.0	23.2	44.2	4,448.0
Asmara	3.7	12.8	2.2	18.4	11.5	6.4	3.6	3.9	25.2	49.0	1,640.4
Other Town	3.0	12.7	4.1	12.6	15.3	8.9	3.9	2.5	22.0	41.4	2,807.6
Rural	3.3	11.9	7.9	12.0	21.9	11.0	4.9	1.5	24.1	42.9	9,369.0
Region											
Debubawi Keih Bahri	2.9	9.8	3.2	14.7	15.1	9.0	2.0	2.4	23.0	39.6	209.2
Maekel	3.1	11.3	2.0	15.9	11.0	6.1	3.2	3.6	25.7	46.6	2,533.1
Semenawi Keih Bahri	4.6	15.8	12.0	12.6	22.8	15.0	5.5	1.3	27.5	48.7	1,632.1
Anseba	4.2	14.3	11.7	14.0	31.2	14.9	5.3	1.4	33.1	56.0	2,133.5
Gash-Barka	3.8	13.1	7.1	12.5	24.5	11.4	5.8	1.8	20.5	40.2	3,445.3
Debub	2.0	9.3	3.6	10.8	12.3	6.8	3.7	1.7	18.9	35.1	3,863.7
Education											
No education	3.7	12.4	9.2	12.5	24.2	12.3	5.3	1.4	25.0	43.7	6,233.6
Primary	3.2	11.4	6.0	11.7	18.7	10.1	4.6	1.9	23.9	43.4	3,429.2
Middle	2.8	11.7	3.2	12.4	14.5	7.2	4.0	2.0	22.8	42.3	2,294.5
Secondary or above	3.0	13.4	1.9	17.0	9.9	5.9	2.8	4.0	21.0	43.6	1,856.2
Missing	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	25.0	3.4
Wealth quintile											
Lowest	3.6	12.6	10.7	11.8	26.0	12.0	4.5	1.4	25.4	44.2	2,518.0
Second	3.3	13.2	9.9	13.3	25.5	12.5	5.8	1.2	25.2	44.9	2,944.2
Middle	3.8	11.0	5.9	11.7	19.9	10.8	5.0	1.6	23.5	42.7	3,074.5
Fourth	2.9	11.3	3.3	12.5	13.5	8.4	4.5	2.3	22.1	40.8	2,950.8
Highest	2.9	13.1	2.0	15.8	10.9	5.9	2.7	3.8	22.9	44.8	2,329.4
Total	3.3	12.2	6.4	12.9	19.3	10.1	4.6	2.0	23.8	43.4	13,817.0

Note: Table is based on all the women who had a live birth in the five years preceding the survey in both CORE and MMM questionnaires.

Table 9-12 Duration of labor

Among women age 15-49 with live births in the 5 years preceding the survey, percentage of women by duration of labor for the most recent birth, according to background characteristics, Eritrea 2010

Background characteristic	Duration of labor					
	<12 hours	12-24 hours	>24 hours	Missing	Total	Number of women
Age						
15-19	81.8	11.4	6.8	0.0	100.0	597
20-34	86.1	9.8	3.9	0.1	100.0	8,878
35-49	86.3	9.1	4.2	0.3	100.0	4,342
Birth order						
1	80.4	13.1	6.4	0.1	100.0	3,096
2-3	88.4	8.3	3.1	0.2	100.0	4,560
4-5	88.1	8.8	2.9	0.2	100.0	3,166
6+	86.0	9.1	4.6	0.3	100.0	2,995
Marital status						
Never married	86.5	9.5	3.8	0.2	100.0	2,414
Married or living together	85.9	9.6	4.3	0.2	100.0	10,155
Divorced/separated/widowed	86.2	10.2	3.5	0.1	100.0	1,247
Employed last 12 months						
Not employed	86.2	9.5	4.1	0.2	100.0	11,069
Employed for cash	85.7	10.1	4.1	0.0	100.0	1,818
Employed not for cash	84.7	11.0	4.1	0.1	100.0	928
Missing	100.0	0.0	0.0	0.0	100.0	2
Residence						
Total urban	86.3	9.4	4.1	0.2	100.0	4,448
Asmara	84.7	10.7	4.5	0.2	100.0	1,640
Other Town	87.3	8.6	3.9	0.2	100.0	2,808
Rural	85.8	9.8	4.1	0.2	100.0	9,369
Zoba						
Debubawi Keih Bahri	82.2	11.4	6.5	0.0	100.0	209
Maekel	87.3	8.9	3.7	0.1	100.0	2,533
Semenawi Keih Bahri	80.9	12.9	6.1	0.1	100.0	1,632
Anseba	82.6	12.1	5.1	0.2	100.0	2,133
Gash-Barka	87.3	8.2	4.1	0.4	100.0	3,445
Debub	88.2	8.7	2.9	0.1	100.0	3,864
Education						
No education	85.7	9.8	4.3	0.2	100.0	6,234
Primary	86.1	9.7	4.1	0.1	100.0	3,429
Middle	86.2	9.8	3.9	0.1	100.0	2,295
Secondary or above	86.6	9.1	4.0	0.3	100.0	1,856
Missing	75.0	25.0	0.0	0.0	100.0	3
Wealth quintile						
Lowest	83.9	10.9	4.9	0.3	100.0	2,518
Second	85.3	10.4	4.1	0.2	100.0	2,944
Middle	86.1	9.6	4.2	0.1	100.0	3,075
Fourth	88.1	8.2	3.6	0.1	100.0	2,951
Highest	86.3	9.5	3.9	0.3	100.0	2,329
Total	86.0	9.7	4.1	0.2	100.0	13,817

Note: Table is based on all the women who had a live birth in the five years preceding the survey in both CORE and MMM questionnaires.

Table 9-13 Prevalence and treatment of delivery complication

Among women age 15-49 with live births in the 5 years preceding the survey, percentage of women who experienced complications during delivery for the most recent birth, percentage among those with complications who seek treatment, according to background characteristics, Eritrea 2010

Background characteristic	Experienced fever during delivery		Treatment for fever		Experienced convulsions during delivery		Treatment for convulsions	
	Percentage who experienced fever during delivery	Number of women with live births 5 years preceding the survey	Percentage who seek treatment for fever	Number of women with fever during last delivery	Percentage who experienced convulsions during delivery	Number of women with live births 5 years preceding the survey	Percentage who sought treatment for convulsions	Number of women with convulsions during last delivery
Age								
15-19	16.5	597	42.5	99	9.0	597	34.7	53
20-34	12.4	8,878	36.6	1,098	7.4	8,878	26.5	657
35-49	14.8	4,342	37.5	644	8.2	4,342	27.7	355
Birth order								
1	12.5	3,096	40.3	385	6.9	3,096	35.0	213
2-3	11.4	4,560	35.9	522	7.0	4,560	26.6	321
4-5	13.5	3,166	37.9	428	7.7	3,166	24.1	245
6+	16.9	2,995	35.7	505	9.6	2,995	25.1	287
Marital status								
Never married	10.0	2,414	41.8	242	7.5	2,414	31.1	181
Married or living together	14.3	10,155	36.0	1,455	7.9	10,155	25.4	805
Divorced/separated/ widowed	11.5	1,247	41.7	144	6.4	1,247	37.8	79
Employed last 12 months								
Not employed	13.6	11,069	37.4	1,504	7.8	11,069	26.9	867
Employed for cash	11.5	1,818	45.0	208	6.9	1,818	32.5	126
Employed not for cash	13.8	928	22.5	128	7.8	928	22.2	72
Missing	0.0	2	-	0	0.0	2	-	0
Residence								
Total urban	9.0	4,448	51.4	402	5.6	4,448	38.5	251
Asmara	7.1	1,640	36.8	116	5.1	1,640	31.3	84
Other Town	10.2	2,808	57.3	286	5.9	2,808	42.1	167
Rural	15.4	9,369	33.3	1,438	8.7	9,369	23.8	815
Zoba								
Debubawi Keih Bahri	13.5	209	34.6	28	6.1	209	50.3	13
Maekel	7.2	2,533	32.6	183	5.2	2,533	29.3	132
Semenawi Keih Bahri	18.1	1,632	39.1	296	11.9	1,632	32.0	194
Anseba	17.2	2,133	43.2	367	10.8	2,133	25.5	231
Gash-Barka	14.6	3,445	42.9	502	6.5	3,445	31.1	223
Debub	12.0	3,864	27.2	465	7.1	3,864	20.3	273
Education								
No education	17.1	6,234	33.3	1,067	9.0	6,234	24.0	561
Primary	12.2	3,429	41.7	417	8.0	3,429	29.9	276
Middle	9.7	2,295	46.5	222	6.1	2,295	28.9	141
Secondary or above	7.2	1,856	39.7	133	4.7	1,856	38.1	87
Missing	40.1	3	0.0	1	40.1	3	0.0	1
Wealth quintile								
Lowest	17.7	2,518	27.8	445	9.7	2,518	19.2	245
Second	17.2	2,944	32.0	508	9.8	2,944	22.0	287
Middle	14.0	3,075	42.4	431	8.3	3,075	28.9	255
Fourth	9.9	2,951	49.4	293	6.0	2,951	40.6	176
Highest	7.0	2,329	43.8	164	4.4	2,329	34.5	103
Total	13.3	13,817	37.2	1,840	7.7	13,817	27.3	1,066

Note: Table is based on all the women who had a live birth in the five years preceding the survey in both CORE and MMM questionnaires.

Table 9-14 Means of transportation and time taken to reach health facility for delivery

Among women age 15-49 with live births in the 5 years preceding the survey, percentage of women by type of transportation and time taken to reach health facility for delivery of last pregnancy, by type of problem, according to background characteristics, Eritrea 2010

Background characteristic	Means of transportation				Time taken to reach health facility					Number of women with live births in health facility 5 years preceding the survey
	On foot/ stretches/ pack animals	Ambulance	Other vehicles	Total	<2 hours	2-4 hours	5 or more hours	Missing	Total	
Age										
15-19	35.4	17.7	46.9	100.0	90.1	8.2	1.7	0.0	100.0	187
20-34	30.1	18.1	51.8	100.0	95.2	3.9	0.8	0.1	100.0	3,370
35-49	26.6	19.7	53.6	100.0	94.4	4.6	0.9	0.1	100.0	1,522
Birth order										
1	27.4	18.0	54.7	100.0	93.7	5.3	0.7	0.3	100.0	1,498
2-3	27.8	18.2	54.0	100.0	95.8	3.3	0.9	0.0	100.0	1,753
4-5	30.8	19.9	49.3	100.0	95.1	3.8	1.1	0.0	100.0	1,050
6+	34.4	18.6	47.0	100.0	94.1	5.0	0.9	0.0	100.0	778
Marital status										
Never married	24.0	17.9	58.0	100.0	95.9	3.1	0.8	0.2	100.0	1,172
Married or living together	31.9	17.6	50.4	100.0	94.0	4.9	1.0	0.1	100.0	3,373
Divorced/ separated/ widowed	24.0	25.8	50.2	100.0	97.4	2.6	0.0	0.0	100.0	534
Employed last 12 months										
Not employed	31.9	18.0	50.1	100.0	94.3	4.7	0.9	0.1	100.0	3,701
Employed for cash	21.0	18.2	60.9	100.0	96.6	2.8	0.5	0.1	100.0	1,099
Employed not for cash	27.6	27.0	45.4	100.0	93.4	4.2	2.0	0.4	100.0	277
Missing	0.0	52.2	47.8	100.0	100.0	0.0	0.0	0.0	100.0	2
Residence										
Total urban	22.0	19.2	58.8	100.0	98.3	1.4	0.2	0.1	100.0	3,359
Asmara	4.7	11.2	84.1	100.0	99.5	0.3	0.1	0.1	100.0	1,513
Other Town	36.2	25.7	38.1	100.0	97.4	2.3	0.3	0.0	100.0	1,846
Rural	43.5	17.4	39.2	100.0	87.8	9.8	2.2	0.1	100.0	1,720
Region										
Debubawi Keih Bahri	34.3	28.7	37.0	100.0	86.8	9.4	3.8	0.0	100.0	86
Maekel	6.7	12.4	80.9	100.0	99.2	0.7	0.0	0.1	100.0	1,881
Semenawi Keih Bahri	54.5	10.9	34.5	100.0	94.0	4.4	1.6	0.0	100.0	554
Anseba	55.0	7.6	37.3	100.0	94.6	4.7	0.8	0.0	100.0	622
Gash-Barka	27.6	23.2	49.2	100.0	89.2	8.6	1.8	0.4	100.0	664
Debub	39.6	33.2	27.2	100.0	92.2	6.7	1.1	0.0	100.0	1,272
Education										
No education	45.2	18.0	36.9	100.0	87.9	9.7	2.3	0.2	100.0	1,057
Primary	40.3	21.3	38.3	100.0	94.3	4.4	1.3	0.0	100.0	1,145
Middle	24.0	21.5	54.6	100.0	96.0	3.8	0.3	0.0	100.0	1,351
Secondary or above	14.7	14.3	71.0	100.0	98.9	0.9	0.1	0.1	100.0	1,525
Missing	100.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	100.0	1
Wealth quintile										
Lowest	56.3	9.1	34.6	100.0	82.5	13.7	3.8	0.0	100.0	240
Second	60.4	14.6	25.0	100.0	82.3	13.5	3.9	0.3	100.0	389
Middle	44.1	21.1	34.8	100.0	88.1	9.6	2.1	0.2	100.0	760
Fourth	33.2	23.0	43.7	100.0	97.6	2.3	0.1	0.0	100.0	1,583
Highest	12.2	16.1	71.7	100.0	98.8	1.0	0.1	0.1	100.0	2,108
Total	29.3	18.6	52.2	100.0	94.8	4.3	0.9	0.1	100.0	5,079

Note: Table is based on all the women who had a live birth delivered in the health facility in the five years preceding the survey in both CORE and MMM questionnaires.

9.7 Reasons for not Delivering in a Health Facility

Many factors can prevent women from getting medical advice or treatment for themselves when they are sick or have complications. Information on such factors is particularly important in understanding and addressing the barriers women may face in seeking care during pregnancy, at the time of delivery and post-delivery. In the 2010EPHS, 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 transportation, not wanting to go alone, concern that there may not be a female health provider, and concern that there may not be a health provider available. The results are shown in Table 9-15.

The most common reason given for not utilizing delivery services given by 40 percent of the Eritrean women respondents was a concern that the facility was too far or not available. The second most common reason stated was that it was not necessary to deliver at a health facility (32 percent of respondents), followed by it not being customary to deliver in a health facility (19 percent).

Most people in Eritrea, especially men, have the perception that women do not utilize facilities to deliver their babies because a female provider is not available. Surprisingly, the presence of a female provide was not a major concern for women respondents, as reflected in the negligible percentage who reported it (less than one percent). Very few women mentioned that the reason for not delivering in the health facility was because service was poor (less than two percent). Because most of the service charge is nominal or free, few reported cost as a concern (less than three percent). Less than one percent of women in Eritrea said the reason for not utilizing services was because they did not have permission from husband or family.

Looking at the regional variation for the reason for not utilizing delivery services, the survey revealed that 88 percent of Debubawi Keih Bahri, 61 percent of Semenawi Keih Bahri and Anseba women mentioned distance of health facility as a barrier, compared to 28 percent of women respondents from Maekel. Most Gash-Barka respondents mentioned that it was not necessary to deliver in the health facility. Forty-four percent of rural women mentioned distance as a barrier for service utilization, compared to 14 percent of urban women. Fifty-three percent of the lowest wealth quintile said distance as a barrier, compared to only 12 percent of the highest wealth quintile.

Table 9-15 Reasons for not delivering in health facility

Among women age 15-49 with live births in the 5 years preceding the survey and did not deliver their last birth in health facility, percentage by reasons for not delivering in the health facility, according to background characteristics, Eritrea 2010

	Reason for not delivering in health facility									
Background characteristic	Cost too much	Facility too far/ not available	Poor quality service	No female service provider at facility	Husband/ family did not allow	Not necessary	Not customary	Reinfibulations	At least one reason	Number of women who did not deliver in health facility
Age										
15-19	0.9	45.2	2.3	0.0	2.5	30.6	15.7	0.0	87.8	409
20-34	2.5	40.1	1.2	0.4	0.7	32.3	19.2	0.1	87.0	5,502
35-49	3.0	40.1	1.9	0.6	0.4	31.1	20.1	0.1	86.8	2,808
Birth order										
1	1.9	43.8	1.7	0.5	1.6	29.9	18.1	0.1	87.3	1,594
2-3	2.2	38.5	1.3	0.3	0.5	32.6	19.1	0.2	85.6	2,803
4-5	3.9	39.7	1.4	0.6	0.8	31.8	20.1	0.1	88.1	2,111
6+	2.4	40.8	1.7	0.6	0.1	32.3	19.6	0.1	87.4	2,211
Marital status										
Never married	2.8	33.9	1.6	0.3	0.5	34.8	17.8	0.0	83.3	1,239
Married or living together	2.7	42.1	1.5	0.5	0.7	30.7	19.6	0.1	87.7	6,768
Divorced/separated/ widowed	1.5	34.5	0.9	0.2	1.1	37.1	18.8	0.0	86.0	712
Employed last 12 months										
Not employed	2.8	41.5	1.5	0.5	0.7	31.0	19.0	0.1	87.2	7,351
Employed for cash	1.3	32.3	2.3	0.6	0.5	37.4	16.7	0.2	81.9	718
Employed not for cash	2.2	36.5	0.9	0.1	0.5	35.6	24.9	0.0	89.7	650
Residence										
Total urban	3.0	13.7	1.0	0.3	0.9	40.6	14.2	0.4	69.8	1,084
Asmara	9.8	16.7	1.4	0.0	0.0	18.8	3.4	0.0	46.8	124
Other Town	2.1	13.4	0.9	0.3	1.0	43.5	15.6	0.5	72.8	960
Rural	2.6	44.1	1.6	0.5	0.6	30.6	20.0	0.1	89.4	7,635
Zoba										
Debubawi Keih Bahri	1.3	87.9	0.7	1.6	1.0	6.2	29.5	0.9	97.8	124
Maekel	7.2	28.1	1.9	0.0	0.3	31.9	11.4	0.0	74.5	648
Semenawi Keih Bahri	2.3	60.9	0.7	0.5	0.7	19.0	13.4	0.0	89.0	1,076
Anseba	3.9	57.9	1.5	0.3	0.4	18.4	15.5	0.2	85.2	1,509
Gash-Barka	2.1	24.9	2.7	1.0	1.3	43.9	29.1	0.2	92.6	2,772
Debub	1.4	39.0	0.5	0.1	0.3	33.3	14.9	0.0	83.7	2,590
Education										
No education	2.8	45.4	1.4	0.7	0.8	29.6	21.8	0.1	91.4	5,166
Primary	2.5	37.3	1.7	0.1	0.4	33.9	18.1	0.1	85.0	2,282
Middle	2.3	25.5	1.6	0.0	0.7	39.1	12.1	0.2	75.2	942
Secondary or above	1.6	24.3	0.7	0.6	0.5	31.3	7.7	0.0	64.0	327
Missing	0.0	0.0	0.0	0.0	0.0	53.5	46.5	0.0	100.0	3
Wealth quintile										
Lowest	2.3	52.7	1.4	0.5	0.6	26.8	21.6	0.0	93.7	2,271
Second	2.1	47.1	1.5	0.8	0.7	30.2	20.5	0.1	91.1	2,550
Middle	3.1	33.9	1.5	0.3	1.0	35.1	19.5	0.1	85.8	2,313
Fourth	3.0	22.7	1.5	0.1	0.3	37.7	14.5	0.3	74.8	1,367
Highest	3.5	12.0	1.8	0.6	0.3	31.9	9.3	0.1	57.3	219
Total	2.6	40.3	1.5	0.5	0.7	31.8	19.3	0.1	87.0	8,719

Note: Table is based on all the women who had a live birth not delivered in the health facility in the five years preceding the survey in both CORE and MMM questionnaires.

9.8 Obstetric Fistula

Obstetric fistula is a complication that arises from obstructed or prolonged labor resulting in a hole between the bladder and vagina (vesicovaginal fistula, VVF) or between the rectum and vagina (rectovaginal fistula, RVF). Generally speaking, if a woman's baby will not fit through her birth canal because her pelvis is too small or the baby is too big or badly positioned, then the labor is said to be obstructed. The baby's head becomes wedged in the mother's pelvis, cutting off the blood supply to the soft tissue of her bladder, urethra, rectum and vagina. If there is inadequate obstetric care, and a woman is in obstructed labor for 3 or 4 days without relief, the baby usually dies. If a mother survives her injured pelvic tissue degenerates, creating a fistula.

Fistula can also result from sexual complications and pelvic surgery. Under development of the pelvis, arising from chronic malnutrition is a common cause of obstructed labor that can result in fistula. Obstetric fistula is almost entirely preventable with timely and effective medical intervention. Fistula therefore, occurs disproportionately among impoverished girls and women, especially those living far from medical services and emergency obstetric care. Women are left with chronic incontinence, which may result in social exclusion and rejection, shame, and stigma as well as economic problems. Many of them do not know it can be treated which has resulted in many living and suffering with this condition for a long period. An estimated two million women in sub-Sahara Africa, South Asia, and the Arab world are living with the condition, and some 50,000-100,000 new cases occur each year (UNFPA 2008).

9.8.1 Knowledge and prevalence of obstetric fistula

The 2010 EPHS included a series of questions on obstetric fistula to measure awareness, to estimate the prevalence of this condition among Eritrean women, and to examine events reported to precipitate fistula symptoms, as well as access to treatment.

Overall, 46 percent of respondents had heard about obstetric fistula, but less than one percent actually experienced fistula personally. Knowledge of obstetric fistula is higher among urban women (63 percent) than women residing in rural areas (34 percent) (Table 9-16). There is substantial variation in knowledge of fistula by age, 37 percent of women ages 15-19 years have heard of obstetric fistula, compared with 51 percent of women age 35-39 years. Knowledge of obstetric fistula is highest among women living in Maekel (72 percent), and lowest in Debubawi Keih Bahri (12 percent). Those with higher education had a higher knowledge of fistula (76 percent), compared to 26 percent of those with no education. In general women who live in Asmara, who have secondary or higher education, and who are in the highest wealth quintile are more likely to have heard of fistula problem than women who live in Debubawi Keih Bahri, who have no education and who are in the lowest wealth quintile.

Table 9-16 Knowledge and prevalence of fistula problem

Percentage of women age 15-49 who have heard of fistula problem and percentage who have experienced fistula problem, according to background characteristics, Eritrea 2010

Background characteristic	Percentage heard of fistula problem	Percentage experienced fistula problem	Number of women
Age			
15-19	37.0	0.08	6,864
20-24	49.3	0.27	5,080
25-29	49.7	0.43	4,882
30-34	48.9	0.48	3,633
35-39	50.9	0.37	4,186
40-44	45.3	0.46	2,750
45-49	43.5	0.59	2,830
Number of living children			
0	44.7	0.17	10,703
1-2	48.7	0.47	7,437
3-4	48.2	0.46	5,919
5+	42.0	0.35	6,165
Residence			
Total urban	63.3	0.32	12,222
Asmara	72.6	0.41	5,494
Other Town	55.7	0.25	6,728
Rural	34.0	0.35	18,002
Zoba			
Debubawi Keih Bahri	12.3	0.29	479
Maekel	71.8	0.34	7,486
Semenawi Keih Bahri	38.4	0.53	3,263
Anseba	44.5	0.30	4,243
Gash-Barka	17.7	0.16	6,727
Debub	50.9	0.42	8,026
Education			
No education	25.6	0.31	11,452
Primary	43.5	0.53	6,478
Middle	54.7	0.22	5,694
Secondary or above	75.6	0.30	6,595
Missing	15.4	0.00	6
Wealth quintile			
Lowest	22.6	0.28	5,027
Second	26.1	0.32	5,473
Middle	34.7	0.36	5,944
Fourth	60.3	0.41	6,504
Highest	72.9	0.30	7,277
Total	45.8	0.34	30,224

Note: Table is based on all the women in both CORE and MMM questionnaires.

9.8.2 Cause of the obstetric fistula problem

Information was collected during the survey from a small group of women who experienced fistula (n=102). The majority (56 percent) reported experiencing fistula symptoms after delivery. Eleven percent gave reasons other than those listed. Five percent reported that the fistula symptoms began after pelvic surgery, while three percent reported that fistula occurred after a sexual assault (Table 9-17). Women who experienced fistula after delivery tended to be more among women who reside in Asmara (69 percent), in women with no education (62 percent) and women in the middle wealth quintile (37 percent). For a little over a quarter of the respondents (26 percent) information on the cause of their fistula problem was missing.

Table 9-17 Cause of fistula problem

Percentage of women age 15-49 who experienced fistula problem by cause of the problem, according to background characteristics, Eritrea 2010

Background characteristic	Cause of the problem						Number of women experiencing fistula problem
	After delivery	After sexual assault	After pelvic surgery	Other	Missing	Total	
Age							
15-19	0.0	0.0	0.0	24.3	75.7	100.0	5
20-34	57.8	4.4	1.5	8.7	27.6	100.0	52
35-49	61.1	1.7	9.0	11.3	16.8	100.0	45
Number of living children							
0	18.9	11.5	12.6	21.8	35.2	100.0	18
1-2	66.8	2.8	7.3	5.5	17.7	100.0	35
3-4	67.7	0.0	0.0	7.8	24.6	100.0	27
5+	56.5	0.0	0.0	13.3	30.3	100.0	22
Residence							
Total urban	57.6	7.8	5.8	15.7	13.1	100.0	39
Asmara	68.8	7.7	3.5	8.5	11.5	100.0	23
Other Town	42.4	7.8	8.9	25.7	15.2	100.0	17
Rural	55.6	0.0	4.1	7.4	32.9	100.0	63
Zoba							
Debubawi Keih Bahri	40.0	0.0	0.0	0.0	60.0	100.0	1
Maekel	65.2	6.9	3.1	14.5	10.3	100.0	25
Semenawi Keih Bahri	52.8	0.0	0.0	28.4	18.8	100.0	17
Anseba	39.2	0.0	10.5	0.0	50.4	100.0	13
Gash-Barka	55.6	0.0	11.5	11.5	21.4	100.0	11
Debub	58.8	3.8	4.3	2.7	30.3	100.0	34
Education							
No education	62.1	0.0	7.3	13.7	16.9	100.0	35
Primary	56.9	5.1	0.0	9.9	28.1	100.0	34
Middle	55.4	0.0	0.0	20.4	24.2	100.0	13
Secondary or above	45.9	6.6	11.6	0.0	36.0	100.0	20
Wealth quintile							
Lowest	54.6	0.0	9.4	0.0	36.0	100.0	14
Second	83.5	0.0	0.0	7.2	9.2	100.0	18
Middle	37.4	0.0	5.9	5.1	51.7	100.0	21
Fourth	46.3	2.9	8.4	16.3	26.0	100.0	27
Highest	66.3	10.4	0.0	18.6	4.7	100.0	22
Total	56.4	3.0	4.7	10.6	25.3	100.0	102

Note: Table is based on all the women who have experienced fistula problem in both CORE and MMM questionnaires.

9.8.3 Fistula treatment and place of treatment

Sixty percent of women who experienced fistula problems sought treatment for their symptoms. Among those who sought treatment, nearly all (97 percent) received it from health professionals (Table 9-18). None of the five respondents in the 15-19 age group sought treatment for their fistula problem. Seventy-five percent of respondents living in the urban setting sought treatment while half (50 percent) of rural respondents did.

Table 9-18 Fistula treatment and place of treatment

Percentage of women age 15-49 who experienced fistula problem percentage who sought treatment, among those who sought treatment, percentage source of treatment, according to background characteristics, Eritrea 2010

			Source of treatment				
Background characteristic	Percentage who sought treatment	Number of women who experienced fistula problem	From health professional	Traditional practitioner/ Community health worker	Other	Total	Number of women sought treatment for fistula problem
Age							
15-19	0.0	5	-	-	-	0.0	0
20-34	54.1	52	100.0	0.0	0.0	100.0	28
35-49	72.8	45	95.0	1.4	3.6	100.0	33
Number of living children							
0	50.6	18	100.0	0.0	0.0	100.0	9
1-2	68.8	35	100.0	0.0	0.0	100.0	24
3-4	57.5	27	97.1	2.9	0.0	100.0	16
5+	54.6	22	90.0	0.0	10.0	100.0	12
Residence							
Total urban	74.4	39	100.0	0.0	0.0	100.0	29
Asmara	79.9	23	100.0	0.0	0.0	100.0	18
Other Town	66.9	17	100.0	0.0	0.0	100.0	11
Rural	50.3	63	94.8	1.4	3.7	100.0	31
Zoba							
Debubawi Keih Bahri	40.0	1	100.0	0.0	0.0	100.0	1
Maekel	78.2	25	100.0	0.0	0.0	100.0	20
Semenawi Keih Bahri	70.1	17	86.8	3.6	9.6	100.0	12
Anseba	49.6	13	100.0	0.0	0.0	100.0	6
Gash-Barka	33.0	11	100.0	0.0	0.0	100.0	4
Debub	53.2	34	100.0	0.0	0.0	100.0	18
Education							
No education	58.9	35	92.2	2.2	5.7	100.0	21
Primary	61.1	34	100.0	0.0	0.0	100.0	21
Middle	67.5	13	100.0	0.0	0.0	100.0	9
Secondary or above	52.9	20	100.0	0.0	0.0	100.0	10
Wealth quintile							
Lowest	49.0	14	93.5	6.5	0.0	100.0	7
Second	58.6	18	88.7	0.0	11.3	100.0	10
Middle	38.3	21	100.0	0.0	0.0	100.0	8
Fourth	66.5	27	100.0	0.0	0.0	100.0	18
Highest	79.6	22	100.0	0.0	0.0	100.0	17
Total	59.6	102	97.3	0.7	1.9	100.0	61

Note: Table is based on all the women who have experienced fistula problem in both CORE and MMM questionnaires.

9.8.4 Reason for not seeking treatment for fistula problem

Among women who experienced fistula symptoms 40 percent did not seek treatment. The three most common reasons for not seeking treatment for fistula problems were that the women thought it could not be fixed (24 percent); that the service was too far away (21 percent); and the service was too expensive (18 percent). Seven percent of women did not seek care because they were either embarrassed or they did not know where to go (Table 9-19).

Table 9-19 Reason for not seeking treatment for fistula problem

Percentage of women age 15-49 who experienced fistula problem percentage who did not seek treatment, among those who did not seek treatment, percentage by reason, according to background characteristics, Eritrea 2010

	Reason for not getting treated for the problem							
Background characteristic	Thinking it could not be fixed	Don't know where to go	Treatment too expensive	Service too far	Poor quality of care	Embarrassment	At least one reason for not seeking treatment	Number of women who did not seek treatment
Age								
15-19	100.0	0.0	0.0	0.0	0.0	0.0	100.0	1.3
20-34	25.7	0.0	28.5	10.0	6.4	11.6	65.8	10.5
35-49	0.0	25.7	0.0	51.7	0.0	0.0	77.4	4.7
Number of living children								
0	49.2	0.0	0.0	0.0	0.0	0.0	49.2	2.5
1-2	38.2	0.0	36.1	22.0	14.1	25.7	100.0	4.8
3-4	18.3	24.8	8.8	0.0	0.0	0.0	51.9	4.8
5+	0.0	0.0	19.9	56.3	0.0	0.0	76.2	4.3
Marital status								
Never married	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.9
Married or living together	19.7	7.7	19.3	22.3	4.3	7.9	70.1	15.5
Employed last 12 months								
Not employed	25.0	0.0	15.9	19.7	5.5	9.9	70.5	12.3
Employed for cash	41.4	10.8	0.0	0.0	0.0	0.0	52.3	2.1
Employed not for cash	0.0	48.1	51.9	51.9	0.0	0.0	100.0	2.0
Residence								
Total urban	36.1	0.0	7.2	0.0	0.0	0.0	43.2	5.9
Asmara	45.7	0.0	0.0	0.0	0.0	0.0	45.7	1.9
Other Town	31.4	0.0	10.6	0.0	0.0	0.0	42.0	4.0
Rural	17.3	11.4	24.5	33.0	6.4	11.6	87.9	10.5
Region								
Maekel	30.5	33.2	0.0	0.0	0.0	0.0	63.7	2.9
Semenawi Keih Bahri	31.0	12.1	57.0	0.0	34.9	0.0	100.0	1.9
Gash-Barka	41.3	0.0	0.0	0.0	0.0	20.4	61.7	6.0
Debub	0.0	0.0	33.9	61.7	0.0	0.0	76.9	5.6
Education								
No education	7.0	14.1	35.3	40.8	7.9	0.0	85.0	8.5
Primary	52.4	0.0	0.0	0.0	0.0	25.9	78.3	4.7
Middle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Secondary or above	40.7	0.0	0.0	0.0	0.0	0.0	40.7	2.2
Wealth quintile								
Lowest	28.3	11.0	0.0	0.0	0.0	0.0	39.3	2.1
Second	21.4	0.0	15.0	42.3	0.0	21.4	100.0	5.7
Middle	0.0	0.0	100.0	48.9	31.3	0.0	100.0	2.1
Fourth	0.0	31.8	0.0	0.0	0.0	0.0	31.8	3.0
Highest	62.4	0.0	0.0	0.0	0.0	0.0	62.4	3.4
Total	24.1	7.3	18.2	21.1	4.1	7.4	71.7	16.4

Note: Table is based on all the women who have experienced fistula problem, but did not seek treatment in both CORE and MMM questionnaires.

CHILD HEALTH 10

Key Findings

- Eighty three percent of children age 12-23 months were fully vaccinated at the time of the survey, an increase from the level of 41 percent in EDHS1995 and 76 percent reported in EDHS2002.
- Eleven percent of children under age 5 showed symptoms of acute respiratory infection (ARI) in the two weeks before the survey; for 45 percent of them, advice or treatment was sought from a health care facility or provider.
- Nineteen percent of children under age 5 had fever in the two weeks before the survey.
- Nine percent of children under age 5 had diarrhea, including 2 percent with bloody diarrhea, in the two weeks before the survey; 34 percent of them were taken for advice or treatment.

This chapter presents findings relevant to child health and survival, including characteristics of the neonate (birth weight and size), the vaccination status of young children, and treatment practices—particularly contact with health services—among children suffering from three childhood illnesses: acute respiratory infection (ARI), fever, and diarrhea. Because appropriate sanitary practices can help prevent and reduce the severity of diarrheal disease, information is also provided on how children's faecal matter is disposed of. These results from the EPHS2010 are expected to assist policymakers and program managers as they formulate appropriate strategies and interventions to improve the health of children in Eritrea. In particular, the results can be used to assess the progress of the Health Sector Strategic Plan (HSSP), 2012-2016. One of the four priority intervention areas of the plan is improving child health, with the goal being to ensure that Eritrea achieves Millennium Development Goal 4 and 5.

10.1 Child's Weight and 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. It is also an indicator of the general socio-economic status of a country. Children whose birth weight is less than 2.5 kg, 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 the mother's estimate is subjective, it can be a useful proxy for the weight of the child. Information on children's weight and size at birth according to background characteristics is given in Table 10-1.

Thirty-five percent of children born in the five years preceding the survey had been weighed at birth, an increase of 5 percentage points since EDHS2002. Among the children with a reported birth weight, 7 percent weighed less than 2.5 kg at birth. Birth weight is lowest among children born to women

Table 10-1 Child's weight and size at birth

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

	Percent distribution of births with a reported birthweight[1]					Percent distribution of all live births by size of child at birth					
Background acharacteristic	Less than 2.5 kg	2.5 kg or more	Total	Number of births with reported birth weight	Percentage of all births with a reported birth weight	Very small	Smaller than average	Average or larger	Don't know/ missing	Total	Number of births
Mother's age at birth											
<20	10.1	89.9	100.0	292	34.6	12.4	7.6	77.7	2.3	100.0	844
20-34	6.0	94.0	100.0	1,763	35.9	10.1	6.4	80.2	3.3	100.0	4,912
35-49	8.5	91.5	100.0	387	30.8	13.3	7.5	77.4	1.8	100.0	1,257
Birth order											
1	8.8	91.2	100.0	652	45.7	12.1	6.8	78.3	2.8	100.0	1,427
2-3	6.0	94.0	100.0	911	37.5	8.5	6.6	81.9	3.0	100.0	2,431
4-5	7.0	93.0	100.0	521	31.2	12.5	7.3	77.1	3.1	100.0	1,670
6+	5.6	94.4	100.0	358	24.1	12.0	6.2	79.0	2.8	100.0	1,485
Mother's smoking status											
Smokes cigarettes/ tobacco	0.0	100.0	100.0	5	20.1	29.4	7.9	56.2	6.6	100.0	26
Does not smoke	6.9	93.1	100.0	2,437	34.9	10.9	6.7	79.5	2.9	100.0	6,987
Residence											
Total urban	6.4	93.6	100.0	1,574	74.1	6.8	5.5	86.1	1.6	100.0	2,124
Asmara	6.3	93.7	100.0	734	97.2	4.1	3.3	92.4	0.2	100.0	755
Other Town	6.5	93.5	100.0	840	61.4	8.3	6.6	82.7	2.3	100.0	1,369
Rural	7.7	92.3	100.0	868	17.8	12.7	7.3	76.5	3.5	100.0	4,889
Zoba											
Debubawi Keih Bahri	9.1	90.9	100.0	34	30.2	13.6	10.1	59.3	17.0	100.0	114
Maekel	5.9	94.1	100.0	1,007	83.8	5.1	2.5	92.0	0.4	100.0	1,202
Semenawi Keih Bahri	7.9	92.1	100.0	251	29.1	13.9	7.5	70.5	8.0	100.0	864
Anseba	6.9	93.1	100.0	212	18.9	16.3	9.4	72.1	2.2	100.0	1,119
Gash-Barka	6.7	93.3	100.0	388	21.4	9.4	9.1	77.8	3.7	100.0	1,813
Debub	8.2	91.8	100.0	550	28.9	11.5	5.0	82.5	1.0	100.0	1,901
Mother's education											
No education	7.9	92.1	100.0	497	15.1	13.7	8.2	73.6	4.5	100.0	3,288
Primary	7.2	92.8	100.0	547	32.2	9.7	6.1	81.8	2.4	100.0	1,698
Middle	5.9	94.1	100.0	641	58.0	9.0	6.1	83.8	1.1	100.0	1,104
Secondary or above	6.8	93.2	100.0	757	82.4	5.6	3.4	90.5	0.5	100.0	919
Wealth quintile											
Lowest	5.7	94.3	100.0	113	7.9	14.7	9.0	72.8	3.5	100.0	1,426
Second	9.5	90.5	100.0	189	12.7	13.8	7.9	73.3	4.9	100.0	1,485
Middle	9.6	90.4	100.0	348	22.6	11.0	7.7	78.1	3.2	100.0	1,542
Fourth	6.7	93.3	100.0	770	53.4	8.4	4.2	85.5	1.9	100.0	1,442
Highest	5.7	94.3	100.0	1,022	91.3	5.4	4.3	89.9	0.4	100.0	1,119
Total	6.9	93.1	100.0	2,442	34.8	10.9	6.7	79.4	2.9	100.0	7,013

Note: Table is based on the CORE questionnaires.
[1] Based on either a written record or the mother's recall

(age 20-34 years) and highest in the age group < 20 years. Low birth weight is also highest in the first birth order and least in the 6+ birth order. Children of women with no education and children of women in the second and middle wealth quintile have the highest low birth weight. Low Birth weight also varies by zoba, with Maekel having the lowest low birth weight (6 percent), while Debubawi Keih Bahri having the highest low birth weight (9 percent). Low birth weight also varies by place of residence; with total urban 6 percent while rural is 8 percent.

As noted, a mother's subjective assessment of the size of the baby at birth, in the absence of birth weight, may be useful. Mothers reported 11 percent of all live births in the five years preceding the survey to be very small and 7 percent as smaller than average. Children born to mothers age 35-49 years and children of 4-5 order births are slightly more likely to be reported as very small or smaller than average. In addition, children of mothers with no education and children born to mothers in the lowest wealth quintile are slightly more likely to be reported as very small or smaller than average at birth. Among the zobas, more children born to mothers residing in Anseba (26 percent), Debubawi Keih Bahri (24 percent), and Semenawi Keih Bahri (21 percent) are reported as either very small or smaller than average at birth.

10.2 Vaccination Coverage

Immunization of children against the eight vaccine-preventable diseases (tuberculosis, diphtheria, whooping cough (pertussis), tetanus, hepatitis B, Haemophilus influenzae, 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 Programme on Immunization (EPI).

According to 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 diphtheria, pertussis, and tetanus (DPT) and polio vaccines, and a measles vaccination by the age of 9 months. The pentavalent vaccine DPT-HepB-Hib that protects against diphtheria, pertussis (whooping cough), tetanus, hepatitis B, and Haemophilus influenzae type b has replaced the DPT vaccine. In Eritrea, the vaccination policy calls for BCG vaccine given at birth or at first clinical contact, three doses of DPT-HepB- Hib vaccine given at approximately age 6, 10, and 14 weeks, four doses of oral polio vaccine given approximately at age 0-2, 6, 10, and 14 weeks, and measles vaccine given at or soon after reaching age 9 months.

Information on vaccination coverage was obtained in two ways – from child health cards and from mothers' verbal reports. All mothers were asked to show the interviewer the child health cards in which immunization dates were recorded for all children in the study age group. If a card was available, the interviewer recorded onto the questionnaire the dates of each vaccination received by the child. If a child never received a health card; if the mother was unable to show the card to the interviewer; or if a particular vaccination was not recorded on the child's health card, the vaccination information for the child was based on the mother's report.

Questions were asked for each vaccine type. Mothers were asked to recall whether the child had received BCG, Polio, Pentavalent (DPT-HepB-Hib), and Measles vaccinations. If the mother indicated that the child had received the Polio or DPT/pentavalent vaccines, she was asked about the number of

doses that the child received. The mother was then asked whether the child had received other vaccinations that were not recorded on the card, and they too were noted on the questionnaire. The results presented here are based on both health card information and, for children without a card, information provided by the mother.

Information on vaccination coverage for children age 12-23 months is given in Table 10-2. Coverage levels include data from both health cards and verbal reports of mothers. Overall, 83 percent of children ages 12-23 months are fully vaccinated: 95 percent had received the BCG vaccine, 93 percent had received DPT 1-3 vaccinations, 91 percent had received polio 1-3, and 91 percent had received the measles vaccine at any time before the survey. Two percent of children age 12-23 months have not received any vaccinations. The coverage of the first DPT and polio vaccine is very high (97 and 98 percent, respectively). However, coverage for all three vaccination dosages of DPT and polio declines with subsequent doses; only 93 percent of children received all three DPT vaccines and 91 percent of children received all three of the recommended polio vaccinations. These figures reflect dropout rates (the proportion of children who received the first dose of a vaccine but who did not get the third dose) of 4 percent for DPT and 7 percent for Polio.

Vaccination coverage for children who have reached age 12 months is also shown in Table 10-2. The coverage rates for each vaccination by the time the child reaches 12 months is a measure of the children receiving vaccines on time. Overall, 76percent of children are fully vaccinated by 12 months, while 83 percent is the overall vaccinations at all ages (12-23 months).

An immunization card/book was seen for 85 percent of children age 12-23 months (Table 10-3). First-order births (82 percent), children living in rural areas (84 percent), children living in Debubawi Keih Bahri (75 percent), and children of mothers with no education (82 percent) have lower percentages with a vaccination card seen compared with their counterparts. Children of households in the lowest wealth quintile are less likely to have a vaccination card seen (77 percent0 compared with children in the other quintiles.

There is no notable difference in vaccination coverage between male and female children (Table 10-3). Vaccination coverage decreases as birth order increases; first births are more likely to be fully immunized (85 percent) than births of order six and higher (79 percent). Children living in urban areas are more likely than those living in rural areas to be fully vaccinated (90 percent and 80 percent, respectively).

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, Eritrea 2010

Source of Information	BCG	DPT 1	DPT 2	DPT 3	Polio 0[1]	Polio1	Polio2	Polio3	Measles	All basic vaccinations[2]	No vaccinations	Number of children
Vaccinated at any time before survey												
Vaccination card	82.7	85.2	84.7	82.7	50.2	85.1	84.8	82.4	79.7	76.7	0.0	1,127
Mother's report [3]	12.0	12.2	11.9	10.1	5.1	13.0	12.3	8.0	11.8	6.3	1.8	196
Either source	94.8	97.4	96.6	92.8	55.3	98.1	97.0	90.5	91.4	83.0	1.8	1,323
Vaccinated by 12 months of age	94.2	97.0	96.0	90.8	55.1	97.7	96.3	88.6	83.7	75.5	2.1	1,323

Note: Table is based on the CORE questionnaires.
[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.

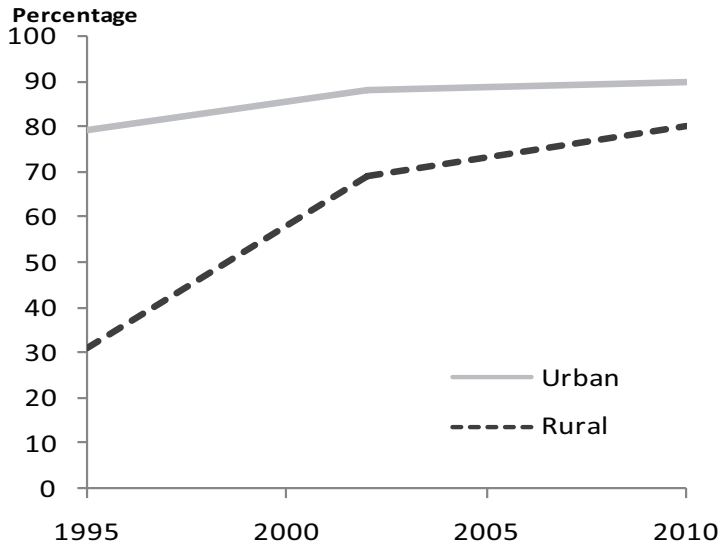
Table 10-3 Vaccinations by background characteristics

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, Eritrea 2010

Background characteristic	BCG	DPT 1	DPT 2	DPT 3	Polio 0[1]	Polio1	Polio2	Polio3	Measles	All basic vaccinations[2]	No vaccinations	Percentage with a vaccination card seen	Number of children
Sex													
Male	94.1	97.2	96.6	92.6	54.2	97.4	96.9	88.7	91.6	82.6	2.3	85.3	692
Female	95.5	97.5	96.5	93.1	56.4	98.8	97.1	92.4	91.3	83.5	1.2	85.1	632
Birth order													
1	97.0	97.2	96.7	93.7	63.6	98.9	97.6	91.6	95.2	85.3	1.1	82.3	257
2-3	95.0	97.6	97.2	94.3	59.9	98.0	96.7	90.6	93.7	85.2	1.6	86.8	508
4-5	93.7	96.8	95.5	89.7	48.8	97.1	96.2	88.5	88.0	81.0	2.9	83.8	302
6+	93.4	97.8	96.6	92.7	45.4	98.4	98.0	91.4	87.2	78.7	1.6	86.5	255
Residence													
Total urban	98.4	99.5	98.8	97.1	88.2	99.5	99.0	92.8	97.4	89.8	0.5	88.1	427
Asmara	100.0	100.0	98.8	96.9	98.5	100.0	98.8	92.9	99.8	92.7	0.0	90.2	162
Other Town	97.4	99.1	98.8	97.3	81.9	99.1	99.1	92.8	96.0	88.0	0.9	86.8	265
Rural	93.0	96.4	95.6	90.8	39.6	97.4	96.1	89.3	88.6	79.8	2.4	83.8	897
Zoba													
Debubawi Keih Bahri	79.2	94.6	93.5	89.7	57.1	96.7	94.8	82.8	87.0	65.6	2.5	74.6	19
Maekel	100.0	100.0	99.2	97.9	90.9	100.0	99.2	94.1	99.0	93.1	0.0	92.3	237
Semenawi Keih Bahri	88.6	93.3	91.5	87.4	48.7	94.6	93.0	84.8	85.8	75.6	5.4	84.9	160
Anseba	95.7	99.0	98.2	94.5	46.7	99.5	99.5	94.3	93.0	83.3	0.0	90.0	204
Gash-Barka	92.8	95.5	94.5	87.0	47.6	95.8	94.7	86.9	82.9	76.2	4.2	80.1	322
Debub	95.9	98.4	98.2	96.1	46.8	99.5	98.1	91.9	95.7	86.2	0.3	83.1	381
Mother's education													
No education	89.9	95.4	94.4	88.6	40.6	96.3	95.1	86.8	84.7	74.6	3.5	82.4	587
Primary	97.2	98.2	97.3	94.4	48.7	99.0	98.1	94.5	94.2	88.9	1.0	86.3	295
Middle	99.2	99.0	98.1	95.9	72.2	99.6	97.8	93.1	97.8	89.5	0.0	87.9	228
Secondary or above	100.0	100.0	100.0	99.1	86.5	100.0	100.0	92.1	99.4	91.0	0.0	88.4	213
Wealth quintile													
Lowest	91.1	94.8	93.1	85.1	28.6	95.7	94.6	83.0	82.2	68.1	4.0	76.6	254
Second	88.4	93.9	93.6	88.5	38.1	95.9	95.6	91.0	87.0	78.0	4.1	83.7	272
Middle	96.7	99.1	97.9	94.6	48.7	99.9	97.4	91.4	92.4	85.6	0.0	89.2	288
Fourth	98.2	99.2	99.2	98.1	67.9	98.8	98.4	94.0	96.0	91.0	0.8	86.7	271
Highest	99.7	100.0	99.2	97.9	96.8	100.0	99.2	92.6	100.0	92.3	0.0	89.4	239
Total	94.8	97.4	96.6	92.8	55.3	98.1	97.0	90.5	91.4	83.0	1.8	85.2	1,323

Note: Table is based on the CORE questionnaires.
[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)

Figure 10-1 Vaccination coverage by residence



Children residing in Asmara are the most likely to have received all of their vaccinations (93 percent). It is also notable that the gap between rural and urban is progressively narrowing as can be seen in Figure 10-1. When vaccination coverage is compared among children by zobas, Maekel has the highest coverage (93 percent), while Debubawi Keih Bahri has the lowest coverage (66 percent).

Vaccination coverage increases as the educational attainment of a child's mother increases. For example, 75 percent of children whose mothers have no education are fully immunized, compared to 91 percent among children of mothers with secondary or higher education. Similarly, vaccination coverage increases as the wealth quintile increases. For example, 68 percent of children in households in the lowest wealth quintile are fully immunized compared with children in households in the highest wealth quintiles (92 percent).

10.2.1 Trends in vaccination coverage

Trends in vaccination coverage can be seen by comparing coverage among children of different age groups in the EPHS2010. Table 10-4 shows the percentage of children who have received vaccinations during the first year of life by current age. These data provide information on trends in vaccination coverage over the past five years.

The percentage of children who have received no vaccinations at all by age 12 months has shown variation over the past four years. At the time of the survey, 7 percent of children age 48-59 months had not received any vaccinations compared with 2 percent of children age 12-23 months during their first year of life. Among children who had received all basic vaccinations by age 12 months, there is a slight increase, from 71 percent of children age 48-59 months to 76 percent of children age 12-23 months within the same

Table 10-4 Vaccinations in first year of life

Percentage of children age 12-59 months at the time of the survey who received specific vaccines by 12 months of age, and percentage with a vaccination card, by current age of child, Eritrea 2010

Age in months	BCG	DPT 1	DPT 2	DPT 3	Polio 0[1]	Polio 1	Polio 2	Polio 3	Measles	All basic vaccinations[2]	No vaccinations	Percentage with a vaccination card seen	Number of children
FINAL TABLE													
12-23	94.2	97.0	96.0	90.8	55.1	97.7	96.3	88.6	83.7	75.5	2.1	85.2	1,323
24-35	91.9	94.6	93.5	89.4	48.0	95.3	94.2	86.5	82.9	73.5	3.6	80.5	1,317
36-47	93.1	93.8	91.4	87.8	46.5	95.4	92.6	84.5	81.1	70.8	4.3	74.1	1,354
48-59	89.7	91.1	89.8	85.3	41.2	92.8	91.3	83.9	80.9	71.3	6.5	71.9	1,415
Total	92.2	94.1	92.7	88.3	47.6	95.3	93.6	85.9	82.2	72.7	4.2	77.8	5,409

Note: Table is based on the CORE questionnaires.
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)

period of four years. This shows some improvement in vaccination coverage in recent years. Vaccination cards were shown for 85 percent of children age 12-23 months but for only 72 percent of children age 48-59 months. This may be because vaccination cards for older children have been discarded or lost.

Trends in immunization coverage can also be identified by comparing data collected from the different DHS surveys. Figure 10-1 shows trends in vaccination coverage seen by comparing the results of the EDHS1995, EDHS2002, and EPHS2010 surveys. It should be noted that all survey data's are from the entire country. Therefore, the trends presented here should be interpreted in that light.

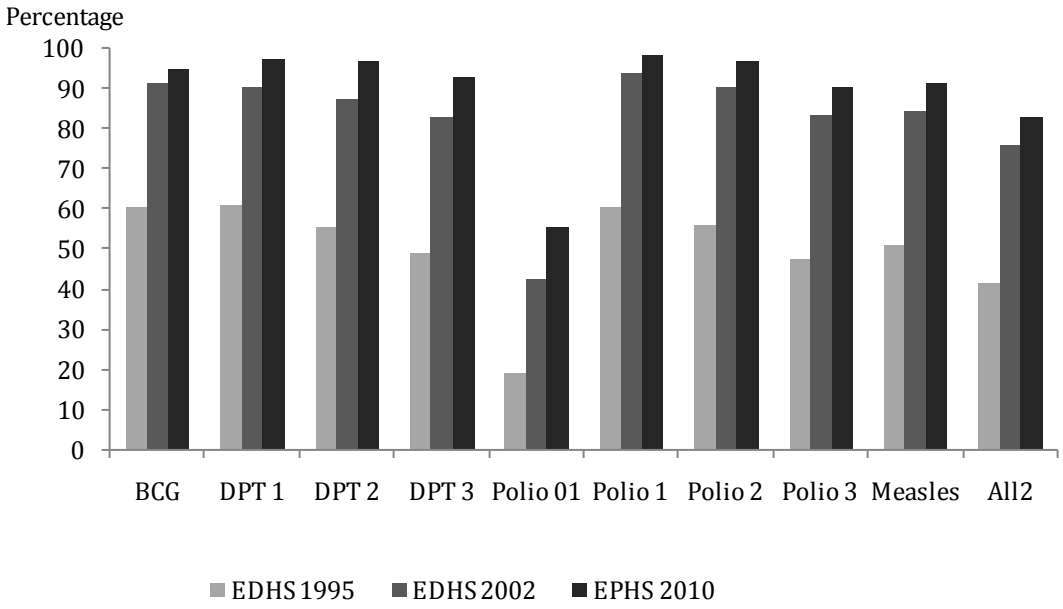
Figure 10-1 shows that vaccination coverage in Eritrea has improved over the past fifteen years. The percentage of children age 12-23 months fully vaccinated by 12 months of age has increased from 41 percent in 1995 to 76 percent in 2002 and 83 percent in 2010. There has also been a steady decrease in the proportion of children who received none of the basic, recommended vaccinations, from 38 percent in 1995 to 5 percent in 2002 and to 2 percent in 2010. The percentage of children who received each specific vaccination has also increased in the past fifteen years.

10.3 Acute Respiratory Infection

Acute respiratory infection (ARI) is among the leading causes of child morbidity and mortality in Eritrea. Pneumonia is the most serious illness of ARI in young children. Early diagnosis and treatment of pneumonia with antibiotics can prevent a large proportion of deaths. In the EPHS2010, ARI prevalence was estimated by asking mothers whether any of their children under age five had been ill with a cough accompanied by short, rapid breathing in the two weeks preceding the survey. These data are subjective (i.e., based on the mother's perception of illness) and not validated by a medical examination.

Eleven percent of children showed symptoms of ARI in the two weeks before the survey (Table 10-5). The percentage of children with reported ARI symptoms peaks at age 6-11 and 12-23 months (15 percent each) and declines thereafter. This tendency is consistent for all the three childhood illnesses: acute

Figure 10-2 **Trends in vaccination coverage during the first year of life among children 12-23 months**



respiratory infection (ARI), fever, and diarrhea and can be seen in Figure 10-3. There are no significant differences in the prevalence of ARI between female and male children. Furthermore, children living in households that use firewood/straw and charcoal/coal/lignite for cooking are more likely to exhibit symptoms of ARI than children living in households using other methods for cooking.

A slightly lower proportion of children in urban areas (9 percent) have symptoms of ARI than do children in rural areas (12 percent). The proportion of children with ARI symptoms ranges from 6 percent in Maekel to 19 percent in Semenawi Keih Bahri. ARI prevalence tends to decrease with an increase in mother's educational attainment. Children of mothers with no education (13 percent) or primary education (12 percent) are slightly more likely to experience ARI symptoms than children of mothers with secondary or higher education (9 percent) and middle education (7 percent). ARI symptoms are lowest in the highest quintiles (7 percent).

Forty-five percent of children under the age of five with symptoms of ARI were taken to a health facility or provider for advice or treatment. This represents a slight increase as compared to in EDHS1995 (37 percent) but no major change from that of EDHS2002. Health-treatment-seeking behaviour for children with ARI symptoms is more common among children age 6-11, 12-23 and 24-35 months (each with 50 percent) but lowest in the age group 48-59 months (34 percent). Urban children are also more likely than rural children to have been taken to a health facility or provider for treatment, as are those children residing in Asmara. Children of women with no education are least likely to be taken to a health facility or provider when they have ARI symptoms compared with children of mothers with secondary education or higher (38 percent and 55 percent, respectively). The proportion of children with ARI taken to a health facility or provider increases with increasing wealth index ranging from only 30 percent among children of mothers in the lowest quintile to 64 percent of children of mothers in the highest wealth quintile.

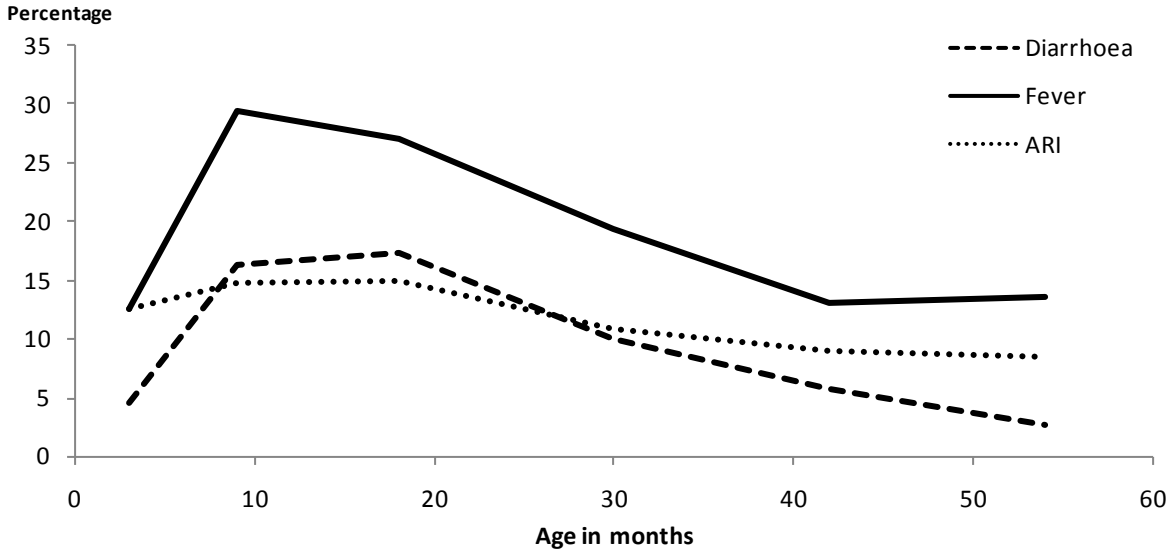
Table 10-5 Prevalence and treatment of symptoms of ARI

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

	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 advice or treatment was sought from a health facility or provider[2]	Number of children
Age in months				
<6	12.5	588	38.4	74
6-11	14.7	667	49.7	98
12-23	14.9	1,323	49.9	197
24-35	10.9	1,317	50.5	144
36-47	9.0	1,354	41.1	122
48-59	8.5	1,415	33.6	120
Sex				
Male	11.5	3,308	46.4	381
Female	11.2	3,356	43.3	374
Mother's smoking status				
Smokes cigarettes/tobacco	11.0	20	0.0	2
Does not smoke	11.3	6,643	45.0	753
Cooking fuel				
Electricity/ natural gas/ LPG/ biogas	4.3	431	68.5	19
Kerosene	7.7	911	61.7	70
Charcoal/ coal/ lignite	14.0	401	67.8	56
Firewood/ straw/ Animal dung/ manure [3]	12.4	4,921	40.1	611
Residence				
Total urban	9.1	2,041	57.0	186
Asmara	6.3	734	65.0	47
Other Town	10.7	1,307	54.3	140
Rural	12.3	4,623	40.9	569
Zoba				
Debubawi Keih Bahri	7.6	105	45.2	8
Maekel	6.4	1,142	57.6	73
Semenawi Keih Bahri	19.0	821	40.2	156
Anseba	13.3	1,060	44.1	141
Gash-Barka	11.4	1,708	48.1	195
Debub	10.0	1,828	40.8	183
Mother's education				
No education	13.0	3,112	38.1	403
Primary	12.4	1,604	44.2	198
Middle	7.4	1,059	70.8	79
Secondary or above	8.5	885	55.2	76
Wealth quintile				
Lowest	11.8	1,368	29.7	161
Second	13.4	1,398	36.1	188
Middle	14.6	1,444	46.3	211
Fourth	9.0	1,367	64.2	123
Highest	6.6	1,087	64.3	72
Total	11.3	6,664	44.8	755

Note: Table is based on the CORE questionnaires.
[1] ARI= Acute respiratory infection. Symptoms of ARI (cough accompanied by short, rapid breathing which was chest-related) are considered a proxy for pneumonia.
[2] Excludes pharmacy, shop, and traditional practitioner
[3] Includes grass, shrubs, crop residues

Figure 10-3 **Prevalence of ARI, fever and diarrhea in the two weeks preceding the survey by age of child**



10.4 Fever

Fever is a symptom of malaria, but it may also be due to other illnesses, including pneumonia, common colds, and influenza. Because malaria is a major cause of death in infancy and childhood in many developing countries, the presumptive treatment of fever with anti-malarial medication has been advocated in many countries where malaria is endemic. Although fever can occur year-round, malaria is more prevalent after the end of the rainy season (August to November), but did not coincide with the EPHS2010 fieldwork (January -July). The temporal factors must be taken into account when interpreting fever as an indicator of malaria prevalence. The prevention and treatment of malaria is discussed in detail in Chapter 12.

Overall, one-fifth of children under age five were reported to have had fever in the two weeks preceding the survey (Table 10-6). The prevalence of fever varies with the age of the children. Generally the prevalence of fever peaked in the age group 6-11 and 12-23 months (30 percent and 27 percent, respectively) and then progressively decreased and is least in the age group <6 months (13 percent). There is no difference in the prevalence of fever by sex of the child and area of residence. Zoba variations are present; prevalence of fever ranges from a low of 13 percent in Debubawi Keih Bahri and Maekel to a high of 26 percent in Anseba.

Children of mothers with no education (20 percent) have the highest prevalence of fever when compared with their counterparts. The proportion of children with fever is higher in the middle and lower wealth quintiles (19-21 percent) than in the highest wealth quintile (14 percent).

Children with fever were more likely to have received an antibiotic than an anti-malarial drug: 45 percent of children with fever received antibiotics but only 2 percent took ant-malarial drugs. Use of anti-malarial and antibiotic drugs among children varies by background characteristics.

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 among children with fever, the percentage of children for whom treatment was sought from a health facility or provider, the percentage who took anti-malarial drugs and the percentage who took antibiotic drugs, by background characteristics, Eritrea 2010

	Among children under age five:		Children under age five with fever							
Background characteristic	Percentage with fever	Number of children	Chloroquine	Fansidar	Quinine	Other anti-malarial drugs	Percentage who took anti-malarial drugs	Took anti-malarial drug same/ next day	Percentage who took antibiotic drugs	Number of children
Age in months										
<6	12.6	588	0.0	0.0	0.0	0.0	0.0	0.0	28.7	74
6-11	29.5	667	1.2	0.0	0.0	1.2	1.8	1.2	41.4	197
12-23	27.1	1,323	0.4	0.0	0.6	0.5	1.5	0.8	53.2	359
24-35	19.5	1,317	1.6	0.9	0.0	0.0	2.5	2.1	44.4	257
36-47	13.1	1,354	0.0	0.8	0.6	0.8	2.2	0.6	42.6	177
48-59	13.6	1,415	0.0	0.0	0.0	0.0	0.0	0.0	39.4	192
Sex										
Male	19.6	3,308	0.7	0.2	0.3	0.7	1.8	1.0	44.1	647
Female	18.2	3,356	0.5	0.4	0.2	0.2	1.2	0.8	44.9	610
Residence										
Total urban	17.2	2,041	0.0	0.7	0.3	0.1	1.0	1.0	53.3	351
Asmara	11.8	734	0.0	1.1	0.0	0.0	1.1	1.1	49.3	87
Other Town	20.2	1,307	0.0	0.5	0.4	0.1	1.0	1.0	54.6	264
Rural	19.6	4,623	0.8	0.2	0.2	0.6	1.7	0.9	41.0	905
Zoba										
Debubawi Keih Bahri	12.7	105	0.0	0.0	0.0	3.3	3.3	3.3	36.9	13
Maekel	13.2	1,142	0.0	0.6	0.0	0.0	0.6	0.6	47.4	151
Semenawi Keih Bahri	24.4	821	0.0	0.0	0.0	0.0	0.0	0.0	49.8	200
Anseba	26.1	1,060	0.4	0.0	0.0	0.4	0.8	0.4	44.9	277
Gash-Barka	17.5	1,708	0.9	0.5	0.3	0.4	1.7	1.2	43.1	298
Debub	17.3	1,828	1.3	0.5	0.7	0.9	3.3	1.7	40.9	317
Mother's education										
No education	20.4	3,112	0.7	0.2	0.2	0.0	1.1	0.9	38.9	635
Primary	19.3	1,604	0.7	0.0	0.7	0.4	1.8	0.7	49.7	309
Middle	16.5	1,059	0.7	0.8	0.0	0.7	1.5	1.5	51.5	175
Secondary or above	15.4	885	0.0	0.7	0.0	2.1	2.8	0.7	50.0	136
Wealth quintile										
Lowest	19.3	1,368	0.0	0.5	0.0	0.0	0.5	0.0	35.7	264
Second	20.4	1,398	1.7	0.0	0.3	0.4	2.0	1.2	38.2	285
Middle	21.1	1,444	1.0	0.0	0.4	0.4	1.8	1.4	47.5	305
Fourth	18.0	1,367	0.0	0.0	0.4	1.1	1.6	0.4	53.6	246
Highest	14.3	1,087	0.0	1.5	0.0	0.1	1.7	1.7	50.5	156
Total	18.9	6,664	0.6	0.3	0.2	0.4	1.5	0.9	44.5	1,257

Note: Table is based on the CORE questionnaires.

10.5 Diarrheal Disease

Dehydration caused by severe diarrhea 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 diarrhea-causing agents is frequently related to the use of contaminated water and to unhygienic practices in food preparation and disposal of excreta. In the EPHS2010, mothers were asked whether any of their children under age five had diarrhea at any time during the two-week period preceding the survey. If the child had diarrhea, the mother was asked about feeding practices during the diarrheal episode. The mother was also asked whether there was blood in the child's stools. Diarrhea with blood in the stool needs to be treated differently from diarrhea which is not accompanied by blood in the stools.

Prevalence of diarrhea is affected by the mother's perception of diarrhea as an illness and her capacity to recall the events. In interpreting the findings of the EPHS2010, it should be borne in mind that prevalence of diarrhea varies seasonally and peaks before the rainy season, which occurs during the period of survey data collection.

Overall, nine percent of all children under five had diarrhea, while two percent had diarrhea with blood (Table 10-7).

The occurrence of diarrhea varies by age of the child. Young children ages 6-23 months are more prone to diarrhea than children in the other age groups; those age 12-23 months have the highest prevalence (17 percent) of diarrhea among the age cohorts. There is little variation in the prevalence of diarrhea by child's sex. The prevalence of diarrhea is highest in those children living in households with not-improved source of drinking water (11 percent). Children living in Semenawi Keih Bahri have the highest prevalence (11 percent), while children in Debubawi Keih Bahri (5 percent) have the lowest rate. The prevalence of diarrhea decreases steadily with increasing wealth quintile and is lowest among children whose mothers have at least middle education. The prevalence of diarrhea with blood follows a pattern similar to that observed for diarrhea in general.

10.5.1 Treatment of diarrhea

Mothers of children with diarrhea in the two weeks preceding the survey were asked what was done to manage or treat the illness. Overall, 34 percent of the children with diarrhea were taken for advice or treatment to a health facility or provider (Table 10-8). Children under 6 months and aged 6-11 months were more likely than children in other age groups to be taken to a health facility or provider for treatment (40 percent each). There are more male children (38 percent) taken for treatment than female children (31 percent). Treatment-seeking behavior is more prevalent for children with bloody diarrhea (37 percent) than if non-bloody diarrhea (34 percent). Percentage of children with diarrhea for whom advice or treatment was sought in health facility in rural areas is 32 percent, compared to 41 percent in urban areas. Advice or treatment for children with Diarrhea is least sought for children whose mothers have no education (29 percent) and highest in secondary education or higher (47 percent) (Table 10-8).

Oral rehydration therapy (ORT) is a simple and effective remedy for the dehydration often caused by diarrhea. It involves giving the child a solution prepared by mixing water with a commercially prepared packet of oral rehydration salts (ORS) or recommended home fluids (RHF), usually a home-made sugar-salt-water solution. Some form of ORT, either fluid from ORS sachets or recommended home-made fluids (RHF), was used to treat the diarrhea in 58 percent of children (Table 10-8). Forty-three percent of these

Table 10-7 Prevalence of diarrhea

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

Background characteristic	Diarrhea in the two weeks preceding the survey		
	All diarrhea	Diarrhea with blood	Number of children
Age in months			
<6	4.5	0.3	588
6-11	16.2	1.8	667
12-23	17.3	3.4	1,323
24-35	10.0	2.2	1,317
36-47	5.6	1.6	1,354
48-59	2.6	0.6	1,415
Sex			
Male	9.6	1.6	3,308
Female	8.7	2.0	3,356
Source of drinking water			
Improved[1]	8.4	1.5	4,511
Not improved	11.3	2.5	1,263
Other/missing	9.4	2.5	890
Toilet facility			
Non-improved or shared [2]	9.1	1.8	6,659
Missing	0.0	0.0	5
Residence			
Total urban	7.4	1.1	2,041
Asmara	6.7	0.4	734
Other Town	7.9	1.5	1,307
Rural	9.9	2.1	4,623
Zoba			
Debubawi Keih Bahri	4.9	0.9	105
Maekel	7.6	0.6	1,142
Semenawi Keih Bahri	11.0	2.5	821
Anseba	9.7	1.1	1,060
Gash-Barka	9.2	2.4	1,708
Debub	9.1	2.2	1,828
Mother's education			
No education	9.3	2.3	3,112
Primary	10.4	1.9	1,604
Middle	7.7	1.4	1,059
Secondary or above	8.1	0.4	885
Wealth quintile			
Lowest	9.9	2.1	1,368
Second	9.5	2.0	1,398
Middle	9.9	2.9	1,444
Fourth	9.5	1.2	1,367
Highest	6.2	0.4	1,087
Total	9.1	1.8	6,664

Note: Table is based on the CORE questionnaires.
[1] See Table 2-7 for definition of categories.
[2] See Table 2-8 for definition of categories.

Table 10-8 Diarrhea Treatment

Among children under age five who had diarrhea in the two weeks preceding the survey, the percentage for whom advice or treatment was sought from a health facility or provider, the percentage given oral rehydration therapy (ORT), the percentage given increased fluids, the percentage given ORT or increased fluids, and the percentage who were given other treatments, by background characteristics, Eritrea 2010

		Oral rehydration therapy (ORT)					Other treatments						
Background characteristic	Percentage of children with diarrhea for whom advice or treatment was sought from a health facility or provider [1]	ORS packets or pre-packaged liquid	Recommended home fluids (RHF)	Either ORS or RHF	Increased fluids	ORT or increased fluids	Homemade liquids	Pill or syrup	Injection	Home remedy/ herbal medicine	Other	No treatment	Number of children with diarrhea
Age in months													
<6	39.7	21.9	10.1	27.1	39.6	53.0	0.0	14.7	3.6	0.0	3.6	30.8	26
6-11	40.3	43.1	24.3	53.5	27.3	65.7	10.5	13.0	0.8	2.4	2.1	22.5	108
12-23	37.4	47.5	37.3	63.1	35.9	75.0	10.8	14.0	0.0	3.4	2.4	17.2	229
24-35	30.6	49.0	31.7	62.6	43.3	77.2	9.8	21.2	0.0	4.1	0.7	15.8	132
36-47	26.2	37.2	39.9	58.8	43.5	76.4	6.8	10.5	0.0	2.4	7.5	19.4	76
48-59	25.6	28.1	30.4	47.3	54.2	75.2	10.5	11.6	0.0	0.0	8.1	17.9	37
Sex													
Male	37.9	46.8	34.5	61.7	35.0	75.3	11.3	15.9	0.3	3.0	2.5	15.8	318
Female	30.6	39.7	30.4	54.5	41.7	70.6	7.6	13.6	0.3	2.8	3.6	21.9	290
Type of diarrhea													
Non bloody	33.7	41.8	30.8	56.5	38.6	72.2	9.9	13.4	0.4	2.5	3.3	19.6	489
Bloody	37.3	50.1	39.3	65.3	36.4	76.5	7.9	20.7	0.0	4.4	1.9	15.1	120
Residence													
Total urban	41.3	50.6	29.9	59.5	44.1	75.9	7.8	15.8	0.6	2.8	5.1	14.3	152
Asmara	43.7	48.2	21.2	53.2	50.2	71.9	0.0	16.4	1.9	5.0	7.2	16.3	49
Other Town	40.1	51.7	34.1	62.6	41.2	77.8	11.6	15.5	0.0	1.7	4.1	13.3	103
Rural	32.2	41.1	33.4	57.8	36.2	72.1	10.1	14.5	0.2	2.9	2.3	20.2	456

Zoba													
Debubawi Keih Bahri	37.9	60.0	10.8	60.0	26.3	69.4	3.6	26.8	0.0	0.0	0.0	26.9	5
Maekel	37.6	40.7	23.7	55.2	42.9	71.9	2.4	15.2	1.1	4.1	4.1	18.9	87
Semenawi Keih Bahri	37.2	53.7	26.4	65.3	32.1	73.6	15.3	12.2	0.0	1.9	3.7	17.5	90
Anseba	37.3	61.3	46.0	78.0	44.3	90.9	18.0	10.8	0.8	5.2	1.8	4.5	103
Gash-Barka	33.8	35.8	37.1	52.0	40.5	69.9	10.1	16.3	0.0	4.4	3.9	18.2	157
Debub	30.0	34.9	28.3	49.5	33.5	65.3	4.4	16.7	0.0	0.0	2.0	28.4	166
Mother's education													
No education	28.5	38.5	31.7	54.3	35.5	69.1	12.4	13.5	0.3	4.6	2.8	20.4	289
Primary	39.8	47.6	37.3	62.2	37.8	77.6	8.1	17.7	0.6	0.5	2.8	18.4	166
Middle	33.8	43.8	35.1	62.7	41.1	73.4	4.8	11.6	0.0	3.0	5.7	18.5	82
Secondary or above	46.7	53.1	21.9	59.8	47.1	78.0	6.7	17.0	0.0	1.5	1.3	12.9	71
Wealth quintile													
Lowest	30.1	41.6	32.7	53.9	34.0	68.2	8.7	9.7	0.0	3.3	3.2	22.3	135
Second	28.1	41.4	27.3	52.6	38.4	66.8	14.0	13.6	0.6	4.5	3.8	23.6	133
Middle	40.2	43.2	40.9	64.3	33.5	80.0	8.9	17.2	0.0	1.3	1.7	12.9	143
Fourth	36.1	44.1	35.2	63.7	38.4	75.9	6.8	17.1	0.0	2.1	1.6	18.6	129
Highest	40.3	50.3	19.4	54.6	55.7	74.7	8.8	18.0	1.4	3.7	6.6	14.7	67
Total	34.4	43.4	32.5	58.2	38.2	73.0	9.5	14.8	0.3	2.9	3.0	18.7	608

Note: Table is based on the CORE questionnaires.
ORT includes solution prepared from oral rehydration salt (ORS), pre-packaged ORS packet, and recommended home fluids (RHF)
[1] Excludes pharmacy, shop and traditional practitioner

children suffering from diarrhea in the two weeks preceding the survey were given fluid from ORS packets and 33 percent were given fluid from RHF. Thirty-eight percent of the children with diarrhea were given increased amounts of other fluids. Overall, 73 percent of children were given either ORT or increased fluids. The other treatments given to children with diarrhea were pill or syrup (15 percent) and injection (less than one percent). Home remedies/herbal medicines were used to treat 3 percent of children with diarrhea. Nineteen percent of children with diarrhea did not receive any treatment. The percent of children suffering from diarrhea who were given ORS packets was 33 percent in EDHS1995, 45 percent in EDHS2002, and 43 percent in EPHS2010.

10.5.2 Feeding practices during diarrhea

When a child has diarrhea, mothers are encouraged to continue feeding their child the same amount of food as they would if the child did not have diarrhea. They are also encouraged to increase the child's fluid intake. These practices help to reduce dehydration and minimize the adverse consequences of diarrhea on the child's nutritional status. In the EPHS2010, mothers were asked whether they gave their child with diarrhea less, the same amount, or more fluids and food than usual. Table 10-9 shows the percent distribution of children under age five who had diarrhea in the two weeks preceding the survey by feeding practices during the episode of diarrhea.

Of the children with diarrhea, 38 percent were given more fluids than usual, as recommended, while 25 percent of children who had diarrhea were given the same amount of liquid as usual (Table 10-9). Twenty-five percent were given somewhat less to drink, while 7 percent were given much less to drink than usual. Four percent of children who had diarrhea were given no liquids. Regarding the amount of food offered to children who had diarrhea, 17 percent were given more food to eat than usual and 21 percent were given the same amount of food as usual. Thirty six percent were given somewhat less than the usual amount of food to eat while sick, and 9 percent were given much less than usual to eat. Ten percent of children with diarrhea did not receive food during their illness. Overall, 31 percent of children had increased fluid intake and continued feeding. Fifty seven percent of children suffering from diarrhea were given ORT and/or increased fluids, and continued feeding.

When feeding and treatment practices are observed by background characteristics, variations among certain groups become apparent. Among children suffering from diarrhea, those under age 6 months are less likely than those in other age groups to be continually fed and given ORT and/or increased fluids during the episode. Female children, children in urban areas, children residing in Anseba, children of mothers with middle and secondary education, and children from the highest wealth quintile are more likely than other children to receive ORT and/or increased fluids with continued feeding.

The percentage of children with diarrhea who were given increased fluids and continued feeding has almost remained constant since the EDHS2002.

10.5.3 Knowledge of ORS packets

To ascertain respondents' knowledge of ORS in Eritrea, women were asked whether they had heard of a special product called an ORS packet that can be used to treat diarrhea. Table 10-10 shows that 94 percent of mothers with a live birth in the five years preceding the survey had heard about ORS packets. ORS knowledge is slightly higher among urban women (97 percent) than among rural women (92 percent).

Table 10-9 Feeding practices during diarrhea

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

Background characteristic	Amount of liquids offered							Amount of food offered										
	More	Same as usual	Somewhat less	Much less	None	Don't know/ missing	Total	More	Same as usual	Somewhat less	Much less	None	Never gave food	Don't know/ missing	Total	Percentage given increased fluids and continued feeding[1]	Percentage who continued feeding and were given ORT and/or increased fluids	Number of children with diarrhea
Age in months																		
<6	39.6	21.0	13.1	9.2	17.0	0.0	100.0	14.8	0.0	8.4	2.3	0.0	74.5	0.0	100.0	19.7	19.7	26
6-11	27.3	34.2	26.4	4.5	6.4	1.1	100.0	14.0	16.6	36.6	5.6	7.8	19.5	0.0	100.0	24.0	50.0	108
12-23	35.9	23.6	28.8	6.6	3.2	1.9	100.0	16.0	20.1	37.3	9.7	13.9	2.6	0.5	100.0	27.2	56.4	229
24-35	43.3	24.1	22.7	6.9	2.4	0.7	100.0	16.7	24.0	44.8	5.4	9.0	0.0	0.0	100.0	37.4	68.4	132
36-47	43.5	22.1	18.2	10.5	4.3	1.4	100.0	20.4	21.0	31.7	15.3	8.4	3.3	0.0	100.0	34.0	56.0	76
48-59	54.2	14.7	18.7	7.6	4.7	0.0	100.0	21.5	40.2	25.6	10.7	2.1	0.0	0.0	100.0	46.1	66.6	37
Sex																		
Male	35.0	24.5	27.6	7.8	3.2	1.8	100.0	15.9	17.9	37.4	11.0	11.2	6.3	0.3	100.0	27.0	55.9	318
Female	41.7	25.0	21.0	6.1	5.7	0.6	100.0	17.4	23.9	34.8	5.7	8.1	10.1	0.0	100.0	34.3	57.9	290
Type of diarrhea																		
Non bloody	38.6	25.0	23.7	7.2	4.3	1.2	100.0	17.6	20.6	35.9	8.2	8.6	8.8	0.2	100.0	32.0	57.1	489
Bloody	36.4	23.8	27.4	6.1	4.8	1.4	100.0	12.7	21.3	37.1	9.4	14.3	5.2	0.0	100.0	24.2	55.7	120
Residence																		
Total urban	44.1	23.5	28.2	1.6	2.7	0.0	100.0	19.4	17.3	36.9	9.7	7.6	9.2	0.0	100.0	35.2	57.2	152
Asmara	50.2	22.8	22.4	0.0	4.6	0.0	100.0	21.9	17.6	31.7	1.9	9.3	17.4	0.0	100.0	37.3	56.8	49
Other Town	41.2	23.8	31.0	2.3	1.7	0.0	100.0	18.2	17.2	39.3	13.4	6.7	5.2	0.0	100.0	34.2	57.4	103
Rural	36.2	25.2	23.2	8.7	5.0	1.7	100.0	15.7	21.9	35.9	8.1	10.5	7.7	0.2	100.0	28.9	56.7	456
Zoba																		
Debubawi Keih Bahri	26.3	12.2	40.6	17.1	3.8	0.0	100.0	5.7	10.2	36.9	16.3	21.1	9.8	0.0	100.0	20.6	40.9	5
Maekel	42.9	33.0	19.5	0.0	2.6	1.9	100.0	14.4	31.2	34.6	1.1	7.6	11.0	0.0	100.0	34.5	60.0	87
Semenawi Keih Bahri	32.1	19.7	31.9	11.1	4.3	1.0	100.0	10.4	11.4	43.0	13.1	12.1	9.9	0.0	100.0	20.3	48.6	90
Anseba	44.3	20.6	25.4	8.4	1.3	0.0	100.0	21.0	15.9	36.6	5.8	13.5	7.2	0.0	100.0	35.7	67.7	103
Gash-Barka	40.5	21.2	19.7	8.7	6.7	3.1	100.0	22.8	20.7	27.0	12.7	7.3	8.8	0.7	100.0	34.2	53.9	157
Debub	33.5	29.5	26.4	5.4	5.2	0.0	100.0	12.9	23.8	41.5	7.2	9.2	5.5	0.0	100.0	27.5	56.2	166

(*Continued*)

Table 10-9 (*Continued*)

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

	Amount of liquids offered							Amount of food offered										
Background characteristic	More	Same as usual	Somewhat less	Much less	None	Don't know/ missing	Total	More	Same as usual	Somewhat less	Much less	None	Never gave food	Don't know/ missing	Total	Percentage given increased fluids and continued feeding[1]	Percentage who continued feeding and were given ORT and/or increased fluids	Number of children with diarrhea
Mother's education																		
No education	35.5	24.1	25.0	8.8	4.1	2.6	100.0	13.0	21.3	33.4	12.7	12.3	6.9	0.4	100.0	26.5	49.5	289
Primary	37.8	25.2	25.0	5.4	6.6	0.0	100.0	14.8	24.4	35.1	6.7	7.7	11.2	0.0	100.0	29.2	60.2	166
Middle	41.1	28.5	23.4	3.5	3.6	0.0	100.0	28.1	15.2	44.2	1.3	7.1	4.1	0.0	100.0	39.5	69.5	82
Secondary or above	47.1	22.1	22.1	7.1	1.5	0.0	100.0	22.3	16.7	40.1	3.6	7.2	10.0	0.0	100.0	39.4	64.2	71
Wealth quintile																		
Lowest	34.0	27.1	22.2	13.1	3.6	0.0	100.0	13.9	21.9	31.9	12.5	13.8	5.9	0.0	100.0	26.2	50.2	135
Second	38.4	23.9	19.9	7.5	6.8	3.5	100.0	13.8	16.9	30.4	13.1	12.1	13.0	0.8	100.0	28.4	44.4	133
Middle	33.5	28.0	27.7	5.9	4.0	0.9	100.0	19.8	21.4	37.9	6.0	6.9	8.1	0.0	100.0	27.7	66.5	143
Fourth	38.4	21.3	30.3	4.6	4.1	1.3	100.0	16.0	26.4	43.5	5.5	6.3	2.3	0.0	100.0	34.0	64.4	129
Highest	55.7	21.3	19.8	0.2	2.9	0.0	100.0	22.1	14.1	38.0	2.2	9.7	13.9	0.0	100.0	42.4	59.5	67
Total	38.2	24.7	24.5	7.0	4.4	1.2	100.0	16.6	20.8	36.1	8.5	9.8	8.1	0.2	100.0	30.5	56.8	608

Note: Table is based on the CORE questionnaires.
[1]Continue feeding practices includes children who were given more, same as usual, or somewhat less food during the diarrhea episode

Knowledge of ORS also varies by zoba; it ranges from a low of 91 percent among mothers in Gash-Barka and Debub to a high of 98 percent in Maekel. Knowledge of ORS packets increases as a woman's educational attainment also increases: 91 percent of mothers with no education know about ORS packets while 97 percent of mothers with secondary or higher education know about ORS packets. There is direct relationship between knowledge of ORS packets and wealth, with the lowest wealth quintile having 90 percent and the highest quintile having 98 percent.

Table 10-10 Knowledge of ORS packets or pre-packaged liquids

Percentage of mothers age 15-49 who gave birth in the five years preceding the survey who know about ORS packets or ORS pre-packaged liquids for treatment of diarrhea by background characteristics, Eritrea 2010

Background characteristic	Percentage of women who know about ORS packets or ORS pre-packaged liquids	Number of women
Age		
15-19	89.5	199
20-24	91.8	934
25-34	95.1	2,106
35-49	92.8	1,471
Residence		
Total urban	96.9	1,472
Asmara	98.0	533
Other Town	96.3	938
Rural	92.0	3,238
Zoba		
Debubawi Keih Bahri	97.0	76
Maekel	97.7	838
Semenawi Keih Bahri	94.4	555
Anseba	96.2	730
Gash-Barka	91.1	1,189
Debub	90.9	1,323
Education		
No education	90.6	2,156
Primary	95.5	1,124
Middle	96.0	782
Secondary or above	96.8	646
Missing	100.0	1
Wealth quintile		
Lowest	89.8	917
Second	90.6	967
Middle	94.1	1,038
Fourth	95.7	1,008
Highest	97.8	780
Total	93.5	4,709

Note: Table is based on the CORE questionnaires.
ORS = Oral rehydration salts

10.5.4 Stool disposal

The proper disposal of children's faeces is important in preventing the spread of disease. If faeces are not properly disposed of, disease may be spread by direct contact or through animal contact. The safe disposal of children's faeces is of particular importance because children's faeces are more likely to be the cause of faecal contamination in the household environment than other causes, as they are often not disposed of properly and may be mistakenly considered less harmful than adult faeces. Children's stools are considered to be safely disposed of if the child uses a toilet or latrine, the child's stool is put in or rinsed into a toilet or latrine, or the stool is buried.

The percent distribution of the youngest children under age five living with their mother by how the child's stools are disposed of, according to background characteristics is shown in Table 10-11. Twenty-seven percent of children's stools are safely disposed, that is, 2 percent of children use a toilet or latrine, 18 percent of children's stools are rinsed in the toilet or latrine, and 7 percent are buried.

There are marked differences in the way children's stools are disposed of, depending on background characteristics. A higher proportion of urban children's stools are disposed of safely than are rural children's stools (55 and 15 percent, respectively). Zoba differentials in safe disposal also are substantial. For example, in Maekel, 52 percent of children's stools are disposed of safely compared with 17 percent in Anseba. Safe disposal of children's stools increases with mother's level of education and with household wealth quintile.

Table 10-11 Disposal of children's stools

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

Background characteristic	Manner of disposal of children's stools								Total	Percentage of children whose stools are disposed of safely	Number of mothers
	Child used toilet or latrine	Put/rinsed into toilet or latrine	Buried	Put/rinsed into drain or ditch	Thrown into garbage	Rinsed away	Other	Missing			
Age in months											
<6	0.4	17.8	8.1	2.9	57.2	5.5	8.0	0.0	100.0	26.4	577
6-11	0.6	17.9	7.3	1.8	65.3	4.6	2.6	0.0	100.0	25.8	659
12-23	1.1	21.0	6.9	0.9	61.7	7.2	1.0	0.1	100.0	29.0	1,272
24-35	2.1	16.1	6.5	0.9	63.1	11.0	0.3	0.1	100.0	24.7	1,023
36-47	2.5	18.3	5.7	1.1	56.9	12.8	1.3	1.4	100.0	26.6	614
48-59	5.9	15.8	5.7	1.4	50.0	18.3	0.9	1.9	100.0	27.4	448
Toilet facility											
Non-improved or shared	1.8	18.2	6.7	1.3	60.2	9.3	2.0	0.4	100.0	26.7	4,590
Missing	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	3
Residence											
Total urban	4.2	47.4	3.1	3.7	36.6	3.2	1.4	0.4	100.0	54.7	1,438
Asmara	6.1	64.1	0.7	6.5	20.4	0.8	1.3	0.2	100.0	70.8	521
Other Town	3.1	37.9	4.5	2.2	45.7	4.6	1.4	0.6	100.0	45.5	917
Rural	0.7	4.9	8.4	0.3	70.9	12.1	2.3	0.4	100.0	14.0	3,155
Zoba											
Debubawi Keih Bahri	3.3	17.6	29.5	0.4	25.7	18.5	4.7	0.4	100.0	50.4	72
Maekel	4.6	45.7	2.1	4.3	36.5	5.3	1.2	0.4	100.0	52.4	808
Semenawi Keih Bahri	4.2	19.2	10.2	0.1	49.6	15.0	1.6	0.2	100.0	33.5	545
Anseba	1.0	19.8	5.7	0.0	59.6	11.9	1.3	0.7	100.0	26.5	710
Gash-Barka	0.7	8.7	7.4	0.5	72.4	7.7	2.0	0.7	100.0	16.8	1,163
Debub	0.5	8.4	6.9	1.6	70.6	8.9	2.9	0.2	100.0	15.8	1,294
Education											
No education	1.2	5.4	9.1	0.4	69.1	12.2	2.2	0.4	100.0	15.7	2,118
Primary	1.3	15.4	6.3	0.7	65.0	8.9	1.8	0.7	100.0	23.0	1,088
Middle	2.1	30.1	4.2	2.6	52.8	5.9	1.8	0.4	100.0	36.4	757
Secondary or above	4.5	52.0	2.7	4.3	30.5	4.3	1.7	0.0	100.0	59.1	628
Missing	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	1
Wealth quintile											
Lowest	0.3	1.4	9.5	0.0	73.7	12.5	2.5	0.2	100.0	11.2	905
Second	0.2	3.0	7.7	0.2	72.7	12.6	2.7	0.8	100.0	10.9	939
Middle	1.5	7.6	9.4	0.5	68.6	9.9	1.9	0.6	100.0	18.5	1,009
Fourth	2.0	19.8	5.5	1.8	59.6	9.0	1.9	0.3	100.0	27.4	974
Highest	5.7	68.8	0.2	5.0	18.4	1.1	0.7	0.1	100.0	74.7	765
Total	1.8	18.2	6.7	1.3	60.2	9.3	2.0	0.4	100.0	26.8	4,593

Note: Table is based on the CORE questionnaires.

[1] Non-shared facilities that are of the types: any facility shared with other households, traditional pit toilet, no facility (bush, field) and others.

NUTRITIONAL STATUS OF CHILDREN AND ADULTS 11

Key Findings

- The proportion of wasting in under five children in Eritrea has been stable at about 15 percent and there has been an increase in stunting and the under-weight in the last eight years, presently standing at 50 percent and 39 percent, respectively.
- Breastfeeding is nearly universal in Eritrea with almost 100 percent of mothers initiating breastfeeding. More than two-thirds of children aged less than six months are exclusively breastfed. Seventy percent of children born in the three years before the survey were breastfed for at least two years.
- Complementary feeding is not started for 50 percent of children aged 6-9 months.
- One-third of children aged 6-23 months are fed appropriately based on the recommended infant and young child feeding (IYCF) practices.
- More than half and more than a third of all children aged 6-59 months get vitamin A and iron rich foods respectively; and eight in ten receive iodized salt.
- Overall, half of women and men aged 15-49 years have BMI <18.5.

Nutritional status is the result of complex interactions between food consumption and the overall status of health and health care practices. Numerous socio-economic and cultural factors influence patterns of feeding children and their nutritional status. From birth to age two is a period especially important for optimal growth, health, and development. Although measurement of micronutrients was not included in this survey, the first two years of life are often marked by micronutrient deficiencies that interfere with optimal growth. In addition, childhood illnesses such as diarrhea and acute respiratory infections (ARI) are also common and may compromise nutritional status.

For women, improving overall nutritional status throughout the life cycle is crucial to maternal health and that of their children. Women who become malnourished during pregnancy often have children who fail to grow and develop normally due to malnutrition at any time during their life, including during fetal development, are at increased risk of perinatal problems, increased susceptibility to infections, slow recovery from illness, and possibly death. Improving maternal nutrition is crucial for improving children's health.

The poor nutritional status of children and women has been a serious problem in Eritrea for many years. Therefore, the health sector has increased its efforts to enhance good nutritional practices through health education, treatment of severely malnourished children, through facility and community based therapeutic feeding programs and provision of target supplementary feeding for all children under five, and for pregnant and lactating mothers. In addition micronutrients are supplemented to the vulnerable groups of the population, that is, mothers and children.

11.1 Nutritional Status of Children

The nutritional status of children under the age of five is an important outcome measure of children's health. The anthropometric data on height and weight collected in the EPHS2010 permit the measurement and evaluation of the nutritional status of young children. This evaluation allows identification of subgroups of the child population that are at increased risk of faltered growth, disease, impaired mental development, and death.

11.1.1 Measurement of nutritional status among young children

The EPHS2010 data were collected to calculate three indices of anthropometric indicators which are height-for-age, weight-for-height, and weight-for-age. For this report, indicators of the nutritional status of children were calculated using new growth standards published by the World Health Organization (WHO) in 2006. *The use of the WHO child growth standards is based on the finding that well-nourished children for all population groups follow very similar growth patterns before puberty. The internationally-based standard population serves as a point of comparison, facilitating the examination of differences in the anthropometric status of subgroups in a population. In any large population, there are natural variations in height and weight. The variations approximate a normal distribution* (Gambia Bureau of Statistics 2013 pp. 16).

The three indices are expressed as standard deviation units from the median for the reference group. Children who fall below minus two standard deviations (−2SD) from the median of the reference population are regarded as moderately malnourished, while those who fall below minus three standard deviations (−3SD) from the median of the reference population are considered severely malnourished.

The height-for-age index provides an indicator of growth retardation and cumulative growth deficits in children. Children whose height-for-age Z-score is below minus two standard deviations (−2SD) from the median of the WHO reference population are considered short for their age (stunted), or chronically malnourished. Children who are below minus three standard deviations (−3SD) are considered severely stunted. Stunting reflects failure to receive adequate nutrition over a long period of time and is affected by recurrent and chronic illness. Height-for-age, therefore, represents the long-term effects of malnutrition in a population and is not sensitive to recent, short-term changes in dietary intake.

The weight-for-height index measures body mass in relation to body height or length; it describes current nutritional status. Children with Z-scores below minus two standard deviations (−2SD) are considered thin (wasted) or 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 with a weight-for height index below minus three standard deviations (−3 SD) are considered severely wasted.

The weight-for-height index also provides data on overweight and obesity. Children more than two standard deviations (+2SD) above the median weight-for-height are considered overweight, or obese.

The weight-for-age is a composite index of height-for-age and weight-for-height. It takes into account both chronic and acute malnutrition. A child can be underweight for his/her age because her she is stunted, wasted, or both. Weight-for-age is an overall indicator of a population's nutritional health. Children with

weight-for-age below minus two standard deviations (−2 SD) are classified as underweight. Children with weight-for-age below minus three standard deviations (−3 SD) are considered severely underweight.

The WHO Child Growth Standards reference population used for the EPHS2010 differs from that used in previous EDHS surveys. When the new WHO child growth standards are used in place of the previous reference, the following changes are usually observed (de Onis *et al* 2006):

- The level of stunting is usually greater, but not for all age groups.
- The level of wasting in infancy is substantially higher, particularly in the first six months of life.
- The level of underweight is substantially higher during the first half of infancy (0-6 months) and decreases thereafter.
- The level of overweight/obesity is higher.

11.1.2 Data collection

Interviewing teams obtained measurements of height and weight for all children born in the five years preceding the survey and listed in the Household Questionnaire. The survey included children who were not biological offspring of the women interviewed. Each interviewing team carried a scale and measuring board. The scales were lightweight electronic SECA scales with a digital screen. They were designed and manufactured under the authority of the United Nations Children's Fund (UNICEF). Shorr Productions manufactured the measuring boards especially for use in survey settings. Interviewers measured children younger than 24 months lying down on the board (recumbent length) and measured the standing height of older children. The team measured recumbent length whenever the child's age was not known and the child was less than 85 centimeters tall. The scale allowed 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.

A total of 6,476 children under age 5 were eligible to be weighed and measured. Of these children, 3 percent had missing values for height or weight. Data for height and weight were obtained for 6,227 children. Table 11-1 and Figure 11-1 show the percentage of children under age five classified as malnourished according to the three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age.

11.1.3 Measures of children's nutritional status

Height-for-age

Nationally, 50 percent of children under age five are stunted; including 25 percent of children who are severely stunted. In general, the prevalence of stunting increases as the age of the child increases, with the highest prevalence of chronic malnutrition found in children age 24-35 months (71 percent) and lowest in children less than 6 months (14 percent) (Table 11-1 and Figure 11-1). Male and female children are equally stunted (51 and 50 percent, respectively) (Table 11-1). There is an inverse relationship between the length of the preceding birth interval and the proportion of children who are stunted. The longer the interval, the less likely is that the child will be stunted.

Table 11-1 Nutritional status of children

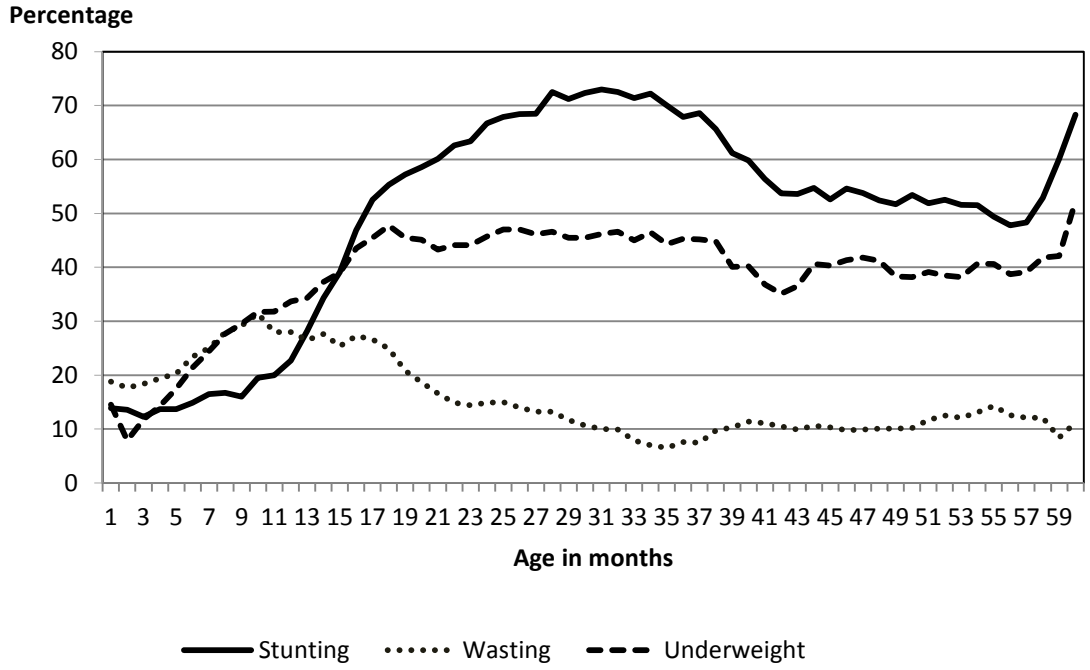
Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Eritrea 2010

Background characteristics	Height-for-age			Weight-for-height				Weight-for-age				Number of children
	Percentage below-3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	
Age in months												
<6	6.3	14.0	-0.3	6.8	19.5	5.6	(0.5)	5.9	14.7	2.5	(0.7)	535
6-8	4.9	16.0	-0.7	11.3	27.5	1.9	(1.1)	10.8	27.0	1.0	(1.3)	306
9-11	10.1	20.5	-0.9	12.2	32.1	2.2	(1.3)	11.5	34.0	1.6	(1.4)	325
12-17	18.2	42.3	-1.7	7.9	25.3	2.5	(1.1)	14.1	41.0	0.5	(1.7)	617
18-23	30.4	61.7	(2.3)	3.5	16.5	1.4	(0.9)	14.7	44.6	0.5	(1.8)	645
24-35	43.7	70.7	(2.7)	2.6	10.5	1.6	(0.6)	18.3	46.1	0.2	(1.9)	1,270
36-47	29.2	56.8	(2.2)	2.1	10.1	1.4	(0.7)	13.1	40.1	0.2	(1.8)	1,358
48-59	21.3	52.1	(2.1)	2.1	11.7	1.0	(0.8)	11.0	40.1	0.1	(1.8)	1,422
Sex												
Male	26.1	51.2	(2.0)	5.0	16.6	1.6	(0.8)	12.6	38.1	0.4	(1.7)	3,194
Female	24.7	49.6	(1.9)	3.5	14.1	2.1	(0.8)	13.7	39.4	0.6	(1.7)	3,282
Birth interval in months[2]												
First birth[3]	20.0	45.4	(1.7)	2.5	13.4	2.3	(0.7)	9.2	31.7	1.0	(1.5)	1,231
<24	31.3	55.7	(2.2)	5.2	14.9	1.4	(0.8)	18.0	43.8	0.0	(1.9)	840
24-47	27.2	53.2	(2.1)	4.9	16.3	1.8	(0.8)	13.9	42.2	0.4	(1.8)	3,181
48+	21.5	43.4	(1.7)	4.0	16.0	1.5	(0.8)	11.9	33.4	0.6	(1.5)	961
Birth order												
2-3	20.2	45.6	(1.7)	2.4	13.3	2.4	(0.7)	9.4	31.4	1.0	(1.5)	1,252
4-5	23.2	48.7	(1.9)	4.1	14.3	1.7	(0.8)	12.3	37.4	0.4	(1.6)	2,290
6+	28.0	52.0	(2.1)	5.4	17.8	1.5	(0.9)	15.0	42.2	0.3	(1.8)	1,563
Size at birth												
Very small	31.4	54.7	(2.1)	6.7	25.1	0.8	(1.2)	19.8	53.7	0.3	(2.1)	670
Small	29.0	55.0	(2.2)	7.8	25.4	0.8	(1.2)	23.3	52.8	0.0	(2.1)	411
Average or larger	24.4	49.8	(1.9)	3.5	13.1	2.1	(0.7)	11.4	35.8	0.6	(1.6)	4,970
Missing	23.5	43.1	(1.7)	8.7	24.5	1.6	(1.1)	16.0	39.0	1.1	(1.7)	162
Mother's interview status[5]												
Interviewed	25.5	50.5	(2.0)	4.3	15.5	1.8	(0.8)	13.2	39.0	0.5	(1.7)	6,213
Not interviewed but in household	24.1	52.5	(2.0)	2.3	9.8	4.0	(0.7)	15.6	37.0	0.4	(1.7)	151
Not interviewed, and not in the household [4]	21.9	41.1	(1.6)	2.8	12.2	1.3	(0.7)	7.9	30.7	0.0	(1.4)	113

Mother's nutritional status												
Thin (BMI<18.5)	27.9	54.6	(2.1)	5.8	21.0	1.3	(1.0)	17.0	48.1	0.3	(1.9)	2,411
Normal (BMI 18.5-24.9)	25.3	49.8	(1.9)	3.4	12.5	2.2	(0.6)	11.4	35.0	0.6	(1.6)	3,484
Overweight/ obese (BMI >= 25)	10.4	30.3	(1.3)	2.0	6.7	1.7	(0.4)	4.8	15.9	1.2	(1.1)	367
Missing	28.8	51.3	(2.3)	5.3	15.5	3.8	(0.7)	17.0	43.4	0.0	(1.8)	82
Residence												
Total urban	17.4	38.4	(1.6)	2.2	10.6	2.5	(0.5)	7.1	26.5	0.8	(1.3)	1,981
..Asmara	9.6	26.8	(1.2)	1.3	7.5	2.7	(0.3)	2.9	14.6	1.2	(0.9)	718
..Other Town	21.8	45.0	(1.8)	2.8	12.4	2.3	(0.7)	9.5	33.2	0.6	(1.5)	1,263
Rural	28.9	55.6	(2.1)	5.1	17.4	1.6	(0.9)	15.8	44.2	0.4	(1.8)	4,495
Zoba												
Debubawi Keih Bahri	32.2	56.9	(2.3)	6.4	23.4	1.9	(1.1)	21.7	51.4	0.1	(2.1)	102
Maekel	12.9	34.5	(1.4)	1.0	7.1	2.4	(0.3)	3.8	18.1	1.0	(1.0)	1,129
Semenawi Keih Bahri	32.5	58.2	(2.2)	5.6	21.0	1.0	(1.0)	21.2	48.0	0.1	(2.0)	772
Anseba	28.4	56.4	(2.1)	5.5	17.4	1.1	(0.9)	15.8	46.4	0.4	(1.9)	1,045
Gash-Barka	29.7	52.6	(2.0)	7.3	22.5	2.0	(1.1)	18.7	47.6	0.5	(1.9)	1,611
Debub	24.1	51.0	(2.0)	2.1	10.0	2.1	(0.6)	8.6	34.7	0.5	(1.6)	1,817
Mother's education[6]												
No education	32.8	58.8	(2.2)	5.9	19.9	1.6	(1.0)	19.4	49.4	0.4	(2.0)	2,963
Primary	24.2	50.0	(2.0)	4.2	13.0	1.7	(0.7)	11.1	38.2	0.6	(1.7)	1,546
Middle	18.3	43.3	(1.7)	1.7	9.8	2.4	(0.5)	6.8	27.2	0.8	(1.3)	1,011
Secondary or above	10.3	31.0	(1.3)	1.6	10.4	2.7	(0.5)	3.1	17.1	0.6	(1.0)	836
Wealth quintile												
Lowest	30.5	56.6	(2.2)	6.9	20.8	2.2	(1.0)	18.9	48.1	0.5	(1.9)	1,331
Second	32.4	57.2	(2.2)	6.1	19.9	1.2	(1.1)	19.2	48.9	0.1	(2.0)	1,337
Middle	31.1	59.0	(2.2)	3.9	15.9	1.4	(0.8)	14.7	45.2	0.4	(1.8)	1,407
Fourth	20.9	46.9	(1.8)	2.2	10.8	2.2	(0.6)	8.3	31.3	0.8	(1.5)	1,349
Highest	8.1	26.5	(1.2)	1.5	7.6	2.5	(0.3)	2.4	15.1	0.9	(0.9)	1,053
Total	25.4	50.3	(2.0)	4.2	15.3	1.9	(0.8)	13.2	38.8	0.5	(1.7)	6,476

Note: Table is based on the CORE questionnaires.
Table is based on children who slept in the CORE household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the WHO Child Growth Standards adopted in 2006. The indices in this table are NOT comparable to those based on the previously used NCHS/CDC/WHO standards.
Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.
[1] Includes children who are below -3 standard deviations (SD) from the International Reference Population median.
[2] Excludes children whose mothers were not interviewed.
[3] First born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval.
[4] Includes children whose mothers are deceased.
[5] Excludes children whose mothers were not weighed and measured. Mother's nutritional status in terms of BMI (Body Mass Index) is presented in Table 11.10.
[6] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.

Figure 11-1 Nutritional status of children by age



Note: Stunting reflects chronic malnutrition; Wasting reflects acute malnutrition; Underweight reflects chronic or acute malnutrition or a combination of both.

Size at birth is an important indicator of a child's nutritional status and the likelihood that a child will be chronically malnourished. Stunting is slightly more common among children who were reported to have been very small or small at birth (55 percent) than among children who were average or larger in size at birth, 50 percent (Table 11-1).

The mother's nutritional status, as measured by her body mass index (BMI) has a clear relationship with her child's level of stunting. As expected, children of overweight or obese mothers are the least likely to be stunted (30 percent); and children of thin mothers (55 percent) are more often stunted than those of normal weight mothers (50 percent).

Children in rural areas are more likely to be stunted than in urban areas (56 versus 38 percent, respectively). By zoba, variation, in the prevalence of stunting in children is similar except for Maekel where the prevalence of stunting is the lowest at 35 percent. Stunting level is lower among children in Asmara (27 percent) than among children in other towns (45 percent).

The mother's level of education generally has an inverse relationship with stunting level. Children of mothers with secondary or higher education are the least likely to be stunted (31 percent), while children whose mothers have no education are the most likely to be stunted (59 percent). The relationship between household wealth index and the stunting levels of children does not follow a clear pattern. However, children in the wealthiest households are the least likely to be stunted (27 percent) when compared with children in other wealth quintiles ranging between 47 percent and 59 percent (Table 11-1).

Weight-for-height

Overall, 15 percent of Eritrean children are wasted and four percent are severely wasted (Table 11-1). Wasting, or acute malnutrition, is highest in children age 9-11 months (32 percent) and lowest in children age 36-47 months (10 pearcent). Male children are slightly more likely to be wasted (17 percent) than female children (14 percent).

Wasting is higher in rural areas (17 percent) than in urban areas (11 percent). The data show an inverse correlation between wasting and birth weight. A higher proportion of babies who are reported to be very small or small at birth (25 percent) are acutely malnourished than are babies reported to be average or larger in size (13 percent) at birth. Wasting is more common among children of thin (BMI <18.5) mothers (21 percent) than among children with normal mothers BMI 18.5-24.9, 13 percent, and women with BMI above 24.9 (8 percent). Wasting is most common in children of mothers with no education (20 percent) as compared to children whose mothers have secondary or above education (10 percent). A small proportion of children in Eritrea are classified as overweight or obese. Overall two percent of children below age five are overweight or obese. Variation by background characteristic is minimal. One should note that in the reference population, 2.5 percent of the children have weight for height larger than +2SD.

Weight-for-age

Thirty-nine percent of children under the age of five are underweight (have low weight for age) and 13 percent are severely underweight (Table 11-1). The proportion of underweight children is lowest among children less than six months old (15 percent) and highest among those 24-35 months old (46 percent). There is no difference in the prevalence of underweight males and females (38 percent versus 39 percent). The percentage of children who are underweight decreases as the length of the birth interval increases. Underweight is more common in children born to mothers who are thin (BMI less than 18.5) (48 percent) than children born to mothers who are normal (BMI 18.5-24.9)(35 percent). Children born to uneducated mothers are more underweight (49 percent) than children of mothers with secondary or higher education (17 percent).

Rural children are substantially more likely to be underweight (44 percent) than urban children (27 percent). The proportion of underweight children varies by zoba. Maekel has the lowest proportion of underweight children, at 18 percent, while Debubawi Keih Bahri has the highest prevalence of underweight children at 51 percent. The proportion of underweight children decreases as mother's household wealth increase. Children born to mothers in the lowest wealth quintile are more than three times as likely to be underweight as children born to mothers in the highest wealth quintile (49 and 15 percent, respectively).

11.1.4 Trends in children's nutritional status

Trends in the nutritional status of children for the period of 2002 and 2010 have been analyzed. For the purpose of comparison, the data for 2002 were recalculated using the new WHO standard reference population making it comparable to the results of the EPHS2010.

A comparison of nutritional status EDHS2002 and EPHS2010 to assess the trends showed an increase in the proportion of children stunted and underweight, but no overall changes in the proportion of children who are wasted (Figure 11-2 and Figure 11-3). The prevalence of stunting increased from 43 percent in 2002 to 50 percent in 2010 reflecting an overall increase in chronic malnutrition over the past eight years. This is particularly pronounced among children 6-12 months of age (Figure 11-1).

Figure 11-3 Trends in children's nutritional status by age, 2002, 2010

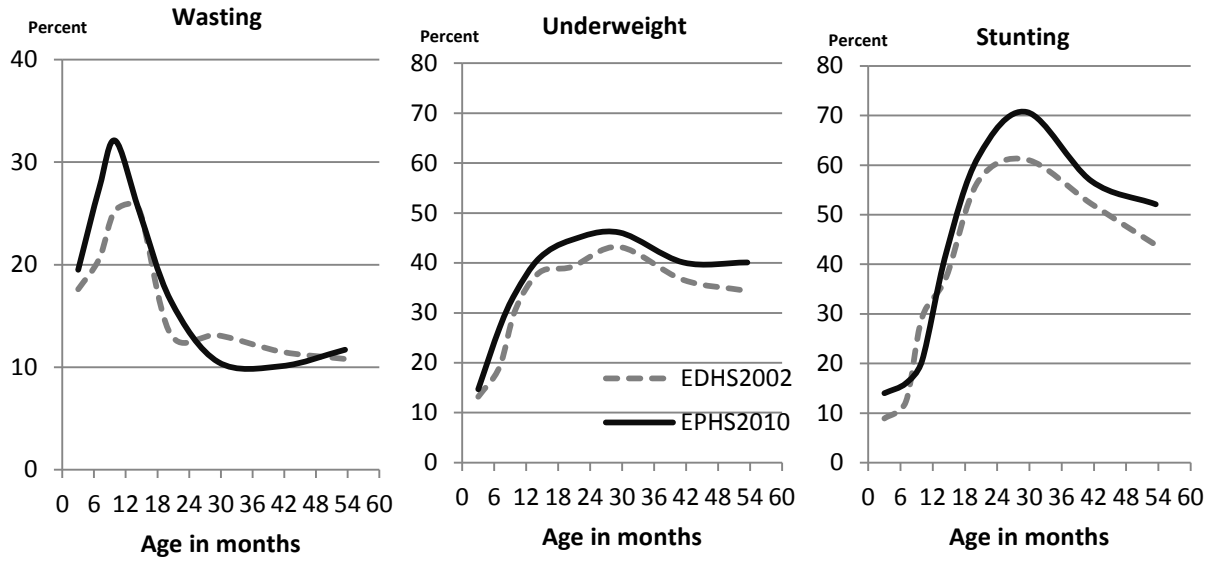
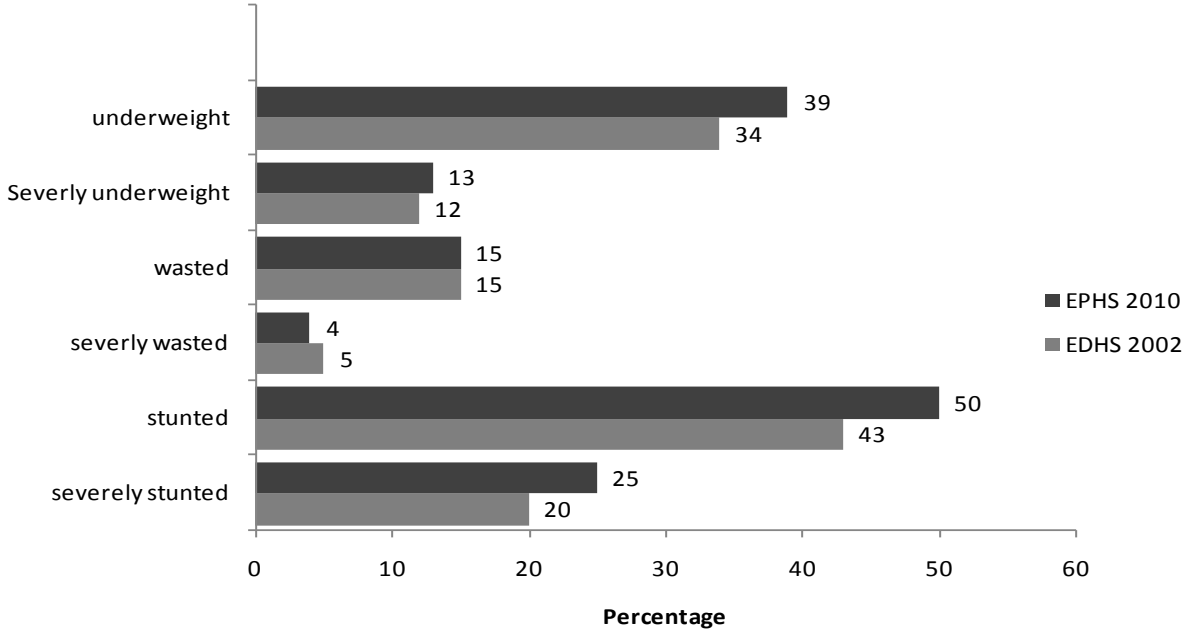


Figure 11-2 Trends in children's nutritional status, 2002, 2010



11.2 Breastfeeding and Complementary Feeding

Infant feeding affects both the mother and the child. Feeding practices affect the child's nutritional status, which in turn affects the risk of death. The duration and intensity of breastfeeding affect the mother's period of postpartum infertility, and hence the length of the birth interval and fertility levels.

11.2.1 Initiation of breastfeeding

Early initiation of breastfeeding is important for both the mother and the child. Early suckling stimulates the release of prolactin, which helps in the production of milk, and oxytocin, which is responsible for the ejection of milk and stimulates the contraction of the uterus after childbirth. The first liquid to come from the breast, known as colostrum, is produced in the first few days after delivery and provides natural immunity to the infant. It is recommended that children be fed colostrum immediately after birth and continue to be exclusively breastfed even if the regular breast milk has not yet appeared.

The survey collected information on children who were ever breastfed, who were breastfed in the first hour and the first day after birth, and who were fed anything other than breast milk before breast milk was regularly given (also known as pre-lacteal feeding).

Table 11-2 presents by background characteristics the breastfeeding status of children born in the five years preceding the survey. The table shows the percentage of children according to whether they were ever breastfed (all children born in the last five years). It also shows, for the last-born children born in the five years preceding the survey, when they started breastfeeding, and whether they were fed anything other than breast milk prior to the commencement of breastfeeding. Breastfeeding is almost universal in Eritrea; 98 percent of children under five are breastfed for some period of time. Breastfeeding is widely practiced across all subgroups of women and variations by background characteristics are small.

Ninety-three percent of infants started breastfeeding within one hour of birth and 97 percent within the first day (Table 11-2). Initiation of breastfeeding in the first hour after birth slightly varies somewhat by background characteristics. Babies assisted at delivery by a health professional or born at a health facility (91 percent, each) tend to have lower percentage of initiation in the first hour after birth than those assisted by traditional birth attendants and others as well as those born at home (94 percent). Children in urban areas (91 percent) have lower level of early initiation of breastfeeding than those in rural area (94 percent).

Initiation of breastfeeding within one hour by was lowest in Maekel (88 percent) and highest in Debubawi Keih Bahri (98 percent). The likelihood that a child is breastfed in the first hour after birth is slightly lower among children of mothers with secondary or higher education (89 percent) and higher among children of mothers with no education (95 percent). It is also higher among children of those in the lowest wealth quintile (95 percent) and lower among children of those in the highest wealth quintile (89 percent). There is no variation in initiation of breastfeeding in the first hour after birth among male and female children (93 percent each). In Asmara, only 84 percent of the children were breastfed within one hour after birth.

The proportion of children who are breastfed within one day of birth does not vary significantly by background characteristics.

Table 11-2 Initial breastfeeding

Percentage of children born in the five years preceding the survey who were ever breastfed, and for the last children born in the five years preceding the survey ever breastfed, the percentage who started breastfeeding within one hour and within one day of birth and the percentage who received a prelacteal feed, by background characteristics, Eritrea 2010

	Breastfeeding among children born in last five years		Among last-born children born in the past five years who ever were breastfed			
Background characteristic	Percentage ever breastfed	Number of children born in last five years	Percentage who started breastfeeding within 1 hour of birth	Percentage who started breastfeeding within 1 day of birth[1]	Percentage who received a prelacteal feed[2]	Number of last-born children ever breastfed
Sex						
Male	97.7	3,505	93.1	97.3	2.9	2,333
Female	98.2	3,508	93.1	97.4	2.9	2,310
Residence						
Total urban	97.6	2,124	91.2	96.5	3.0	1,451
Asmara	98.2	755	84.2	93.4	4.6	524
Other Town	97.3	1,369	95.1	98.3	2.0	927
Rural	98.1	4,889	94.0	97.7	2.8	3,192
Zoba						
Debubawi Keih Bahri	96.7	114	97.7	98.9	3.1	74
Maekel	98.3	1,202	87.6	94.6	4.5	826
Semenawi Keih Bahri	97.6	864	95.2	98.7	1.8	549
Anseba	97.9	1,119	96.3	99.3	1.4	718
Gash-Barka	97.5	1,813	93.8	97.3	2.8	1,170
Debub	98.3	1,901	93.0	97.4	3.1	1,307
Mother's education						
No education	97.8	3,288	94.8	98.3	2.7	2,120
Primary	98.1	1,698	93.9	97.9	1.6	1,108
Middle	98.1	1,104	90.9	95.7	4.2	775
Secondary or above	98.1	919	88.5	95.4	4.1	640
Assistance at delivery						
Health professional [3]	97.4	2,393	91.6	96.7	2.8	1,671
Traditional birth attendant	98.0	3,210	94.8	98.0	3.4	2,047
Other	98.6	1,371	92.2	97.4	2.0	916
No one	100.0	16	100.0	100.0	0.0	7
Missing	100.0	23	0.0	0.0	0.0	2
Place of delivery						
Health facility	97.4	2,361	91.4	96.6	2.8	1,645
At home	98.2	4,618	94.1	97.8	2.9	2,985
Other	100.0	10	93.0	100.0	0.0	9
Missing	100.0	24	37.9	37.9	0.0	4
Wealth quintile						
Lowest	98.3	1,426	94.7	97.6	3.5	904
Second	98.2	1,485	94.0	98.2	2.8	952
Middle	97.2	1,542	93.1	97.6	2.0	1,022
Fourth	98.0	1,442	93.7	97.1	2.7	997
Highest	98.1	1,119	89.3	96.1	3.6	767
Total	97.9	7,013	93.1	97.4	2.9	4,643

Note: Table is based on births in the last five years in the CORE questionnaires whether the children were living or dead at the time of interview.
[1] Includes children who started breastfeeding within one hour of birth.
[2] Children given something other than breast milk during the first three days of life.
[3] Doctor, nurse/midwife, or associate midwife.

Overall, only three percent of children born in the last five years are given prelacteal feeds within the first three days of life. There is no significant variation by background characteristics. The practice of prelacteal feeding is, however, higher in Asmara (5 percent), in Maekel (5 percent), among children of mothers with middle education (4 percent), children assisted by traditional birth attendants during delivery (4 percent), and among children in the lowest and highest wealth quintiles (4 percent each). The practice of giving prelacteal feeds is discouraged because it limits the infant's frequency of suckling and exposes the baby to the risk of infection.

11.2.2 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 semi-solid complementary food in addition to continued breastfeeding from age 6 months until 24 months or more. Use of bottles with nipples is not recommended at any age. Exclusive breastfeeding is recommended because breast milk is uncontaminated and contains all the nutrients necessary in the first few months of life. In addition, the mother's antibodies in breast milk provide the infant with immunity to disease. Early introduction of complementary foods is discouraged for several reasons. First, it exposes infants to pathogens and thus increases their risk of infection, especially diarrheal disease. Second, it decreases infants' intake of breast milk and therefore suckling, which in turn reduces breast milk production. Third, in low-resource settings, complementary foods are often nutritionally inferior.

Interviewers obtained information on complementary feeding by asking mothers about the current breastfeeding status of all children under age five and for the youngest child born in the three-year period before the survey and living with the mother, foods and liquids given to the child the day and night before the survey.

The percent distribution of youngest children under age three and living with the mother by breastfeeding status according to age in months is shown in (Table 11-3 and Figure 11-3). The data show that exclusive breastfeeding during the first six months after birth is not widely practiced in Eritrea. Currently 69 percent of children younger than age six months are exclusively breastfeed. By age, the percentage of young children who are exclusively breastfed decreases sharply from 86 percent of infants age 0-1 month to 75 percent of those age 2-3 months and, further, to 50 percent among infants 4-5 months.

In addition to breast milk, four percent of infants under age six months are given complementary foods, nine percent are given other milk, 13 percent are given plain water only, and five percent are given non milk liquids and juice (Table 11-3) and (Figure 11-3). Complementary feeding increases from two percent of children age 0-1 months to seven percent among those 4-5 months.

Five percent of infants under age six months are fed using a bottle with a nipple, a practice that is discouraged as it increases the child's risk of illness and reduces the child's interest in breastfeeding, with consequent potential decline in milk production.

The duration of breastfeeding in Eritrea is long. The proportion of children who are currently breastfeeding is 97 percent or more for children up to age 9-11 months and then declines to 94 percent of children age 12-17 months and 78 percent for those 18-23 months.

Figure 11-5 shows several infant and young child feeding (IYCF) indicators of breastfeeding status. As mentioned above, 69 percent of children under age six months and 50 percent of children 4-5 months are exclusively breastfed, and 86 percent of children under age six months are predominantly breastfed.

Table 11-3 Breastfeeding status by child's age

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

Age in months	Not breastfeeding	Breastfeeding and consuming:					Total	Percentage currently breastfeeding[1]	Number of youngest child under three years	Percentage using a bottle with a nipple	Number of children
		Exclusively breastfed	Plain water only	Nonmilk liquids/ juice	Other milk	Complementary foods					
0-1	0.1	85.7	4.9	2.9	4.2	2.2	100.0	99.9	156	1.5	160
2-3	2.0	75.3	10.6	2.6	8.2	1.3	100.0	98.0	205	3.5	206
4-5	0.6	50.3	20.6	8.2	12.9	7.4	100.0	99.4	216	7.5	221
6-8	0.3	11.0	20.8	10.1	13.8	44.0	100.0	99.7	320	9.6	325
9-11	2.6	3.0	4.8	4.6	6.7	78.5	100.0	97.4	339	10.4	342
12-17	6.0	0.7	1.4	3.1	2.5	86.2	100.0	94.0	638	10.8	647
18-23	22.0	0.0	1.0	1.7	1.1	74.1	100.0	78.0	634	9.7	676
24-35	78.9	0.0	0.2	0.3	0.3	20.4	100.0	21.1	1,023	6.7	1,317
0-3	1.2	79.8	8.1	2.7	6.5	1.7	100.0	98.8	361	2.6	366
0-5	1.0	68.7	12.8	4.8	8.9	3.8	100.0	99.0	577	4.5	588
6-9	0.9	9.0	16.5	9.1	12.2	52.3	100.0	99.1	432	10.8	438
12-15	5.4	1.1	1.9	3.6	3.0	85.0	100.0	94.6	423	11.3	429
12-23	14.0	0.4	1.2	2.4	1.8	80.2	100.0	86.0	1,272	10.2	1,323
20-23	27.2	0.1	1.3	1.9	1.3	68.3	100.0	72.8	412	8.7	448

Note: Table is based on the CORE questionnaires.
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 up 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 three years.

Figure 11-4 Infant feeding practice by age

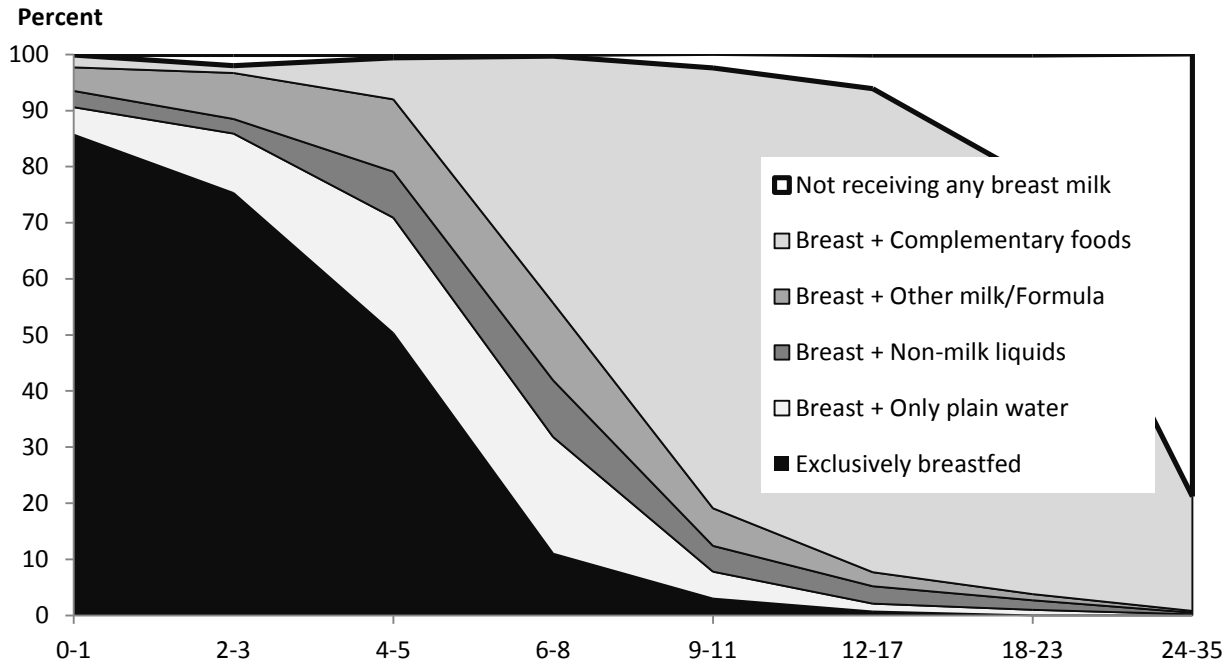
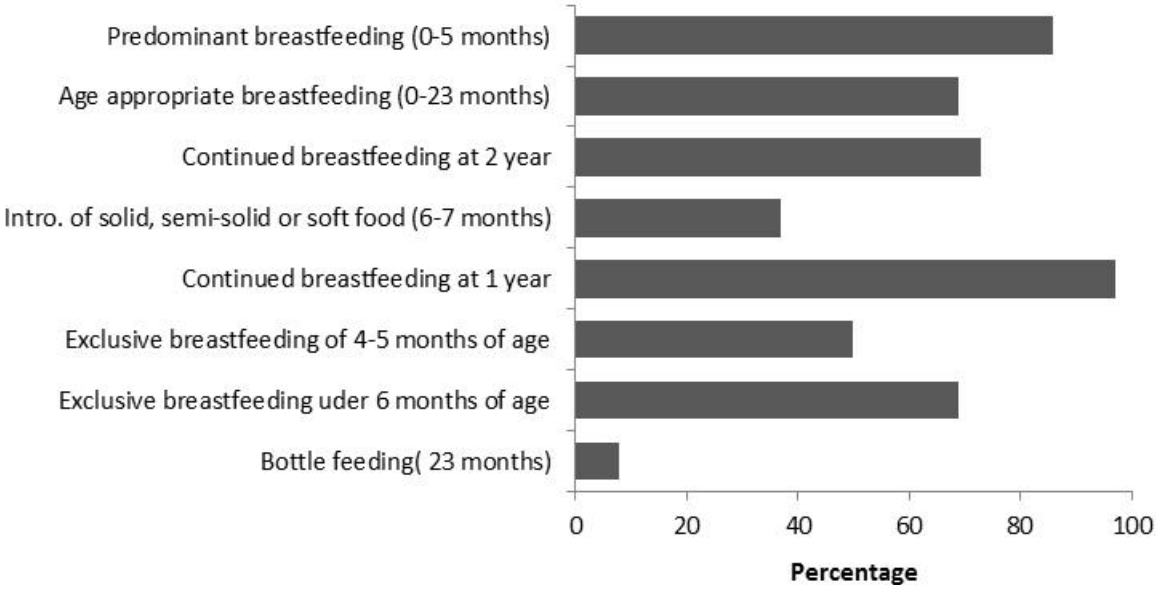


Figure 11-5 IYCF indicators on breastfeeding status



Children age 6-7 months (37 percent) consume solid, semi-solid, or soft foods. A similar proportion (69 percent) of children under the age of two receives age-appropriate breastfeeding, while about eight percent use a bottle with a nipple. Ninety-seven percent of children continued breastfeeding at one year, and seventy-three percent continued breastfeeding at two years.

11.2.3 Duration of breastfeeding

Table 11-4 provides information on median duration of breastfeeding among children born in the three years preceding the survey. The estimates of median and mean durations of breastfeeding are based on current status data, that is, the proportion of children in the three years preceding the survey who were being breastfed at the time of the survey.

The median duration any breastfeeding in Eritrea is 23 months. The median duration of exclusive breastfeeding is 3.8 months and the mean duration of exclusive breastfeeding is 4.7 months. Predominant breastfeeding is defined as exclusive breastfeeding or breastfeeding in combination with plain water, water-based liquids, or juices. The median and mean lengths of predominant breastfeeding are 6.1 and 7.1 months, respectively.

The median duration of any breastfeeding varies somewhat by background characteristics. It is longer among rural children (23.5 months) than urban children (22.6 months), and highest in Gash-Barka (24 months) and lowest in Debubawi Keih Bahri (20 months). Women with secondary or higher education breastfeed for about 21.9 months as compared to women who have no education (23.9 months). Similarly, children in the highest wealth quintile have a lower median duration of any breastfeeding (21 months) than those in the lowest quintile (24.1 months).

Table 11-4 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, Eritrea 2010

	Median duration (months) of breastfeeding among children born in the last three years[1]			Frequency of breastfeeding among children under six months			
Background characteristic	Any breastfeeding	Exclusive breastfeeding	Predominant breastfeeding[3]	Percentage breastfed 6+ times in last 24 hours[2]	Mean number of day feeds	Mean number of night feeds	Number of children
Sex							
Male	23.3	3.7	5.9	97.4	6.9	5.5	282
Female	23.2	3.9	6.4	97.2	6.2	5.0	294
Residence							
Total urban	22.6	4.5	5.7	98.6	7.0	5.6	198
Asmara	22.5	3.2	4.6	96.7	7.1	5.5	59
Other Town	22.7	5.0	6.0	99.4	7.0	5.6	139
Rural	23.5	3.6	6.3	96.6	6.3	5.0	378
Zoba							
Debubawi Keih Bahri	20.0	0.6	5.0	100.0	7.1	5.9	11
Maekel	22.9	3.8	4.6	97.8	6.9	5.1	89
Semenawi Keih Bahri	22.1	4.9	6.8	98.5	6.4	5.5	82
Anseba	23.4	4.1	6.9	97.6	7.0	6.0	81
Gash-Barka	24.0	2.7	6.0	96.8	6.6	5.3	172
Debub	23.6	4.3	6.6	96.4	6.0	4.6	140
Mother's education							
No education	23.9	3.4	6.7	96.7	6.5	5.4	249
Primary	23.1	3.9	6.5	97.6	6.6	5.1	139
Middle	22.3	3.9	5.4	98.8	6.7	5.0	100
Secondary or above	21.9	4.5	4.9	96.8	6.5	5.1	88
Wealth quintile							
Lowest	24.1	3.3	7.3	97.1	6.5	5.4	114
Second	23.7	3.2	6.5	96.0	6.5	5.4	122
Middle	22.8	3.8	6.4	96.5	6.2	4.9	134
Fourth	23.9	4.6	5.7	100.0	6.7	5.0	124
Highest	21.0	3.9	4.7	96.7	6.9	5.5	83
Total	23.2	3.8	6.1	97.3	6.5	5.2	576
Mean for all children	22.9	4.7	7.1	na	na	na	na

Note: Table is based on the CORE questionnaires.
Median and mean durations are based on current status. Includes children living and deceased at the time of the survey.
na = Not applicable
[1] It is assumed that non-last-born children and last-born children not currently living with the mother are not currently breastfeeding.
[2] Excludes children without a valid answer on the number of times breastfed.
[3] Either exclusively breastfed or received breast milk and plain water, and/or non-milk liquids only.

The variation in the median duration of exclusive and predominant breastfeeding by background characteristics has shown some differences. The median duration of exclusive breastfeeding and predominant breastfeeding of children of mothers with no education is 3.4 months and 6.7 months, respectively, compared to 4.5 months and 4.9 months for children of mothers with secondary or above education. The duration of exclusive breastfeeding is lowest in Debubawi Keih Bahri (0.6 months) and highest in Semenawi Keih Bahri (4.9 months). The duration of predominant breastfeeding is lowest in Maekel (4.6 months) and highest in Anseba (6.9 months) and Semenawi Keih Bahri (6.8 months).

11.2.4 Types of complementary food

UNICEF and WHO recommend the introduction of complementary foods to infants around age six months because by that age breast milk alone is no longer adequate to maintain a child's optimal growth. In the transition to the family diet, in addition to breastfeeding, children age six months and older should be fed small quantities of solid and semi-solid foods frequently throughout the day. During this transition period (age 6-23 months), the prevalence of malnutrition increases substantially in many countries because of an increase in infections and poor feeding practices. The EPHS2010 collected data on the types of foods given on the day and night preceding the survey to the youngest child under age 3 living with their mothers. The result is presented in Table 11-5 according to breastfeeding status.

Infant formula supplementation at any age is uncommon in Eritrea. Among breastfeeding children under age 2-3 months, one-fifth of one percent consume infant formula. However, a higher proportion receives other milk (49 percent). The introduction of other liquids such as water, juice, and formula, takes place earlier than the recommended introduction at age six months. Among the youngest breastfeeding children 0-1 months one percent consume infant formula, six percent other milk and five percent other liquids. Consumption of other milk increases gradually with age from six percent at 0-1 month up to 45 percent by age 9-11 months. Consumption of other liquids also shows increasing trends with age through age 9-11 months, when 71 percent of breastfeeding children consume other liquids). (Table 11-5).

Among children age 6-23 months, foods made from grains are consumed more often than foods from any other food group. Among breastfeeding children in this age group, 45 percent ate foods made from grains in the form of Geat or Sebko and 70 percent in the form of Injera. Thirty-two percent ate fruits and vegetables rich in vitamin A and four percent ate foods made from roots and tubers during the day or night preceding the interview. Meat, fish, poultry, and eggs have body building substances essential to good health. They are important for balanced physical and mental development. Overall, 28 percent of children age 6-23 months consumed meat, fish, eggs or poultry. Only 11 percent of children in this age group consumed cheese, yogurt, or other dairy products in the 24 hours preceding the survey. Overall, 82 percent breastfeeding children age 6-23 months consumed some solid or semi-solid food during the day or night preceding the survey.

A comparison of dietary intake of children age 6-23 months by breastfeeding status shows that a higher proportion of non-breastfeeding children (98 percent) than breastfeeding children (82 percent) are consuming solid and semi-solid foods. The consumption of all groups of liquids and solid or semi-solid foods is more common among the non-breastfeeding children than among those who are still breastfeeding.

Table 11-5 Foods and liquids consumed by children in the day or night preceding the interview

Percentage of youngest children under three years of age who are living with the mother by type of foods consumed in the day or night preceding the interview, according to breastfeeding status and age, Eritrea 2010

	Liquids			Solid or semi-solid foods										
Age in months	Infant formula	Other milk[1]	Other Liquids[2]	Injera	Food made from grains	Fruits and vegetables rich in vitamin A[3]	Other fruits and vegetables	Food made from roots and tubers	Food Made from legumes and nuts	Meat, fish, poultry, and eggs	Cheese, yogurt, other milk product	Any solid or semi-solid food	Food made with oil, fat and butter	Number of children
BREASTFEEDING CHILDREN														
0-1	0.7	6.4	5.1	1.5	1.4	0.7	0.7	0.0	0.7	0.7	0.0	2.2	0.0	156
2-3	0.1	9.5	3.5	1.2	0.5	0.8	0.5	0.0	1.2	1.2	0.0	1.3	0.5	201
4-5	2.5	16.2	15.8	3.5	3.5	2.2	1.6	0.7	2.4	2.2	1.2	7.4	1.6	215
6-8	17.9	31.1	42.0	24.5	29.9	13.9	12.2	1.5	9.8	9.5	4.2	44.2	16.6	319
9-11	26.6	45.1	70.6	65.3	49.1	29.3	22.5	4.9	16.1	28.5	10.1	80.4	34.6	330
12-17	28.2	46.2	82.7	82.6	48.2	36.8	26.1	4.4	28.2	33.3	12.5	91.6	41.5	600
18-23	26.2	46.0	84.5	88.1	48.0	40.7	27.5	4.9	32.2	33.3	14.1	94.8	46.7	494
24-35	19.9	48.9	87.7	91.4	45.0	41.3	26.2	6.2	29.9	31.6	13.8	96.3	42.0	216
6-23	25.4	43.2	73.5	70.3	45.0	32.3	23.3	4.1	23.7	28.0	11.0	81.7	37.1	1,743
Total	19.5	36.4	60.0	56.7	35.2	26.0	18.5	3.4	19.2	22.3	8.9	65.4	29.3	2,531
NONBREASTFEEDING CHILDREN														
0-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
2-3	0.0	57.6	43.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4
4-5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1
6-8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	1
9-11	65.6	50.1	69.2	79.7	45.3	58.1	38.8	12.0	26.8	23.1	12.0	98.7	27.7	9
12-17	25.6	81.5	86.6	87.4	71.2	50.5	38.8	5.6	44.9	33.8	18.1	94.2	47.2	38
18-23	29.0	63.5	90.7	88.8	49.9	48.1	33.3	3.3	36.0	44.0	21.0	98.4	50.7	140
24-35	23.8	49.6	93.2	93.8	51.0	53.3	30.7	8.5	32.4	39.5	19.8	98.6	53.6	807
6-23	30.4	66.7	88.9	88.2	54.3	49.3	35.0	4.2	37.7	41.2	19.9	97.6	48.6	187
Total	24.9	52.8	92.1	92.2	51.3	52.2	31.3	7.6	33.2	39.6	19.7	97.8	52.4	1,000

Note: Table is based on the CORE questionnaires.
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] Doesn't include plain water.
[3] Includes pumpkin, carrots, squash (yellow or orange inside); any dark green leafy vegetables; mangoes, papayas, other vitamin A fruits.

11.2.5 Infant and young child feeding (IYCF) practices

Appropriate infant and young child feeding (IYCF) practices include timely initiation of feeding of solid and semi-solid foods from the sixth month and increase the amount and variety of foods consumed and frequency of feeding as the child gets older, while maintaining breastfeeding (WHO, 2008)

WHO has established guidelines with respect to IYCF practices for children age 6-23 months. Breastfed children age 6-23 months should receive animal-source foods and vitamin A-rich fruits and vegetables daily (PAHO/WHO, 2003). Since first foods almost universally include a grain- or tuber-based staple, it is unlikely that young children who eat three or fewer food groups will receive both an animal source food and a vitamin A-rich fruit or vegetable. Therefore, four food groups are considered the minimum acceptable number of food groups for breastfed infants (Arimond and Ruel, 2003). Breastfed infants age 6-8 months should be fed meals of complementary foods two times per day, with one to two snacks as desired; breastfed children age 9-23 months should be fed meals at least three or four times per day, with one to two snacks (WHO, 2008).

Non-breastfed children age 6-23 months should receive milk products at least twice a day to ensure that their calcium needs are met. In addition, they need animal-source foods and vitamin A-rich fruits and vegetables. Therefore, for non-breastfed young children, four food groups are considered the minimum acceptable number. Non-breastfed children should be fed meals at least four times per day, with one to two snacks as desired (WHO, 2005). Meal frequency is considered a proxy for energy intake from foods other than breast milk. Therefore, for non-breastfed children, feeding frequency indicators include both milk feeds and solid or semi-solid feeds (WHO, 2008).

Ninety-eight percent of children age 6-23 months received breast milk or milk products during the 24 hours period before the survey and 58 percent were fed at least the minimum number of times or more. Forty percent of all children age 6-23 months were fed according to minimum standards with respect to food diversity (four or more food groups). Overall, only 29 percent of youngest children ages 6-23 months living with their mothers are fed in accordance with three IYCF practices. Older children, children in urban areas, and those residing in Asmara are more likely to be fed according to the IYCF practices than younger children and rural children. In addition, feeding practices improve with educational level of the mother (19 percent with no education and 56 percent with secondary or above education); similar improvement was seen with improvement of wealth (Table 11-6).

Among breastfed children age 6-23 months, 40 percent receive foods from at least four food groups, while 58 percent are fed the minimum number of times or more. In total, 30 percent of breastfed children are given foods from three or more groups and also are fed at least the minimum number of times per day. Among non-breastfed children in the same age group, 77 percent receive milk or milk products at least twice a day, 35 percent receive foods from at least four food groups, and 57 percent are fed the minimum number of times or more. One-fifth of non-breastfed children are fed in accordance with IYCF practices (Table 11-6 and Figure 11-6)

Table 11-6 Infant and young child feeding (IYCF) practices

Percentage of youngest children age 6-23 months living with their mother who are fed according to three IYCF feeding practices based on breastfeeding status, number of food groups and times they are fed during the day or night preceding the survey, according to background characteristics, Eritrea 2010

	Among breastfed children 6-23 months, percentage fed:				Among non-breastfed children 6-23 months, percentage fed:					Among all children 6-23 months, percentage fed:				
Background characteristic	3+ food Groups	Minimum times or more	Both 3+ food groups and minimum times or more	Number of breastfed children 6-23 months	Milk or milk products	4+ food groups[1]	4+ times or more	With 3 IYCF practices	Number of non-breastfed children 6-23 months	Breastmilk or milk products	3+or 4+ food Groups	Minimum times or more	With all 3 IYCF practices	Number of all children 6-23 months
Age														
6-8	19.3	32.8	13.0	319	100.0	100.0	100.0	100.0	1	100.0	19.6	33.0	13.3	320
9-11	38.6	49.8	26.0	330	100.0	27.7	41.4	0.0	9	100.0	38.3	49.6	25.3	339
12-17	45.8	64.8	35.5	600	89.0	46.6	51.0	28.1	38	99.3	45.9	63.9	35.1	638
18-23	47.5	70.5	36.5	494	71.7	31.9	59.5	19.5	140	93.8	44.0	68.0	32.8	634
Sex														
Male	40.5	59.6	30.6	886	73.6	32.4	57.9	22.2	100	97.3	39.7	59.4	29.7	987
Female	39.7	55.8	29.2	857	80.2	38.1	56.3	19.2	87	98.2	39.5	55.8	28.3	944
Residence														
Total urban	60.7	66.1	46.5	501	92.0	64.5	59.7	41.9	83	98.9	61.2	65.2	45.9	584
..Asmara	76.7	72.7	60.0	180	94.8	79.3	66.8	58.4	36	99.1	77.1	71.7	59.7	216
..Other Town	51.7	62.4	39.0	321	89.8	53.2	54.4	29.2	47	98.7	51.9	61.4	37.7	368
Rural	31.8	54.3	23.2	1,242	64.6	11.6	55.1	4.0	104	97.2	30.2	54.4	21.7	1,346
Zoba														
Debubawi Keih Bahri	23.3	52.3	18.4	17	72.3	12.1	42.0	12.1	6	92.8	20.4	49.6	16.8	24
Maekel	74.1	69.9	57.9	298	88.5	64.8	72.8	47.8	44	98.5	72.9	70.3	56.6	342
Semenawi Keih Bahri	37.0	53.2	25.3	201	83.2	30.6	39.3	9.6	27	98.0	36.2	51.6	23.5	228
Anseba	38.5	59.6	31.3	266	83.8	41.6	58.9	26.2	36	98.1	38.9	59.5	30.6	303
Gash-Barka	29.4	54.1	20.7	463	68.9	14.8	41.6	1.6	43	97.4	28.2	53.1	19.1	506
Debub	32.3	54.8	23.1	497	58.2	21.9	71.9	14.1	32	97.5	31.7	55.8	22.6	529

Mother's education														
No education	27.1	54.7	20.2	784	69.8	13.6	44.5	3.9	68	97.6	26.0	53.9	18.9	851
Primary	35.2	53.7	24.1	421	72.4	26.7	58.0	14.5	41	97.6	34.4	54.1	23.3	462
Middle	53.4	63.1	41.0	303	89.0	46.8	70.7	30.8	34	98.9	52.7	63.9	40.0	337
Secondary or above	75.4	68.4	58.5	234	81.7	66.3	65.1	44.5	45	97.1	74.0	67.9	56.2	278
Wealth quintile														
Lowest	22.4	49.0	16.0	357	86.5	11.8	30.3	4.5	26	99.1	21.7	47.8	15.3	382
Second	27.6	52.8	20.0	378	63.2	10.4	50.9	0.0	30	97.3	26.4	52.7	18.6	409
Middle	34.1	58.5	26.3	375	63.7	21.8	56.1	10.5	47	96.0	32.8	58.3	24.6	422
Fourth	50.3	62.2	36.0	370	65.1	36.9	74.8	22.0	28	97.6	49.4	63.1	35.0	397
Highest	76.0	69.1	59.2	263	95.6	68.4	64.7	46.9	57	99.2	74.6	68.3	57.0	321
Total	40.1	57.7	29.9	1,743	76.7	35.1	57.1	20.8	187	97.7	39.6	57.7	29.0	1,930

Note: Table is based on the CORE questionnaires.

[1] Food groups: a. infant formula, milk other than breast milk, cheese or yogurt or other milk products; b. foods made from grains, roots, and tubers; c. vitamin A-rich fruits and vegetables; d. other fruits and vegetables; e. eggs; f. meat, poultry, fish, and shellfish (and organ meats); g. food made from beans, peas, lentils, nuts; h. foods made with oil, fat, butter.

[2] At least twice a day for breastfed infants 6-8 months and at least three times a day for breastfed children 9-23 months.

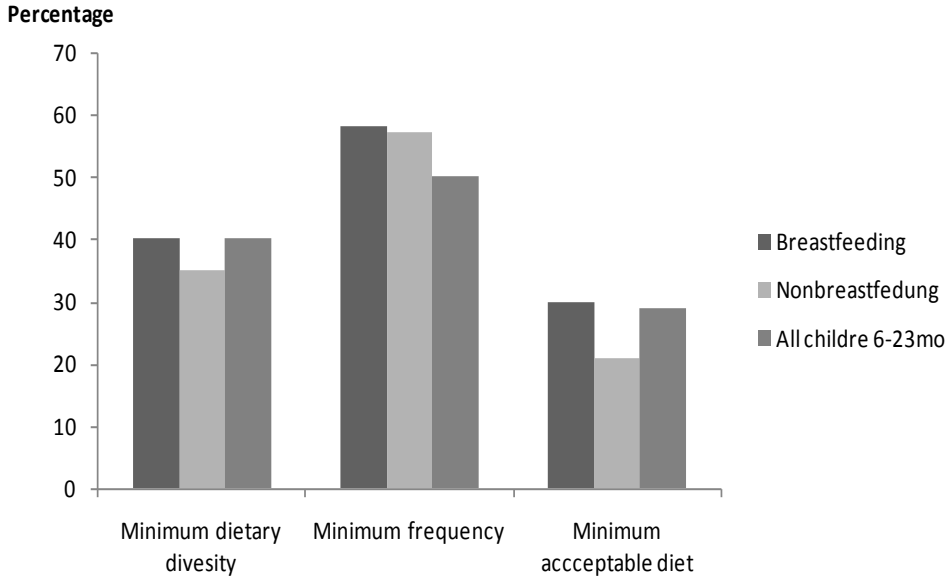
[3] Includes commercial infant formula, fresh, tinned and powdered animal milk, and cheese, yogurt and other milk products.

[4] Non breastfed children ages 6-23 months are considered to be fed with a minimum standard of three Infant and Young Child Feeding practices if they receive other milk or milk products and are fed at least the minimum number of times per day with at least the minimum number of food groups.

[5] 3+ food groups for breastfed children and 4+ food groups for non-breastfed children.

[6] Fed solid or semi-solid food at least twice a day for infants 6-8 months, 3+ times for other breastfed children, and 4+ times for non-breastfed children.

Figure 11-6 IYCF indicators on minimum acceptable diet



11.3 Micronutrient Intake Among Children

Micronutrient deficiency is a major contributor to childhood morbidity and mortality. Children can receive micronutrients from foods, food fortification, and direct supplementation. Table 11-8 summarizes information collected in the EPHS2010 on children's intake of vitamin A and iron, and whether they live in households with iodized salt.

Vitamin A is an essential micronutrient for the immune system that plays an important role in maintaining the epithelial tissue in the body. Severe vitamin A deficiency (VAD) can cause eye damage. VAD can also increase the severity of infections such as measles and diarrheal diseases in children and slow recovery from illness and ultimately increase the risk of child death. 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) with vitamin A supplements is one method of ensuring that children at risk do not develop VAD. Since 2006 Eritrea has started vitamin A supplementation twice per year with a coverage rate above 70 percent.

Fifty-three percent of the youngest children age 6-23 months living with their mothers consumed foods rich in vitamin A in the 24 hours preceding the interview (Table 11-7). The proportion of children consuming vitamin A-rich foods increases with age from 21 percent at 6-8 months to 55 percent at 18-23 months and 65 percent at 24-35 months. Non-breastfeeding children are more likely than breastfeeding children to consume foods rich in vitamin A (66 percent compared with 46 percent). However breastfed children also get high vitamin A from breast-milk. There is no difference in the consumption of vitamin A in males and females. There is variation in children's consumption of foods rich in vitamin A in the

Table 11-7 Micronutrient intake among children

Among youngest children age 6-35 months who are living with their mother, the percentages who consumed vitamin A-rich and iron-rich foods in the day or night preceding the survey, and among all children 6-59 months, the percentages who were given vitamin A supplements in the six months preceding the survey, who were given iron supplements in the last seven days, and among all children age 6-59 months who live in households that were tested for iodized salt, the percentage who live in households with adequately iodized salt, by background characteristics, Eritrea 2010

	Among youngest children age 6-35 months living with the mother:			Among all children age 6-59 months:			Among children age 6-59 months living in households tested for iodized salt	
Background characteristic	Percentage who consumed foods rich in vitamin A in last 24 hours[1]	Percentage who consumed foods rich in iron in last 24 hours[2]	Number of children	Percentage given vitamin A supplements in last 6 months	Percentage given iron supplements in last 7 days	Number of children	Percentage living in households with adequately iodized salt[3]	Number of children
Age in months								
6-8	20.6	9.8	320	31.1	5.6	325	76.6	315
9-11	44.5	28.3	339	50.9	4.9	342	81.5	335
12-17	52.9	33.3	638	51.0	8.1	647	81.2	624
18-23	55.2	35.7	634	50.8	8.4	676	80.3	656
24-35	65.1	37.9	1,023	47.9	7.5	1,317	77.2	1,294
36-47	na	na	0	47.9	4.8	1,354	78.1	1,326
48-59	na	na	0	46.3	6.4	1,415	77.6	1,381
Sex								
Male	54.3	32.0	1,513	47.7	6.7	3,018	79.4	2,942
Female	52.0	32.6	1,440	47.2	6.4	3,058	77.6	2,988
Breastfeeding status								
Breastfeeding	46.4	28.4	1,959	47.3	7.0	2,003	79.2	1,949
Not breastfeeding	66.4	40.1	985	47.5	6.4	4,024	78.1	3,934
Missing	65.6	11.2	10	51.5	0.3	49	77.6	48
Residence								
Total urban	76.0	48.4	879	57.8	8.4	1,841	91.9	1,805
..Asmara	86.2	56.0	332	69.1	6.9	675	96.6	662
..Other Town	69.8	43.7	547	51.3	9.2	1,166	89.2	1,143
Rural	43.5	25.5	2,075	43.0	5.8	4,235	72.6	4,126
Zoba								
Debubawi Keih Bahri	33.5	27.5	40	44.2	18.3	93	33.1	88
Maekel	83.1	50.4	520	65.3	5.4	1,053	97.4	1,038
Semenawi Keih Bahri	46.6	25.7	349	35.7	4.4	738	46.6	713
Anseba	42.0	23.4	472	63.0	5.6	975	78.0	950
Gash-Barka	41.3	26.7	725	28.7	4.8	1,532	66.1	1,491
Debub	54.8	33.8	848	49.6	9.8	1,685	94.2	1,652

(*Continued*)

Table 11-7 (*Continued*)

Among youngest children age 6-35 months who are living with their mother, the percentages who consumed vitamin A-rich and iron-rich foods in the day or night preceding the survey, and among all children 6-59 months, the percentages who were given vitamin A supplements in the six months preceding the survey, who were given iron supplements in the last seven days, and among all children age 6-59 months who live in households that were tested for iodized salt, the percentage who live in households with adequately iodized salt, by background characteristics, Eritrea 2010

	Among youngest children age 6-35 months living with the mother:			Among all children age 6-59 months:			Among children age 6-59 months living in households tested for iodized salt	
Background characteristic	Percentage who consumed foods rich in vitamin A in last 24 hours[1]	Percentage who consumed foods rich in iron in last 24 hours[2]	Number of children	Percentage given vitamin A supplements in last 6 months	Percentage given iron supplements in last 7 days	Number of children	Percentage living in households with adequately iodized salt[3]	Number of children
Mother's education								
No education	38.8	22.7	1,342	38.2	5.7	2,856	65.8	2,773
Primary	50.2	27.4	702	51.9	7.0	1,463	84.4	1,432
Middle	69.7	43.5	492	55.5	8.4	957	93.3	935
Secondary or above	85.0	58.2	416	63.1	6.8	796	94.6	787
Mother's age at birth								
15-19	40.6	28.1	133	37.5	6.1	162	84.3	154
20-29	56.1	35.5	1,389	49.6	7.0	2,770	80.4	2,711
30-39	52.9	30.6	1,146	46.9	6.9	2,426	77.6	2,372
40-49	45.4	25.1	285	43.0	3.9	718	72.7	694
Wealth quintile								
Lowest	30.5	17.0	598	37.6	5.2	1,252	58.0	1,214
Second	39.3	25.1	611	40.7	4.6	1,270	68.0	1,226
Middle	49.0	29.2	646	45.2	7.8	1,310	78.8	1,273
Fourth	68.6	38.3	617	52.0	8.0	1,241	94.0	1,228
Highest	84.6	56.7	482	65.6	7.5	1,002	96.9	989
Total	53.2	32.3	2,954	47.5	6.6	6,076	78.5	5,931

Note: Table is based on the CORE questionnaires.
Information on vitamin A and iron supplements is based on the mother's recall.
na = Not applicable
[1] Includes meat (and organ meat), fish, poultry, eggs, pumpkin, red 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).
[3] Salt containing 15 parts per million of iodine or more. Excludes children in households in which salt was not tested.

past 24 hours between urban and rural residence (76 and 44 percent respectively). With regard to zoba, children living in Maekel are most likely to consume foods rich in vitamin A (83 percent), while those in the Debubawi Keih Bahri are least likely to have consumed (34 percent). Mother's level of education and wealth tend to increase with an increase in the consumption of foods rich in vitamin A by young children age 6-23 months (no education 39 percent, secondary or above education 85 percent; and lowest wealth quintile 31 percent versus highest quintile 85 percent)(Table 11-7).

Nearly half (48 percent) of children age 6-59 months were given vitamin A supplementation in the seven days preceding the survey. Youngest children age 6-8 months, those residing in rural areas, those in Gash-Barka, those belonging to mothers with no education, and those in the lowest wealth quintile are least likely to receive vitamin A supplementation during the reference period.

Low iron is the root cause of anemia and iron is also essential for cognitive development. Iron requirements are greatest at age 6-11 months, when growth is extremely rapid. About one-third (32 percent) of children age 6-23 months consumed iron-rich foods in the 24 hours preceding the survey (Table 11-7). Consumption of foods rich in iron increases from 10 percent at age 6-8 months to 36 percent among children 18-23 months and 38 percent among children age 24-35 months. Non-breastfeeding children are more likely than breastfeeding children to consume iron-rich foods (40 percent versus 28 percent). Consumption of iron-rich foods is more common in urban areas (48 percent) than in rural areas (26 percent). Children in Maekel are the most likely to consume iron-rich foods (50 percent), while those living in Anseba are the least likely (23 percent). Children whose mothers have some secondary education are more likely to consume iron-rich foods (58 percent) than those whose mothers have no education (23 percent). Similarly, an increase in wealth status is followed by an increase in the consumption of foods rich in iron with 17 percent of children in the lowest wealth quintile consuming foods rich in iron in the 24 hours before the survey, compared with 57 percent of children in the highest wealth quintile.

Iron supplementation coverage is generally low in Eritrea. Only seven percent of children ages 6-59 months were given iron supplements in the seven days preceding the survey. It does not vary much by background characteristics, except for variation by zoba (18 percent for Debubawi Keih Bahri and 4 percent for Semenawi Keih Bahri).

Iodine deficiency has serious effects on body growth and mental development. The principal cause of iodine deficiency is inadequate iodine in foods. The fortification of salt with iodine is the most common method of preventing iodine deficiency. According to WHO, a country's salt iodization program is considered to be on a good track (poised to attain the goal of eliminating iodine deficiency) when 90 percent of the households are using iodized salt. Data from a survey done in Eritrea in 1994, among age group 9-11 years showed that 22 percent had goiter and 82 percent had a urinary a iodine concentration below the median value. Rehabilitation and installation of salt iodization capacity was done in 1995 and 1998. A follow up survey undertaken in 1998 showed a drop of prevalence of iodine deficiency from 82 percent to 25 percent during the period 1994-1998.

To assess the use of iodized salt in Eritrea, interviewers in the EPHS2010 asked households to provide a teaspoon of salt used for cooking. The salt was tested for iodine using iodine rapid test kit. Seventy-nine percent of all children live in households that use iodized salt (Table 11-7). There are some variations by background characteristics. Children in rural areas (73 percent), in Debubawi Keih Bahri (33 percent), whose mothers have no education (66 percent), and those in the lowest wealth quintile (58 percent) are least likely to live in households that use iodized salt.

Table 11-8 Presence of iodized salt in household

Among all households, percentage of households tested for iodine content and percentage of households with no salt; and among households with salt tested, the percent distribution by level of iodine in salt (parts per million or ppm), according to background characteristics, Eritrea 2010

Background characteristic	Among all households, the percentage			Number of households	Among households with tested salt, the percent distribution by iodine content of salt			Total	Number of households
	With salt tested	With no salt	Salt not tested		None (0 ppm)	Inadequate (<15 ppm)	Adequate (15+ ppm)		
Residence									
Total urban	33.1	0.6	66.3	11,199	3.1	5.0	91.9	100.0	3,707
Asmara	33.4	0.2	66.4	4,894	0.6	3.4	96.1	100.0	1,632
Other Town	32.9	0.9	66.2	6,305	5.1	6.4	88.6	100.0	2,075
Rural	32.5	1.0	66.5	20,015	16.4	10.8	72.8	100.0	6,508
Zoba									
Debubawi Keih Bahri	32.6	1.7	65.7	512	51.8	15.2	33.0	100.0	167
Maekel	33.3	0.2	66.4	6,969	0.5	2.9	96.7	100.0	2,323
Semenawi Keih Bahri	32.5	1.4	66.1	3,339	38.2	10.3	51.5	100.0	1,086
Anseba	32.4	1.4	66.2	4,487	11.5	10.3	78.2	100.0	1,453
Gash-Barka	32.4	1.0	66.5	7,350	18.4	17.7	63.9	100.0	2,383
Debub	32.8	0.5	66.7	8,556	2.3	4.0	93.7	100.0	2,804
Wealth quintile									
Lowest	33.2	1.0	65.8	5,206	25.2	15.7	59.1	100.0	1,729
Second	31.3	1.1	67.6	6,461	20.0	12.3	67.8	100.0	2,023
Middle	32.2	1.2	66.6	6,762	12.7	9.5	77.8	100.0	2,176
Fourth	33.2	0.6	66.2	6,589	2.6	4.4	93.0	100.0	2,187
Highest	33.9	0.3	65.8	6,195	0.4	3.2	96.4	100.0	2,100
Total	32.7	0.8	66.5	31,214	11.6	8.7	79.7	100.0	10,216

Note: Table is based on the CORE questionnaires.

Thirty-three percent of households had salt tested for iodine at the time of the interview (Table 11-8). Of these households, 80 percent were using adequately iodized salt. Among the households with tested salt, the percent distribution by iodine content of salt has shown some variation by background characteristics. It was more frequently adequate in urban (92 percent) as compared to rural (73 percent) and was found to be adequate in 97 percent of households in Maekel as compared to 33 percent in Debubawi Keih Bahri. The percentage of adequacy increases with an increase in the wealth quintile (from 60 percent for the lowest wealth quintile to 96 percent for the highest quintile).

11.4 Nutritional Status of Women and Men

The 2010 EPHS measured the height and weight of women and men age 15-49. The data were used to derive two measures of nutritional status: height and body mass index (BMI). Results are presented for women in Table 11-9 and for men in Table 11-10.

Short stature reflects previous poor socio-economic conditions and inadequate nutrition during childhood and adolescence. In a woman, short stature is a risk factor for poor birth outcomes and obstetric complications. For example, short stature is associated with small pelvic size, which increases the likelihood

Table 11-9 Nutritional status of women

Among women age 15-49, the percentage with height under 145 cm, mean body mass index (BMI), and the percentage with specific BMI levels, by background characteristics, Eritrea 2010

	Height		Body Mass Index[1]									
Background Characteristic	Percentage below 145 cm	Number of women	Mean Body Mass Index (BMI)	18.5-24.9 (Total normal)	<18.5 (Total thin)	17.0-18.4 (Mildly thin)	16.0-16.9 (Moderately thin)	<16.0 (Severely thin)	>=25.0 (Total overweight or obese)	25.0-29.9 (Overweight)	>=30.0 (Obese)	Number of women
Age												
15-19	3.1	2,266	18.8	49.0	49.1	24.5	13.9	10.7	1.9	1.7	0.2	2,208
20-24	1.7	1,716	19.3	53.2	42.7	23.4	10.9	8.4	4.0	3.5	0.4	1,485
25-29	2.4	1,615	19.4	53.8	41.8	22.9	11.9	7	4.5	3.5	1.0	1,359
30-34	2.7	1,206	19.5	49.9	43.2	23.8	10	9.4	6.9	5.8	1.0	1,019
35-39	3.0	1,410	19.9	50.2	40.5	20.2	10.5	9.8	9.3	6.5	2.8	1,282
40-44	2.5	916	19.9	47.4	42	20.2	9.6	12.2	10.6	8.7	1.9	878
45-49	2.4	933	20.0	44.1	44	22.1	11.6	10.3	11.8	9.0	2.8	924
Residence												
Total urban	1.8	4,033	20.4	54.7	33.9	17.5	9.6	6.8	11.4	8.9	2.5	3,744
Asmara	1.0	1,806	20.9	54.1	31.4	17.5	8.4	5.5	14.5	11.0	3.5	1,707
Other Town	2.3	2,227	20.0	55.2	36	17.5	10.6	7.9	8.9	7.2	1.7	2,037
Rural	3.1	6,027	18.8	46.8	51	26.4	13	11.6	2.3	1.9	0.4	5,410
Zoba												
Debubawi Keih Bahri	4.3	163	18.7	33.2	59.6	22.4	14.9	22.3	7.3	5.1	2.1	148
Maekel	1.4	2,466	20.5	54.3	34.1	18.6	9	6.5	11.6	9.0	2.6	2,311
Semenawi Keih Bahri	5.4	1,100	19.1	42.8	51	24.4	12.1	14.5	6.2	4.7	1.5	981
Anseba	2.5	1,422	18.9	48.4	48.6	23.5	13.5	11.6	2.9	2.6	0.3	1,286
Gash-Barka	4.4	2,209	19.0	46.1	49.5	24.2	13.1	12.2	4.4	3.5	0.9	1,980
Debub	1.0	2,701	19.3	54.0	42.4	24.4	11.3	6.7	3.6	3.1	0.6	2,448
Education												
No education	3.9	3,813	18.9	45.2	50.9	24.9	13.2	12.8	3.8	3.0	0.8	3,449
Primary	2.5	2,130	19.4	52.8	42.1	23.4	10.5	8.2	5.1	4.4	0.7	1,891
Middle	2.1	1,919	19.6	48.7	43.8	22.8	12.6	8.4	7.4	5.7	1.7	1,758
Secondary or above	0.7	2,197	20.2	56.6	34	18.4	9	6.6	9.4	7.4	2.1	2,055
Missing	0.0	1	19.4	100.0	0	0	0	0	0.0	0.0	0.0	1
Wealth quintile												
Lowest	4.3	1,711	18.5	43.3	54.9	27.6	13	14.3	1.8	1.4	0.4	1,557
Second	3.6	1,740	18.7	44.9	53.3	27.8	13.7	11.8	1.8	1.6	0.3	1,557
Middle	3.0	1,988	18.9	48.8	48.8	25.3	13.2	10.3	2.5	1.9	0.6	1,787
Fourth	1.5	2,200	19.6	55.1	39.3	20.1	11	8.2	5.6	5.0	0.6	1,990
Highest	1.3	2,421	20.9	54.8	30.2	16.2	8.4	5.6	15.0	11.5	3.5	2,263
Total	2.6	10,061	19.4	50.0	43.9	22.7	11.6	9.6	6.0	4.8	1.2	9,154

Note: Table is based on the CORE questionnaires.
The Body Mass Index (BMI) is expressed as the ratio of weight in kilograms to the square of height in meters (kg/m^2).
[1] Excludes pregnant women and women with a birth in the preceding 2 months.

Table 11-10 Nutritional status of men

Among men age 15-49, mean body mass index (BMI), and the percentage with specific BMI levels, by background characteristics, Eritrea 2010

Background characteristic	Body Mass Index									
	Mean Body Mass Index (BMI)	18.5-24.9 (Total normal)	<18.5 (Total thin)	17.0-18.4 (Mildly thin)	16.0-16.9 (Moderately thin)	<16.0 (Severely thin)	>=25.0 (Total overweight or obese)	25.0-29.9 (Overweight)	>=30.0 (Obese)	Number of men
Age										
15-19	17.3	21.1	78.5	32	24.3	22.2	0.4	0.3	0.1	1,511
20-24	18.7	52.3	46.8	28.4	12.8	5.6	0.8	0.8	0.0	622
25-29	19.3	53.2	41.8	26.3	9.6	5.9	5.0	4.7	0.2	438
30-34	19.9	57.6	36.4	24	7.9	4.5	6.0	5.7	0.3	377
35-39	20.3	57.1	34.7	24.3	7.8	2.6	8.2	6.7	1.5	470
40-44	20.3	56.8	33.3	22.9	6.2	4.2	9.9	8.3	1.6	362
45-49	20.3	55.8	35.8	21.4	10.7	3.7	8.4	7.8	0.6	404
Residence										
Total urban	19.5	46.9	45.6	21.4	13.5	10.7	7.5	6.6	0.9	1,696
Asmara	20.0	49.6	40.7	19.9	12.1	8.7	9.7	8.1	1.6	817
Other Town	19.0	44.4	50.1	22.8	14.8	12.5	5.5	5.3	0.3	879
Rural	18.4	40.1	58.5	31.6	15.8	11.1	1.4	1.3	0.1	2,487
Zoba										
Debubawi Keih Bahri	18.7	40.2	55.1	21.6	12.2	21.3	4.7	3.8	1.0	66
Maekel	19.6	46.6	45.6	23	12.8	9.8	7.9	6.7	1.2	1,156
Semenawi Keih Bahri	18.6	39.9	56.8	30.7	15.6	10.5	3.3	3.1	0.2	451
Anseba	18.2	37.0	61	28.9	19	13.1	2.1	2.1	0.0	578
Gash-Barka	18.7	44.3	53.3	28	14.7	10.6	2.4	2.1	0.4	757
Debub	18.5	42.5	55.5	30	14.9	10.6	2.0	2.0	0.0	1,176
Education										
No education	18.6	43.7	54.7	31.3	13.1	10.3	1.6	1.5	0.0	583
Primary	18.7	42.3	53.8	27.9	15.3	10.6	4.0	3.5	0.5	643
Middle	18.2	35.5	62.5	28.9	17.5	16.1	2.0	1.7	0.3	1,159
Secondary or above	19.3	47.6	46.6	25.2	13.5	7.9	5.9	5.2	0.7	1,798
Missing	17.8	0.0	100	100	0	0	0.0	0.0	0.0	0
Wealth quintile										
Lowest	18.1	37.1	62.8	34.5	17.4	10.9	0.2	0.2	0.0	719
Second	18.3	40.2	58.5	32.4	15.3	10.8	1.3	1.3	0.0	685
Middle	18.4	39.9	58.6	30.9	17.1	10.6	1.4	1.4	0.0	737
Fourth	18.7	43.4	53.5	24.9	15.2	13.4	3.1	2.8	0.4	928
Highest	20.0	49.8	40	19.8	11.2	9	10.2	8.8	1.3	1,115
Total 15-49	18.8	42.9	53.2	27.5	14.8	10.9	3.9	3.5	0.4	4,183
50-59	20.3	58.9	31.9	20.4	7.9	3.6	9.3	7.9	1.4	693
Total men 15-59	19.0	45.1	50.3	26.5	13.9	9.9	4.7	4.1	0.6	4,876

Note: Table is based on the CORE questionnaires.
The Body Mass Index (BMI) is expressed as the ratio of weight in kilograms to the square of height in meters (kg/m2).

of difficulty during delivery and the risk of bearing low birth weight babies. A woman is considered to be at risk if her height is below 145 cm.

BMI is used to measure thinness or obesity. BMI is defined as weight in kilograms divided by height in metres squared (kg/m^2). A BMI below 18.5 indicates thinness. A BMI below 16 kg/m^2 indicates severely thin and is associated with increased mortality. Low pre-pregnancy BMI, like short stature, is associated with poor birth outcomes and obstetric complications. A BMI of 25.0 or above indicates overweight or obesity.

Table 11-9 shows the percentage of women with height less than 145 cm, mean BMI, and the proportions of women falling into normal and high-risk categories by background characteristics. Respondents for whom there was no information on height or weight and for whom a BMI could not be estimated are excluded from this analysis. The data analysis on height was based on 10,061 women and on BMI is based on 9,154 women age 15-49 years.

Three percent of Eritrean women are below 145 cm in height. In general, height differs little with background characteristics. Adolescent women, age 15-19 years, are most likely to be below 145 cm. Women of short stature are most likely to reside in rural areas, in Semenawi Keih Bahri and Debubawi Keih Bahri, are those with no education, and those in the lowest wealth quintile (Table 11-9).

The mean BMI for Eritrean women age 15-49 is 19.4 kg/m^2 (Table 11-9).

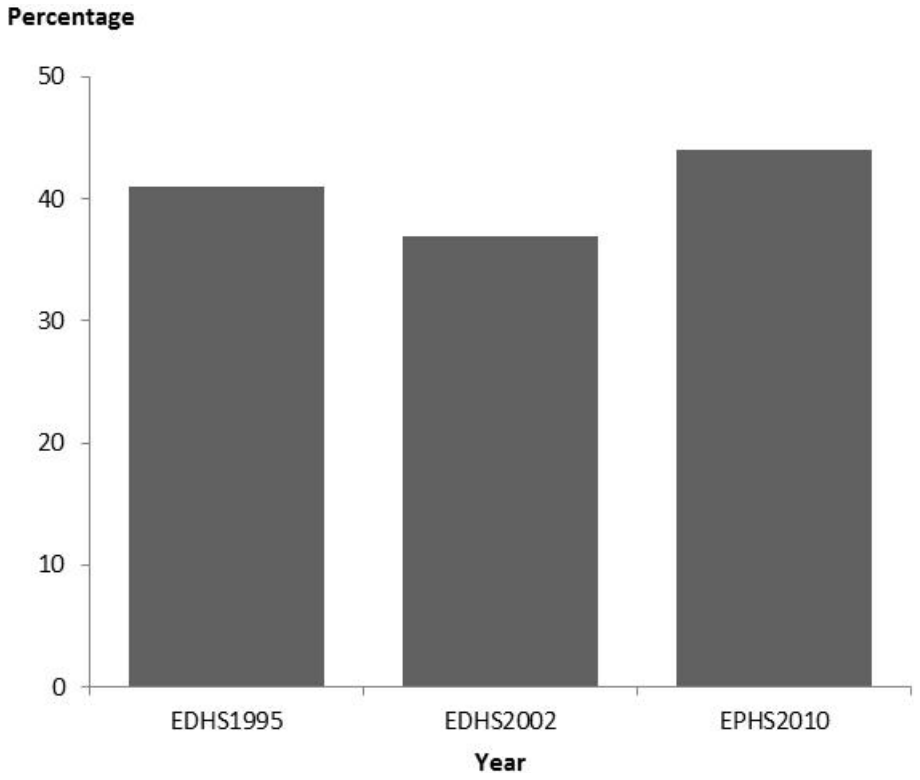
Fifty percent of Eritrean women have a normal BMI (between 18.5 and 24.9 kg/m^2). Overall, 44 percent of women are thin or undernourished (BMI less than 18.5 kg/m^2), 23 percent mildly thin (BMI between 17.0-18.4 kg/m2), 12 percent are moderately thin (BMI between 16.0-16.9 kg/m^2) and 10 percent are severely thin (BMI less than 16.0 kg/m^2). Adolescents age 15-19 are somewhat more likely to be thin (49 percent) than older women. Rural women are more likely to be thin than urban women (51 percent versus 34 percent). Women residing in Maekel (34 percent) are less likely to be thin than women in other zobas (42-60 percent). The percentage of women who are thin decreases as educational attainment and wealth status increases; uneducated women (51 percent) and those in the lowest and second wealth quintile (55 percent) are more likely to be thin than women with secondary or higher education (34 percent) and those in the highest wealth quintile (30 percent).

Overweight or obesity (BMI 25 kg/m^2 or above) is not common among women in Eritrea. Overall, six percent are overweight or obese with five percent are overweight and one percent obese. The percentage of women who are overweight or obese increases with age from two percent among women age 15-19 to 12 percent among the age 45-49. It is substantially higher among urban than rural women (11 and 2 percent, respectively). By zoba, women in Maekel are the most likely to be overweight or obese (12 percent), while women in Anseba are the least likely (3 percent). The percentage of women who are overweight or obese increases substantially with education and wealth.

Overall, the percentage of thin women in Eritrea has not changed much since 1995, as shown in Figure 11-7.

The mean BMI for Eritrean men age 15-49 is 19 kg/m^2 (Table 11-10). There is little difference in the mean BMI by background characteristics. Forty-five percent of Eritrean men age 15-49 have a normal BMI (between 18.5 and 24.9 kg/m^2), 50 percent are thin (BMI less than 18.5 kg/m^2), 27 percent are mildly thin (BMI between 17.0 and 18.4 kg/m^2), 14 percent moderate thin (BMI less than 16.0-16.9 kg/m^2), and 10 percent are severely thin (BMI less than 16.0 kg/m^2).

Figure 11-7 Trend of nutritional status among women 15-49 years (percent with BMI<18.5)



Young men age 15-19 are much more likely to be thin (79 percent) than their older counterparts (36 percent). Rural men are more likely to be thin (59 percent) than urban men (46 percent). Among zoba, those residing in Anseba are most likely to be thin (61 percent) while those living in Maekel (46 percent) are the least likely to be thin. There is no clear pattern in the relationship between education and the percentage of men who have a BMI of less than 18.5 kg/m^2 with the prevalence ranging from a low of 47 percent among those with at least secondary education to a high of 63 percent among those with middle education. The proportion of men who are thin declines with an increase in wealth quintile. Sixty-three percent of men in the lowest wealth quintile, compared with 40 percent of men in the highest wealth quintile, have BMI below 18.5 kg/m^2.

Only five percent of men are overweight (BMI 25 kg/m2 or above), while less than one percent are obese. The proportion of overweight or obese men is higher among urban men (8 percent), those living in Maekel (8 percent), men with secondary or higher education (6 percent), and men in the highest wealth quintile (10 percent). The prevalence of overweight is the least in rural areas (1 percent), those in Debub (2 percent), those with no education (less than 2 percent), and those in the lowest wealth quintile (less than 1 percent).

11.5 Micronutrient Intake Among Mothers

Adequate micronutrient intake by women has important benefits for both women and their children. A mother's nutritional status during pregnancy is important both for fetal development and for protection against maternal morbidity and mortality. Breastfeeding children benefit from micronutrient supplementation that mothers receive, especially vitamin A. Iodine deficiency is related to a number of adverse pregnancy outcomes, including abortion, fetal brain damage, congenital malformation, stillbirth, and prenatal death. Table 11.11 includes a number of measures that are useful in assessing the extent to which women are obtaining adequate intakes of vitamin A, iodine and iron. One-fourth (23 percent) of mothers age 15-49 consumed vitamin A-rich foods (Table 11-11). Consumption of vitamin A-rich food is higher among young mothers, age 15-24, (24-25 percent), in urban areas (33 percent), in Maekel (37 percent), those with at least secondary education (38 percent), and those in the highest wealth quintile (36 percent) than their counterparts.

Twenty-five percent of mothers who gave birth in the five years preceding the survey received postpartum vitamin A supplements (Table 11-11). The proportion of mothers that received postpartum vitamin A supplements does not vary much by age. Mothers age 35-49, however, are least likely to receive vitamin A supplementation. Postpartum vitamin A supplements are more common in urban areas than rural areas (33 percent and 22 percent, respectively). More women in Maekel received postpartum vitamin A supplementation (43 percent) than the other zobas (16-26 percent). Women with secondary or higher education are more likely to have received vitamin A supplements after their last pregnancy (40 percent) than women with no education (17 percent). The likelihood of women receiving postpartum vitamin A supplements is highest among those in highest wealth quintiles (40 percent) and lowest among those in the lowest wealth quintile (15 percent).

Forty-three percent of women did not take any iron tablets during their last pregnancy (Table 11-11). Thirty-five percent of women took iron tablets for fewer than 60 days, nine percent took for 60-89 days and ten percent took iron tablets for 90 days or more during their last pregnancy. The percentage of women who took iron tablets for 90 or more days, decreasing somewhat with age (7 percent for age 15-19 years and 12 percent for age 35-49 years). There is no difference between urban and rural, but it is highest for Anseba (22 percent) and lowest for Gash-Barka (4 percent). In general, there is no marked variation in percentage of women who took iron tablets for 90 days or more by education and wealth index status of mothers.

Iodine deficiency has adverse effects on all population groups, but women of reproductive age are often most affected. (Table 11-11) shows the percentage of women with a child born in the five years preceding the survey who live in households using adequately iodized salt. Nationally, 79 percent of women live in households with adequately iodized salt. This percentage varies much by background characteristics. Ninety-two percent of mothers in urban areas, compared to 73 percent in rural areas, live in households using adequate iodized salt. The proportion is the highest in Maekel (96 percent) and lowest in Debubawi Keih Bahri (33 percent). The proportion increases steadily with an increasing level of education and wealth index.

Table 11-11 Micronutrient intake among mothers

Among women age 15-49 with a child under age three years living with her, the percentages who consumed vitamin A-rich and iron-rich foods in the 24 hours preceding the survey; among women age 15-49 with a child born in the last five years, the percentage who received a vitamin A dose in the first two months after the birth of the last child; among mothers age 15-49 who during the pregnancy of the last child born in the five years prior to the survey, the percentage who suffered from night blindness, the percentage who took iron tablets or syrup for specific numbers of days; and among women age 15-49 with a child born in the last five years, who live in households that were tested for iodized salt, the percentage who live in households with adequately iodized salt, by background characteristics, Eritrea 2010

	Among women with a child under three years living with her						Number of days women took iron tablets or syrup during pregnancy of last birth						Among women with a child born in the last five years, who live in households that were tested for iodized salt	
Background characteristic	Percentage consumed Vitamin A rich foods[1]	Percentage consumed iron-rich foods[2]	Number of women	Percentage who received vitamin A dose postpartum[3]	Night blindness reported[4]	Night blindness adjusted	None	<60	60-89	90+	Don't know/ missing	Number of women	Percentage living in households with adequately iodized salt[5]	Number of women
Age														
15-19	27.8	19.3	183	24.3	3.7	2.7	52.8	34.2	4.5	7.2	1.2	199	83.8	192
20-24	24.0	16.6	751	26.7	1.8	0.6	42.0	38.1	7.4	9.9	2.6	934	79.2	914
25-29	21.8	14.2	945	28.5	3.5	1.7	42.4	37.3	9.0	9.1	2.2	1,194	81.2	1,169
30-34	20.1	12.0	707	26.5	4.6	2.6	42.5	34.5	9.0	10.9	3.2	911	78.9	888
35-49	23.3	13.0	945	20.9	5.8	2.7	41.7	32.8	10.9	12.0	2.5	1,471	76.6	1,431
Residence														
Total urban	32.5	21.5	1,075	33.2	2.4	1.0	38.4	37.0	10.1	10.7	3.8	1,472	92.2	1,442
Asmara	39.0	25.6	390	40.8	1.4	0.9	35.9	37.4	10.3	9.4	7.0	533	97.2	524
Other Town	28.7	19.2	685	28.9	3.0	1.0	39.8	36.8	10.0	11.4	1.9	938	89.2	918
Rural	18.3	11.0	2,456	21.6	4.9	2.5	44.5	34.6	8.6	10.3	2.0	3,238	73.1	3,153
Zoba														
Debubawi Keih Bahri	14.3	11.4	52	26.6	6.5	2.1	25.3	44.7	12.6	14.5	3.0	76	33.3	73
Maekel	37.2	22.6	608	42.6	1.3	1.0	34.5	37.0	11.4	12.0	5.1	838	97.5	824
Semenawi Keih Bahri	18.2	10.8	431	21.2	6.5	2.4	34.7	41.6	10.3	10.7	2.7	555	48.1	537
Anseba	17.2	10.5	555	22.9	4.6	2.5	27.5	35.3	15.0	21.5	0.7	730	78.2	709
Gash-Barka	15.9	10.5	896	15.5	4.4	1.9	59.0	30.2	4.6	3.7	2.5	1,189	66.6	1,155
Debub	25.1	16.2	989	25.7	4.3	2.3	45.4	35.9	7.7	9.1	1.9	1,323	94.3	1,297

Education														
No education	16.2	9.8	1,594	17.1	6.1	3.0	48.1	31.9	8.9	8.9	2.1	2,156	66.0	2,091
Primary	19.5	10.3	840	25.5	2.8	1.6	39.6	36.8	8.6	12.1	2.9	1,124	84.6	1,099
Middle	31.5	21.3	591	35.2	3.0	1.2	36.4	41.4	9.0	10.3	2.9	782	93.4	765
Secondary or above	37.7	26.4	504	39.6	0.9	0.4	36.6	37.1	10.7	12.8	2.8	646	95.2	638
Missing	0.0	0.0	1	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	1	100.0	1
Wealth quintile														
Lowest	12.9	7.3	711	14.6	7.0	3.7	50.0	29.4	8.8	9.7	2.1	917	58.8	889
Second	15.3	10.1	737	19.8	5.7	3.1	46.8	36.0	7.9	7.7	1.5	967	67.7	932
Middle	20.3	12.3	777	23.2	4.2	1.8	39.2	38.0	9.4	11.4	2.0	1,038	78.8	1,009
Fourth	31.2	19.1	740	30.8	2.1	0.7	39.2	36.4	9.3	12.4	2.6	1,008	94.2	995
Highest	36.3	24.6	565	39.7	1.2	0.6	37.3	36.7	10.3	10.8	4.9	780	96.9	770
Total	22.6	14.2	3,531	25.2	4.1	2.0	42.6	35.4	9.1	10.4	2.5	4,709	79.1	4,595

Note: Table is based on the CORE questionnaires.
[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. Excludes women in households where salt was not tested.

MALARIA 12

Key Findings

- Half of households own at least one mosquito net and over a quarter own at least two nets. In other words, one in five people own a net, which is almost one net per household of 4.8 people.
- Ownership of mosquito nets has increased from 33 percent in 2002 to 50 percent in 2010; an increase of 47 percent.
- A third of the households surveyed reported environmental management being conducted in their village, with 79 percent of the households having one or more of their members participated in the activity.
- One-fifth of children under the age of five, 13 percent of women of child bearing age and 15 percent of pregnant women had slept under insecticide treated nets the night preceding the survey.
- One-fifth of children under age five had fever two weeks before the survey; of which 57 percent were treated with any drug and 1.5 percent were diagnosed and treated for malaria.

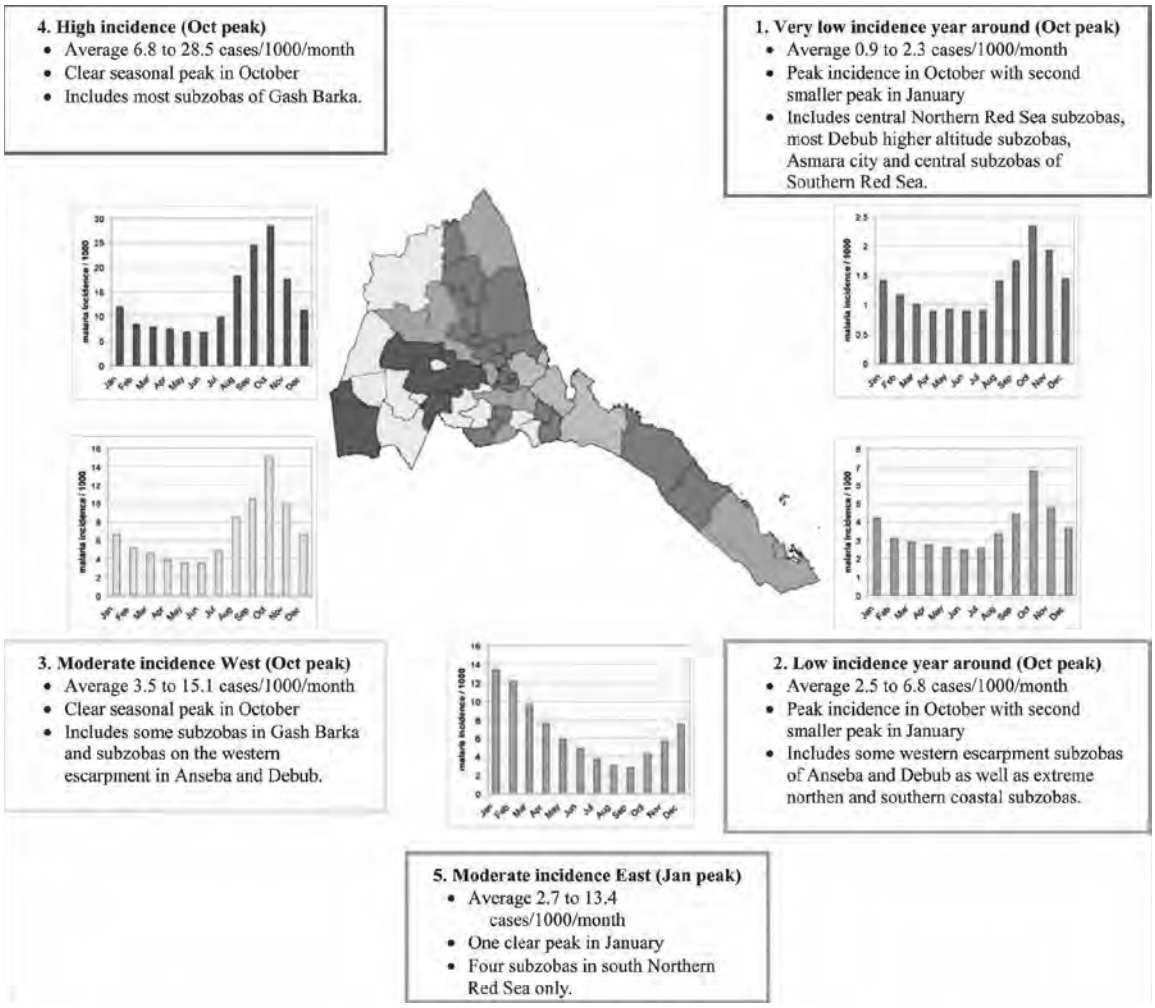
Malaria is seasonal and focal in Eritrea with a heterogeneous pattern across geographic areas. Sixty-five percent of malaria infections are caused by Plasmodium falciparum—with Anophelesgambiaeas the primary vector. Malaria was a major public health problem up to 1999, when the government of Eritrea adopted the Roll Back Initiative and reduced the prevalence of malaria considerably. Although malaria has decreased considerably in the past 13 years, it still is an important public health problem in Eritrea as 70 percent of the villages have conditions that are favorable for malaria transmission.

There are two main malaria transmission seasons in Eritrea. Four of the zobas namely Gash-Barka, Debub, Anseba and Maekel (Western Lowlands and Central Highlands) belong to the main malaria transmission season (August – November), while the coastal areas, Semenawi Keih Bahri and Debubawi Keih Bahri belong to the coastal transmission season (December – February).

Malaria accounts for two percent of all outpatient attendance and admissions and less than 30 deaths annually in Eritrea (HMIS 2011). The disease is most prevalent in the western lowlands; Gash-Barka that usually carries two-thirds of the national burden of malaria followed by Debub which usually carries one fifth (Figure 12-1). The recent Malaria Program Review (2012) conducted by the Ministry of Health and WHO indicated an incidence rate of 12 persons per 1000 as compared to 110 persons per 1000 population in the year 1998.

The main malaria affected zobas are Gash-Barka, Debub, Anseba and Semenawi Keih Bahri, while, Maekel (encompassing the capital city, Asmara) and Debubawi Keih Bahri are the least malarial zobas. Most of the malaria control activities take place in the most malaria prone areas and hence interventions (such as the distribution and thereby ownership and use of mosquito nets) are generally lowest in Debubawi Keih Bahri and Maekel.

Figure 12-1 Malaria stratification and seasonal variations, 2007



The Government of Eritrea considers elimination of malaria as a development issue and to that end has committed to transition to the pre-elimination phase by end of 2016. In order to meet this goal, a series of objectives have been set as listed below:

1. Build capacity and deploy the necessary skill mix, particularly at the front lines;
2. Achieve and maintain 100 percent coverage of preventive and treatment services for malaria;
3. Enhance health promotion activities targeting malaria hot spots; and
4. Strengthen Surveillance, Monitoring and Evaluation (M&E) and Operational Research to inform policy on timely basis.

Information on coverage of malaria prevention services was collected in the EDHS/EPHS surveys. The EPHS2010 information covers environmental management, ownership of mosquito nets, use of mosquito nets by various groups (women aged 15-49, pregnant women, and children under age five), and prevalence and prompt treatment of fever in children under age five.

The Ministry of Health also conducted a Malaria Indicator Survey (MIS) in October 2012 according to which improvements (as compared to previous MIS surveys) were recorded in various areas such as environmental management, ownership and use of mosquito nets, and treatment seeking behavior. The report is not yet published. The MIS surveys are conducted in the four most malaria prone zobas (in the most malaria prone villages) and during peak malaria transmission season for the three zobas except Semenawi Keih Bahri. The following are some selected findings from the 2012 MIS.

1. Ninety percent of the households have at least one mosquito net of any type with 87 percent having at least one ITN.
2. Seven in ten (67 percent) of children under age five slept under ITN the night before the survey, showing an increase of 37 percent from that observed in 2008 MIS (49 percent).
3. Six in ten of children who had fever two weeks before the survey took any drugs and five percent took anti-malarial drugs.
4. Six in ten of women in the reproductive age group (15-49) slept under ITN the night before the survey.

12.1 Environmental Management

Among the surveyed households, 33 percent reported that their village/town had conducted environmental management activities. Debub (46 percent) and Anseba (41 percent) conducted environmental management activities more than the other four zobas. In areas where the activities were conducted, 79 percent of the households had one or more members who participated. Participation is a bit higher in urban areas (82 percent) than in rural areas (78 percent) (Table 12-1).

Reduction of malaria transmission through the application of appropriate preventive measures targeting the vector is one of the most effective strategies the government of Eritrea implements in rolling back malaria. Some of the major preventive and control strategies currently being implemented are community-based environmental control measures (source reduction) and larviciding activities in selected and epidemic prone villages. With the increase of agricultural and dam construction, the Eritrean government plans to further promote environmental management and larviciding activities in order to suppress vector density around micro dams developed for irrigation.

The great reduction in malaria morbidity and mortality that the program achieved has created high relaxation and complacency in the communities which in turn has led to low community participation in the prevention and control of malaria. This needs special attention as the country goes on to pre-elimination.

Table 12-1 Household possession of mosquito nets

Percentage of households with at least one and two or more mosquito net (treated or untreated), percentage of households located in villages or towns where environmental management activities conducted, and percentage of households living in these areas with any member participated in the activities, by background characteristics, Eritrea 2010

	Any type of mosquito net				Environmental management activities		
Background Characteristic	Percentage with at least one	Percentage with more than one	Average number of nets per household	Percentage with activities conducted in the village/town	Number of households	Percentage with members participated in the areas where activities were conducted	Number of households with activities conducted in the village/town
Residence							
Total urban	43.6	26.5	0.9	34.1	3,816	81.8	1,300
Asmara	11.8	4.1	0.2	18.4	1,666	90.8	307
Other Town	68.1	43.8	1.5	46.2	2,150	79.1	993
Rural	54.0	27.6	0.9	33.0	6,772	77.5	2,235
Zoba							
Debubawi Keih Bahri	28.9	14.5	0.5	11.0	176	82.9	19
Maekel	18.0	7.1	0.3	22.7	2,365	88.1	537
Semenawi Keih Bahri	70.5	39.7	1.3	30.3	1,137	74.4	344
Anseba	68.0	40.6	1.3	41.0	1,522	72.7	625
Gash-Barka	53.0	33.1	1.1	26.8	2,500	82.1	669
Debub	58.2	27.4	0.9	46.4	2,888	78.1	1,341
Wealth quintile							
Lowest	54.5	30.2	1.0	29.4	1,799	78.1	528
Second	54.3	27.6	0.9	30.5	2,121	73.7	647
Middle	57.2	29.3	1.0	36.0	2,284	79.1	823
Fourth	55.1	31.5	1.1	41.5	2,246	79.6	932
Highest	30.0	17.5	0.6	28.3	2,138	84.8	604
Total	50.2	27.2	0.9	33.4	10,588	79.1	3,536

Note: The table is based on the CORE questionnaires.

12.2 Ownership of Mosquito Nets

Malaria is caused by Plasmodium parasites and transmitted from person to person by an intermediate host or vector called anopheles mosquitoes. To protect people from mosquito bites, strategies that create a barrier between humans and the vector are effective prevention measures against malaria. One such strategy proven to prevent malaria transmission considerably is sleeping under mosquito nets. Use of mosquito nets is obviously influenced by level of net possession by householders and thus the EPHS2010 collected data on net ownership at household level.

Half of the sampled households owned at least one mosquito net; with ownership being more in rural (54 percent) than urban areas (44 percent) (Table 12-1). When urban and rural areas were compared (excluding Asmara), however, ownership is higher in urban areas – other towns (68 percent) than in rural areas (54 percent). Ownership of mosquito nets is higher (60 percent) among households in the four zobas with higher risk of malaria (Gash-Barka, Anseba, Debub, and Semenawi Keih Bahri). The 2011 World Malaria Report (WHO WMR, 2011) indicated consistent results for sub-Saharan Africa – 50 percent coverage of households with at least one mosquito net.

Comparison by zoba also showed a difference in ownership levels with Semenawi Keih Bahri and Anseba having the highest proportion of households possessing one or more nets. Gash-Barka has the highest malaria at-risk proportion and is expected to have most of its residents owning mosquito nets; but this is not the case. In general, there is an uneven pattern in net ownership among zobas. The reasons for this can be irregularities in the supply of bed nets, pull system, not considering the population size during bed net request, and absence of net census. Total ownership of nets has increased from 34 percent in 2002 to 50 percent in 2010 (Figure 12-1), an increase of 47 percent.

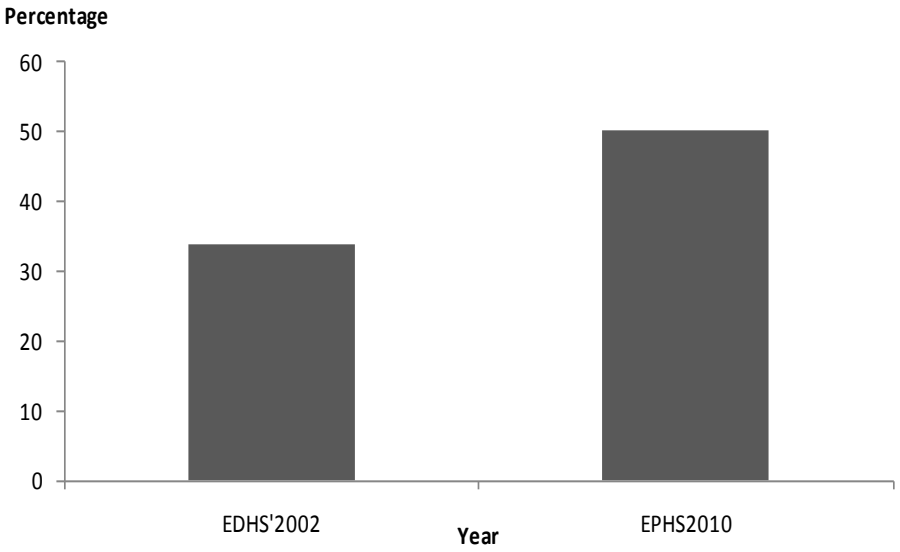
Average number of nets per household is one; it is found to be higher in other towns, aside from Asmara (more than one), than in rural areas (one).

12.3 Use of Mosquito Net by Children Under Age Five

Among children under the age of five, 20 percent slept under Insecticide Treated Nets (ITN), 22 percent under an ever treated net and 30 percent under any net the night before the survey. Comparisons with EDHS2002 indicate that the use of ITNs increased considerably from 4.2 percent to 20 percent, and use of any net from 12 percent to 30 percent (Figure 12-2).

There was little difference in the use of nets by sex, but other background characteristics reveal important differences. The younger the child, the more he/she is likely to sleep under a mosquito net (Table 12-2). This can be attributed to the fact that younger children sleep with their mothers more often than their older siblings.

Figure 12-2 **Percentage of households owning at least one mosquito net, 2002, 2010**



Urban children aside from Asmara (34 percent) are more likely to use nets than rural children (19 percent). Comparisons by zoba showed that children residing in Semenawi Keih Bahri (36 percent) and Anseba (34) are more likely to use nets than their counterparts in the other four zobas, with Maekel being the least (7 percent). Children in the highest and lowest wealth quintiles are less likely to use ITNs than those in the middle wealth quintiles (Table 12-2).

Children under the age of five and pregnant women are the most vulnerable to malaria. Hence, the Ministry of Health of the state of Eritrea has a policy of mosquito net distribution and other interventions that gives priority to children under the age of five and pregnant women residing in malaria affected areas.

Table 12-2 Use of mosquito nets by children

Percentage of children under five who slept the night before the survey under a mosquito net (treated or untreated), under an ever-treated mosquito net, and under an insecticide treated net (ITN), by background characteristics, Eritrea 2010

Background Characteristic	Percentage who slept under any net l`ast night	Percentage who slept under an[1] ever treated net last night	Percentage who slept[2] under an ITN (long lasting) last night	Number of children
Age (in months)				
<12	40.8	26.1	24.9	1,254
12-23	30.9	23.7	22.2	1,323
24-35	28.3	21.6	19.8	1,317
36-47	25.6	19.5	17.6	1,354
48-59	25.8	19.3	17.8	1,415
Sex				
Male	30.8	22.3	20.5	3,308
Female	29.4	21.6	20.2	3,356
Residence				
Total urban	32.8	24.3	22.7	2,041
Asmara	6.1	3.7	3.5	734
Other Town	47.8	35.9	33.6	1,307
Rural	28.9	20.9	19.3	4,623
Zoba				
Debubawi Keih Bahri	17.7	11.4	10.8	105
Maekel	8.7	6.7	6.6	1,142
Semenawi Keih Bahri	54.0	37.3	35.9	821
Anseba	54.2	36.1	34.4	1,060
Gash-Barka	20.6	16.6	15.4	1,708
Debub	28.3	21.9	19.1	1,828
Wealth quintile				
Lowest	27.1	19.4	17.9	1,368
Second	32.7	23.2	21.6	1,398
Middle	34.1	24.7	22.8	1,444
Fourth	34.2	26.3	24.4	1,367
Highest	20.2	14.5	13.5	1,087
Total	30.1	21.9	20.4	6,664

Note: The table is based on the CORE questionnaires.
[1] An ever-treated net is 1) a pretreated net or 2) a non-pretreated 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 which is similar to long lasting net in the EPHS 2010 questionnaire or 2) a pretreated net obtained within the past 12 months or (3) a net that has been soaked with insecticide within the past 12 months.

12.4 Use of Mosquito Net by Women of Childbearing Age

The EPHS2010 found out that among women age 15-49, 13 percent slept under an ITN, 14 percent under an ever treated net and 19 percent under any net the night before the survey. The improvement is considerable compared with EDHS2002. Only 2.7 percent slept under an ITN and 6.5 percent under any net in 2002.

Women living in towns other than Asmara (20 percent) are more likely to sleep under an ITN than women living in rural areas (14 percent). Comparison by zoba showed that women living in Semenawi Keih Bahri (27 percent) and Anseba (25 percent) slept under a mosquito net more than women living in the other four zobas.

Comparison of ITN use by educational background showed that the more educated the woman (secondary or above; 8 percent), the less likely she is to sleep under an ITN than the less educated (no education; 15 percent). Women on the highest and lowest wealth quintiles are less likely to use ITNs than those in the other wealth quintiles (Table 12-3).

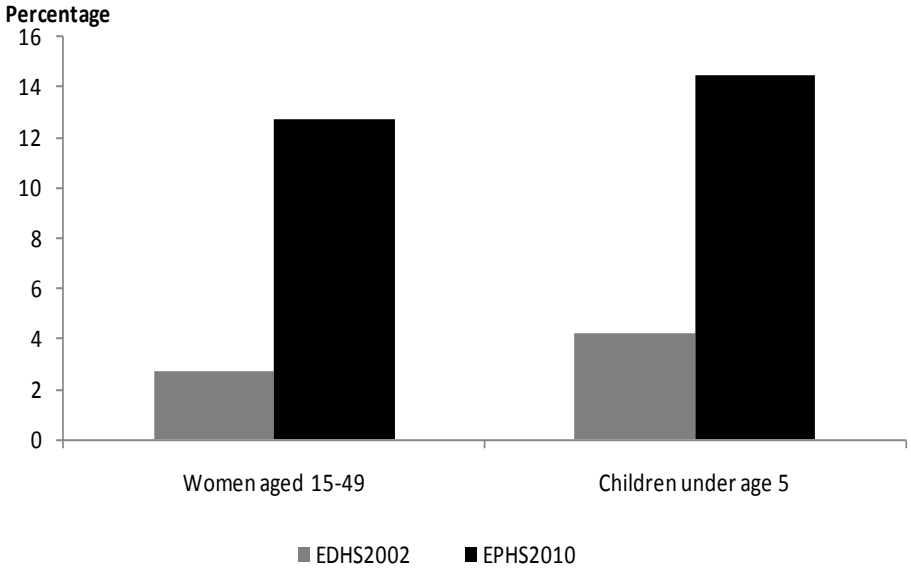
Table 12-3 Use of mosquito nets by women of childbearing age

Percentage of all women age 15-49 who slept the night before the survey under a mosquito net (treated or untreated), under an ever-treated mosquito net, and under an insecticide-treated net (ITN) , by background characteristics, Eritrea 2010

Background Characteristic	Percentage of all women age 15-49 who: Slept under any net last night	Slept under an ever[1] treated net last night	Slept under an ITN[2] (long lasting) last night	Number of women
Residence				
Total urban	15.8	12.2	11.5	4,125
Asmara	1.5	1.2	1.1	1,870
Other Town	27.6	21.4	20.1	2,255
Rural	20.3	14.8	13.6	6,113
Zoba				
Debubawi Keih Bahri	11.2	8.1	7.3	163
Maekel	2.9	2.4	2.2	2,535
Semenawi Keih Bahri	39.0	28.1	27.0	1,122
Anseba	37.7	26.2	25.3	1,436
Gash-Barka	14.5	11.3	10.2	2,255
Debub	18.2	14.3	12.4	2,727
Education				
No education	22.1	16.2	14.7	3,882
Primary	23.2	16.9	16.0	2,162
Middle	15.8	12.2	11.3	1,946
Secondary or above	10.4	8.4	7.9	1,967
Wealth quintile				
Lowest	19.9	14.1	12.8	1,746
Second	23.2	16.5	15.4	1,769
Middle	23.4	17.5	16.2	2,014
Fourth	20.6	16.3	15.1	2,223
Highest	8.4	6.3	5.9	2,485
Total	18.5	13.8	12.7	10,238

Note: The table is based on the CORE questionnaires.
[1] An ever-treated net is 1) a pretreated net or a non-pretreated 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 which is similar to long lasting net in the EPHS2010 questionnaire or 2) a pretreated net obtained within the past 12 months or 3) a net that has been soaked with insecticide within the past 12 months.

Figure 12-3 **Percentage of women age 15-49 and children under age five sleeping under ITN, 2002,2010**



12.5 Use of Mosquito Net by Pregnant Women

The survey found out that 15 percent of pregnant women slept under an ITN the night before the survey, 16 percent under an ever treated net and 22 percent under any net. Residential comparisons showed that women urban areas (13 percent) are less likely to sleep under an ITN than their rural counterparts (15 percent) (Table 12-4). Women in towns, excluding Asmara, are most likely to sleep under ITN (20 percent). Comparison by zoba showed that women living in Anseba (29 percent) and Semenawi Keih Bahri (30 percent) are more likely to sleep under an ITN than the other four zobas.

Semenawi Keih Bahri, Gash-Barka and Debub inhabitants are expected to use nets more than the others due to the endemicity of the disease in these zobas and therefore the priority given to them in distribution of bed nets and coverage of health promotion. This turned to be not the case due to, possibly, the timing of the survey. The main malaria transmission season of these zobas is during August – November, while the survey was conducted during January– July.

The more educated the pregnant woman (secondary or above; 9 percent), the less likely she is to sleep under an ITN than the less educated (no education; 17 percent). Pregnant women on the highest wealth quintiles (10 percent) are less likely to use ITNs than those on the lowest wealth quintiles (22 percent).

Table 12-4 Use of mosquito nets by pregnant women

Percentage of all pregnant women age 15-49 who slept the night before the survey under a mosquito net (treated or untreated), under an ever-treated mosquito net, and under an insecticide treated net (ITN), by background characteristics, Eritrea 2010

Background Characteristic	Percentage of all pregnant women age 15-49 who:			
	Slept under any net last night	Slept under an ever treated net last night	Slept under an ITN (long lasting) last night	Number of pregnant women
Residence				
Total urban	18.6	13.6	12.8	247
Asmara	0.0	0.0	0.0	88
Other Town	28.8	21.1	19.8	160
Rural	23.6	17.4	15.4	509
Zoba				
Debubawi Keih Bahri	10.9	5.5	5.5	12
Maekel	1.9	1.9	1.9	139
Semenawi Keih Bahri	45.8	31.4	30.4	90
Anseba	44.2	29.9	29.1	118
Gash-Barka	12.5	11.4	9.5	181
Debub	21.4	16.0	12.8	215
Education				
No education	26.2	18.6	17.1	287
Primary	23.5	17.8	15.4	200
Middle	18.5	14.6	13.2	143
Secondary or above	13.7	10.3	9.3	120
Wealth quintile				
Lowest	34.2	25.3	22.3	118
Second	25.4	16.8	16.0	153
Middle	19.4	15.2	12.5	162
Fourth	18.4	14.8	13.6	179
Highest	15.8	10.8	10.0	144
Total	22.0	16.2	14.5	756

Note: The table is based on the CORE questionnaires.
[1] An ever-treated net is 1) a pretreated net or a non-pretreated 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 which is similar to long lasting net in the EPHS 2010 questionnaire or 2) a pretreated net obtained within the past 12 months or 3) a net that has been soaked with insecticide within the past 12 months.

12.6 Prevalence and Prompt Preatment of Children With Fever

Fever is a major manifestation of malaria, particularly in children under age five and pregnant women who are among the immunologically naïve portion of the population. Malaria contributes to maternal and child mortality. Thus early diagnosis with microscopy or rapid diagnostic test followed by prompt and appropriate treatment is strongly recommended for malaria to avert complication and fatality due to the disease. The EPHS2010 asked mothers or guardians of children under age five whether their children had fever two weeks before the survey and if so, whether anti-malarial treatment was given and if so, what time the treatment was given after onset of fever.

Nationally, 19 percent of the sampled children under age five had fever in the two weeks before the survey; which is a decline from 30 percent in 2002 when malaria was more prevalent. No

considerable difference was seen among urban-rural residents or by sex. Fever was most prevalent in children aged one to two years, highest in Anseba (26 percent), among children taken care by non-educated mothers (20 percent) and among children from the middle and second wealth quintile (21 percent).

Among children under age five who had fever two weeks preceding the survey, 57 percent took any drug. Children from Maekel took drugs most (72 percent) as compared to the other zobas, with Debubawi Keih Bahri taking the least (49 percent). Comparisons by residence showed that 74 percent of other towns children with fever were given drugs more than rural settlers (51 percent). The percentage of children who took any drug for treatment of febrile diseases increased proportionally with the increase of mother's or guardian's education and wealth quintile (Figure 12-3).

A small proportion of the febrile children (1.5 percent) had taken anti-malarial drugs, down from 3.6 percent in 2002 (Table 12-5). The declining trend is likely related to the improvement in the malaria situation over time.

Figure 12-4 **Percentage of children under age five with fever who took drug, by wealth quintile and mother's education**

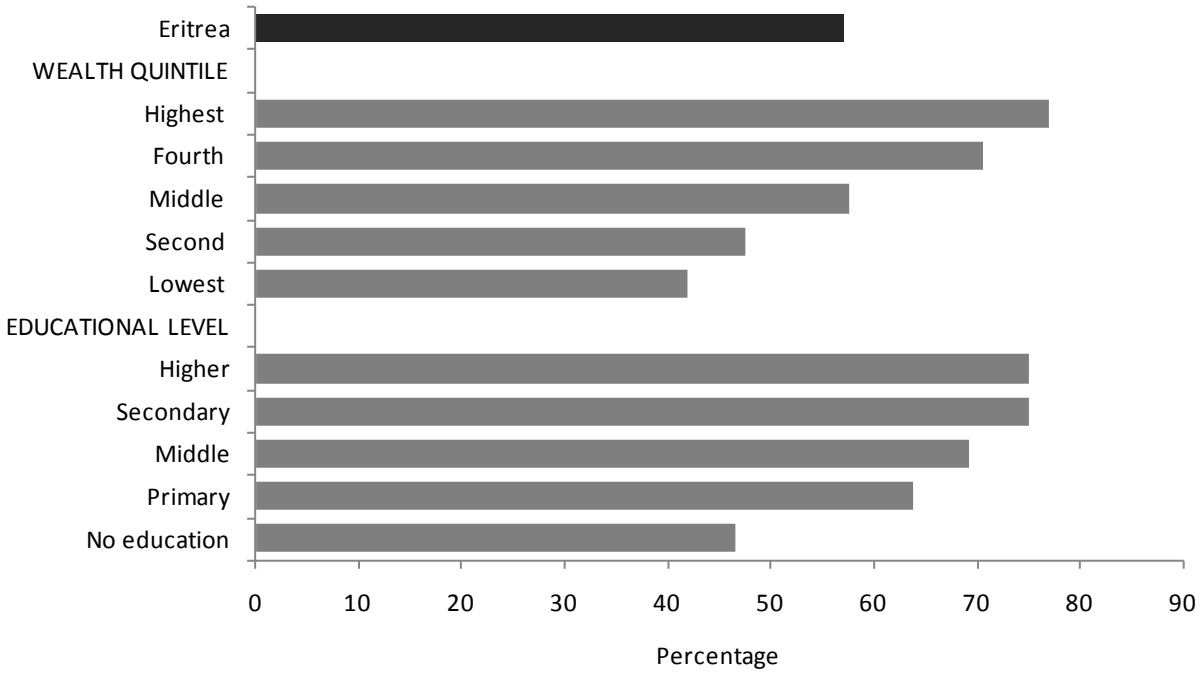


Table 12-5 Prevalence and prompt treatment of children with fever

Percentage of children under age five with fever in the two weeks preceding the survey, and among children with fever, the percentage who took antimalarial drugs and the percentage who took the drugs the same or next day following the onset of fever, by background characteristics, Eritrea 2010

	Among children under age five			Among children under age five with fever		
Background Characteristic	Percentage with fever in the two weeks preceding the survey	Number of children	Any drug	Percentage who took antimalarial drugs	Percentage who took antimalarial drugs same or next day	Number of children with fever
Age (in months)						
<12	21.6	1,254	48.9	1.3	0.9	271
12-23	27.1	1,323	65.0	1.5	0.8	359
24-35	19.5	1,317	59.2	2.5	2.1	257
36-47	13.1	1,354	58.3	2.2	0.6	177
48-59	13.6	1,415	49.0	0.0	0.0	192
Sex						
Male	19.6	3,308	57.9	1.8	1.0	647
Female	18.2	3,356	56.0	1.2	0.8	610
Residence						
Total urban	17.2	2,041	73.5	1.0	1.0	351
Asmara	11.8	734	77.5	1.1	1.1	87
Other Town	20.2	1,307	72.2	1.0	1.0	264
Rural	19.6	4,623	50.6	1.7	0.9	905
Region						
Debubawi Keih Bahri	12.7	105	48.8	3.3	3.3	13
Maekel	13.2	1,142	72.2	0.6	0.6	151
Semenawi Keih Bahri	24.4	821	58.5	0.0	0.0	200
Anseba	26.1	1,060	57.7	0.8	0.4	277
Gash-Barka	17.5	1,708	54.5	1.7	1.2	298
Debub	17.3	1,828	50.9	3.3	1.7	317
Mother's education						
No education	20.4	3,112	46.5	1.1	0.9	635
Primary	19.3	1,604	63.9	1.8	0.7	309
Middle	16.5	1,059	69.2	1.5	1.5	175
Secondary or above	16.3	814	75.1	2.9	0.7	132
Missing	33.3	4	75.1	0.0	0.0	1
Wealth quintile						
Lowest	19.3	1,368	41.8	0.5	0.0	264
Second	20.4	1,398	47.5	2.0	1.2	285
Middle	21.1	1,444	57.6	1.8	1.4	305
Fourth	18.0	1,367	70.7	1.6	0.4	246
Highest	14.3	1,087	77.1	1.7	1.7	156
Total	18.9	6,664	57.0	1.5	0.9	1,257

Note: The table is based on the CORE questionnaires.

HIV/AIDS-RELATED KNOWLEDGE, ATTITUDE, AND BEHAVIOUR

13

Key Findings

- Ninety-five percent of women and 98 percent of men age 15-49 have heard of AIDS. However, comprehensive knowledge of AIDS is uncommon with only 22 percent of women and 35 percent of men having comprehensive knowledge of HIV/AIDS transmission and prevention methods.
- Sixty-eight percent and 66 percent of women and men age 15-49, respectively, know that HIV can be transmitted by breastfeeding. However, only thirty-six percent of women and 38 percent of men know that the risk of mother-to-child transmission can be reduced by a mother taking special drugs during pregnancy.
- Women and men express equally accepting attitudes toward people with HIV. Forty-nine percent of both women and men always expressed accepting attitudes when reacting to three hypothetical situations involving people with HIV.
- One percent of women and eight percent of men had intercourse with a person who was neither their husband/wife nor lived with them during the 12 months preceding the survey. Among respondents who had intercourse with a person who was neither their husband/wife nor lived with them during the preceding 12 months, 20 percent of women and 89 percent of men age 15-49 reported that they used a condom during their most recent sexual intercourse.
- Seventy-nine percent of women and 85 percent of men know where to get an HIV test. Nineteen percent of women and 16 percent of men have been tested for HIV in the last 12 months. Moreover, forty-three percent of pregnant women were counseled and accepted HIV test during antenatal care.

Acquired immune deficiency syndrome (AIDS) is caused by the human immunodeficiency virus (HIV). HIV weakens the immune system, making the body susceptible to secondary and opportunistic infections. Without treatment, HIV infection leads to AIDS and death. The predominant mode of HIV transmission in Eritrea is through sexual contact. Other modes of transmission are mother-to-child transmission, use of contaminated blood supplies for transfusions, and injections using contaminated needles or syringes.

AIDS is an important public health problem in Eritrea. According to the 2009 ANC sentinel surveillance survey, 1.3 percent of pregnant women age 15-49 are infected with HIV (ANC SSS 2009). The EPHS2010 also showed that 0.93% of adults age 15-49 are infected with HIV, with women 2.3 times more likely to be infected than men (Table 14-4). Heterosexual contact accounts for the great majority of HIV transmission in the country. Although, dominant in urban areas and some key populations at higher risk, AIDS is now affecting all sectors of Eritrean society. The future course of the AIDS epidemic in Eritrea depends on a number of factors including HIV/AIDS-related knowledge, social stigma, risk behavior modification, access to high-quality services for sexually transmitted infections (STIs), provision and uptake of HIV counseling and testing, and access to antiretroviral therapy (ART).

The principal objective of this chapter is to establish the prevalence of relevant knowledge, attitudes, and behaviors at the national level and within the geographic and socioeconomic subgroups of the population, using data from the EPHS2010. The chapter presents findings from the general

adult population and especially from youth. The chapter concludes with information on patterns of sexual activity among young people, as they are the main target of many HIV prevention efforts. The findings in this chapter will help HIV/AIDS control and prevention programs to target the groups of people most in need of information and services and most vulnerable to the risk of HIV infection. Some findings presented in this chapter can also be compared with the findings from the 1995 and 2002 EDHS.

13.1 HIV/AIDS Knowledge, Transmission, and Prevention Methods

Since there is no cure for AIDS, the main strategy for combating the disease has been prevention through practicing abstinence, being faithful to one sexual partner, using condoms and more recently provision of antiretroviral therapy to reduce spread of the disease. This strategy depends heavily on the level of knowledge of the population and their perception of the HIV/AIDS problem. For this reason, the EPHS2010 sought to measure the levels of knowledge of HIV/AIDS and other sexually transmitted infections in the population and to examine the behaviors women and men adopt to protect themselves from infection.

13.1.1 Awareness of HIV/AIDS

In the EPHS2010, respondents were asked whether they had heard of AIDS and if so, whether there is anything one can do to avoid getting infected with HIV. In Eritrea, general awareness of AIDS is nearly universal; 95 percent of women and 98 percent of men have heard of AIDS (Table 13-1). This figure is similar to the results of the EDHS2002 which were 96 percent for women age 15-49. The level of awareness of AIDS is notably lower in Gash-Barka (84 percent of women and 91 percent of men) than in other zobas.

Eighty-three percent of women aged 15-49 and 93 percent of men believe there is a way to avoid HIV/AIDS which is slightly lower than EDHS2002 (88 percent) for women. Women living in rural areas, Gash-Barka, Debubawi Keih Bahri and Semenawi Keih Bahri, and men in Gash-Barka are less likely to report that AIDS can be avoided than urban respondents and those living in other zobas. Education is also strongly related to understanding of HIV/AIDS prevention. For example, 97 percent of women and 99 percent of men who have attended some secondary school or higher education report that HIV/AIDS can be avoided compared with 66 percent of women and 72 percent of men who have not attended school. In the comparison of women and men, the knowledge of men is higher than women for all of the background characteristics (Table 13-1).

13.1.2 Knowledge of HIV prevention

The Eritrean HIV prevention program has mainly focused on reducing sexual transmission of HIV and other sexually transmitted infections through three programmatically important ways: promotion of sexual abstinence, mutually faithful monogamy among uninfected individuals, and condom use among the sexually active.

Table 13-1 Knowledge of AIDS

Percentage of women and men age 15-49 [59] who have heard of AIDS, by background characteristics, Eritrea 2010

Background characteristic	Women			Men		
	Has heard of AIDS	Believes there is a way to avoid HIV/AIDS	Number of respondents	Has heard of AIDS	Believes there is a way to avoid HIV/AIDS	Number of respondents
Age						
15-24	95.6	85.3	4,045	97.8	92.7	2,179
..15-19	94.6	83.7	2,301	97.6	91.5	1,544
..20-24	96.9	87.5	1,744	98.3	95.7	635
25-29	95.9	85.1	1,646	98.2	94.0	449
30-39	95.6	82.7	2,656	98.2	93.3	879
40-49	93.6	77.7	1,891	98.2	92.0	793
Marital status						
Never married	95.6	87.3	2,878	97.9	93.0	2,506
Ever had sex	97.3	94.6	151	99.6	98.3	545
Never had sex	95.5	86.9	2,727	97.4	91.5	1,961
Married/Living together	95.0	80.7	6,183	98.2	92.5	1,715
Divorced/Separated/Widowed	95.9	86.4	1,177	97.5	96.1	78
Residence						
Total urban	99.5	94.8	4,125	99.6	97.1	1,757
Asmara	99.9	97.1	1,870	100.0	97.8	855
Other Town	99.1	92.9	2,255	99.1	96.4	902
Rural	92.5	75.4	6,113	96.9	89.9	2,542
Zoba						
Debubawi Keih Bahri	97.5	63.7	163	96.1	86.4	67
Maekel	99.8	97.4	2,535	100.0	98.1	1,196
Semenawi Keih Bahri	95.1	78.6	1,122	99.2	93.6	470
Anseba	98.1	87.0	1,436	99.6	93.9	588
Gash-Barka	83.8	61.1	2,255	91.4	76.8	778
Debub	99.0	89.4	2,727	99.2	97.5	1,200
Education						
No education	89.2	65.8	3,882	89.8	71.6	599
Primary	97.7	89.6	2,162	97.4	89.2	659
Middle	99.4	94.5	1,946	99.5	96.4	1,188
Secondary or above	99.9	97.2	1,967	99.9	98.7	1,473
Wealth quintile						
Lowest	88.4	65.2	1,746	95.1	84.9	739
Second	89.8	69.4	1,769	95.4	84.9	699
Middle	95.6	81.5	2,014	98.2	93.5	753
Fourth	99.7	94.1	2,223	99.5	97.4	960
Highest	99.9	97.3	2,485	100.0	98.5	1,148
Total 15-49	95.3	83.2	10,238	98.0	92.8	4,299
50-59	na	Na	na	97.2	87.9	722
Total men 15-59	na	na	na	97.9	92.1	5,021

Note: Table is based on the CORE questionnaire.
na = Not applicable

Table 13-2 Knowledge of HIV prevention methods

Percentage of women and men age 15-49 [59] who, in response to prompted questions, say that people can reduce the risk of getting the AIDS virus by using condoms every time they have sexual intercourse, by having one sex partner who is not infected and has no other partners, and by abstaining from sexual intercourse, by background characteristics, Eritrea 2010

	Women					Men				
Background characteristic	Using condoms	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Abstaining from sexual intercourse	Number of women	Using condoms[1]	Limiting sexual intercourse to one uninfected partner[2]	Using condoms and limiting sexual intercourse to one uninfected partner[1,2]	Abstaining from sexual intercourse	Number of men
Age										
15-24	52.8	46.7	32.0	67.6	4,045	69.5	58.8	47.9	79.9	2,179
15-19	50.7	45.3	30.3	65.5	2,301	70.1	58.0	47.4	78.5	1,544
20-24	55.5	48.5	34.3	70.5	1,744	67.9	60.9	49.2	83.1	635
25-29	55.2	45.0	32.1	70.5	1,646	70.1	57.6	48.9	81.2	449
30-39	49.4	43.5	28.2	68.4	2,656	71.0	59.6	50.6	80.8	879
40-49	43.0	41.4	24.9	65.3	1,891	65.3	58.3	45.5	82.7	793
Marital status										
Never married	55.3	48.7	33.5	71.7	2,878	70.6	59.4	49.2	81.3	2,506
Ever had sex	68.8	55.9	45.6	81.8	151	79.4	67.5	60.2	86.6	545
Never had sex	54.6	48.3	32.8	71.1	2,727	68.1	57.2	46.1	79.8	1,961
Married/Living together	47.6	42.3	27.6	65.6	6,183	66.7	57.3	46.2	79.8	1,715
Divorced/ Separated/ Widowed	53.9	46.3	31.8	70.1	1,177	72.6	71.1	56.6	83.0	78
Residence										
Total urban	64.2	53.2	38.7	79.6	4,125	74.3	62.7	52.5	85.6	1,757
Asmara	70.4	57.9	44.8	87.0	1,870	79.6	61.8	54.7	90.7	855
Other Town	59.0	49.3	33.6	73.5	2,255	69.4	63.6	50.5	80.8	902
Rural	41.2	38.8	23.7	59.9	6,113	65.4	56.0	45.1	77.3	2,542
Zoba										
Debubawi Keih Bahri	38.1	39.1	26.4	48.5	163	43.5	45.5	29.8	63.3	67
Maekel	71.5	60.8	47.7	86.5	2,535	82.3	67.9	61.0	91.0	1,196
Semenawi Keih Bahri	33.0	30.3	14.7	53.6	1,122	65.7	57.5	44.2	82.2	470
Anseba	40.2	42.0	20.0	65.4	1,436	56.8	44.0	32.5	73.3	588
Gash-Barka	35.4	26.3	16.4	51.6	2,255	49.4	31.7	20.9	61.7	778
Debub	56.7	52.3	35.5	72.3	2,727	77.4	75.6	63.2	86.8	1,200
Education										
No education	31.0	29.9	15.2	53.2	3,882	41.9	35.3	23.0	64.0	599
Primary	54.1	47.4	31.4	69.5	2,162	61.8	53.4	40.7	76.9	659
Middle	61.9	53.3	38.3	76.1	1,946	71.4	58.5	47.1	78.9	1,188
Secondary or above	70.3	59.2	45.2	83.8	1,967	78.2	67.9	58.7	87.7	1,473
Wealth quintile										
Lowest	26.8	28.8	12.1	49.0	1,746	59.1	44.0	34.5	70.4	739
Second	36.8	33.4	20.3	54.6	1,769	59.5	50.7	39.3	73.5	699
Middle	46.1	41.7	26.0	64.4	2,014	66.4	57.9	44.3	81.1	753
Fourth	63.5	53.0	38.6	77.2	2,223	73.7	68.6	56.6	83.3	960
Highest	68.8	58.5	43.9	85.0	2,485	79.2	65.5	57.6	89.3	1,148
Total 15-49	50.5	44.6	29.7	67.9	10,238	69.1	58.8	48.1	80.7	4,299
50-59	na	na	na	na	na	57.0	54.3	40.0	75.7	722
Total men 15-59	na	na	na	na	na	67.3	58.1	47.0	80.0	5,021

Note: Table is based on the CORE questionnaire.
na = Not applicable
[1] Using condoms every time they have sexual intercourse.
[2] Partner who has no other partners.

Seven women and eight men of every ten age 15-49 (68 percent of women and 80 percent of men) know that the chance of becoming infected with HIV is reduced by abstaining from sexual intercourse (Table 13-2). Similarly, 51 percent of women and 69 percent of men know that the chance of getting HIV can be reduced by using condoms and 45 percent of women and 58 percent of men know that limiting sex to one uninfected partner reduces chances of getting HIV. Although HIV is rarely transmitted by sharing razor blades, it was spontaneously mentioned by 38 percent of the women and 33 percent of men as a way to avoid HIV/AIDS (Table 13-3).

There are notable differences in knowledge of HIV/AIDS prevention by background characteristics. Among women, knowledge of HIV/AIDS prevention decreases with age. For example, 32 percent of female youth, age 15-24, know that both using condoms and limiting sexual intercourse to one uninfected partner can reduce the risk of acquiring HIV, compared with 25 percent of women age 40-49. Never married women who have ever had sex are the most likely to know about HIV prevention methods when compared with never married women who have never had sex or with women currently in union or previously married. Knowledge of both methods of prevention is higher among urban women than rural women (39 percent versus 24 percent). Variation by zoba is particularly striking. For example, 48 percent of women residing in Maekel are aware of both methods of HIV/AIDS prevention, compared with 16 percent in Gash-Barka and 15 percent in Semenawi Keih Bahri. Awareness of prevention methods increases with education and wealth for both men and women (Table 13-2).

Table 13-3 Knowledge of ways to avoid HIV/AIDS

Percentage of women and men who spontaneously mentioned ways to avoid HIV/AIDS, by background characteristics, Eritrea 2010

Ways to avoid HIV/AIDS	Percentage of women	Percentage of men
Has not heard of AIDS	4.7	2.1
Does not know if AIDS can be avoided	6.8	3.8
Believes there is no way to avoid AIDS	5.3	1.9
Does not know any specific way	0.3	0.1
Abstain from sex	61.7	69.8
Use condoms	42.1	68.4
Limit sex to one partner or stay faithful to one partner	55.4	59.9
Limit number of sexual partners	2.7	2.9
Avoid sex with prostitutes	3.3	2.3
Avoid sex with persons who have many partners	1.2	0.9
Avoid sex with homosexuals	0.2	0.1
Avoid sex with persons who inject drugs intravenously	0.8	0.6
Avoid blood transfusions	2.8	2.3
Avoid injections	3.9	4.8
Avoid sharing razor or blades	38.3	32.8
Avoid kissing	0.2	0.3
Avoid mosquito bites	0.2	0.1
Seek protection from traditional healer	0.2	0.2
Avoid sharing food with AIDS patient	0.4	0.1
Other	1.4	2.8
Number of respondents	10,238	5,021

Men's knowledge of HIV prevention differs similarly according to background characteristics to that of women, but the differences are not as pronounced. For example, knowledge of HIV prevention among men decreases slightly with age, from 48 percent of men age 15-24 who are aware of both prevention methods to 46 percent of men age 40-49. Never married men, particularly those who have ever had sex, urban men, those with secondary education or more, and men in the highest wealth quintile are the most likely to know methods of HIV prevention. Knowledge of both HIV prevention methods among men ranges from 61 percent in Maekel to 21 percent in Gash-Barka.

Overall knowledge of all the key HIV prevention methods is lower among women than men and is lower among women residing in Debubawi Keih Bahri, Semenawi Keih Bahri and Gash-Barka, while in men it is lowest in Debubawi Keih Bahri, Anseba and Gash-Barka. However, there have been marked improvements since 1995 in knowledge of HIV prevention methods among both women and men age 15-49. Particularly notable is the increase in the proportion of women and men who know that abstaining from sex and using condoms can reduce the risk of HIV transmission (Figure 13-1 and Figure 13-2).

Figure 13-1 **Trends in knowledge of HIV prevention methods: Women 1995, 2010**

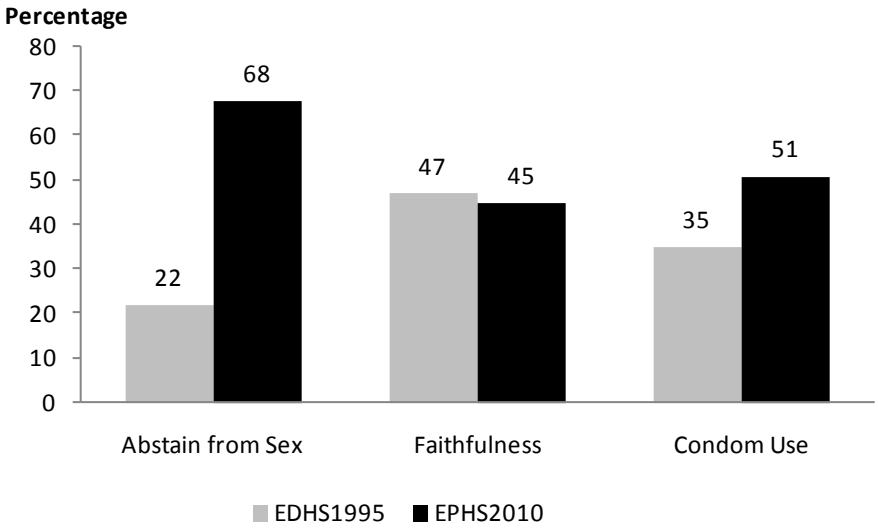
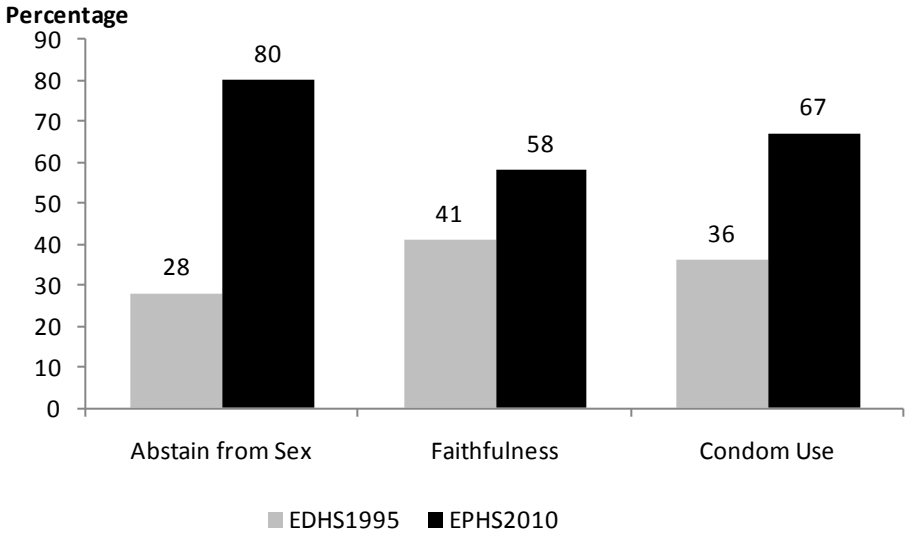


Figure 13-2 **Trends in knowledge of HIV prevention methods: Men 1995, 2010**



13.1.3 Rejecting major misconceptions

EPHS2010 respondents were asked whether they think it is possible for a healthy-looking person to have HIV and whether they believe HIV is transmitted through mosquito bites, supernatural means, or sharing food with a person who has HIV.

The majority of Eritrean adults (79 percent of women and 88 percent of men) know that a healthy-looking person can have HIV (Table 134). The most common misconception about HIV transmission is that it can be transmitted by mosquitoes. Overall 32 percent of women and 26 percent of men still believe that HIV can be transmitted by mosquitos. The second most common misconception is that HIV can be transmitted by sharing food with a person who has AIDS. About 18 percent of women and 13 percent of men age 15-49 believe that HIV can be transmitted by sharing food with a person who has AIDS. Still 14 percent of women and 11 percent of men believe that a person can be infected with supernatural means (Table 13-4).

13.1.4 Comprehensive knowledge about AIDS

Comprehensive knowledge about AIDS 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 in Eritrea—that HIV/AIDS can be transmitted through mosquito bites and by sharing food with infected persons.

The EPHS2010 reveals that comprehensive knowledge of AIDS is low; only 22 percent women and 35 percent of men age 15-49 have comprehensive knowledge about AIDS. Comprehensive knowledge varies by background characteristics. Respondents age 15-24, those that have never married but have ever had sex, urban respondents, those with secondary education or more, and respondents from the wealthiest households have the highest levels of comprehensive knowledge about AIDS. Among zobas, women in Semenawi Keih Bahri (10 percent), Gash-Barka (10 percent), and Anseba (11 percent) and men living in Gash-Barka (14 percent) are the least likely to have comprehensive knowledge about AIDS (Table 13-4 and Table 13-5).

13.1.5 Knowledge of prevention of mother-to-child transmission of HIV

Increasing knowledge of ways in which HIV can be transmitted from mother to child and of the fact that the risk of transmission can be reduced by using antiretroviral drugs is critical to reducing mother-to-child transmission (MTCT) of HIV. To obtain information on these issues, the EPHS2010 asked respondents 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 (antiretroviral) during pregnancy.

Sixty-eight percent of women and 66 percent of men know that HIV can be transmitted to a baby through breastfeeding (Table 13-6). Thirty-eight percent women and men know that the risk of MTCT can be reduced through mother taking special drugs during pregnancy. Overall, 36 percent of women and 35 percent of men know that HIV can be transmitted through breastfeeding and that HIV positive women can reduce the risk of MTCT by taking special drugs during pregnancy.

There are notable differences in knowledge of prevention of MTCT by background characteristics. Oldest respondents (40-49) and youngest men age 15-19 are the least likely to know both facts about MTCT (28 percent and 29 percent, respectively). Knowledge of both facts about MTCT is the highest among never married respondents who have ever had sex (57 percent of women and 47 percent of men), compared with other marital status sub-groups. Urban women are more than twice as likely as rural women (51 and 26 percent, respectively) to report knowledge about mother-to-child transmission.

Among men 46 percent of urban residents, compared with 27 percent of rural residents, have correct knowledge about both aspects of MTCT. Women and men in Gash-Barka are the least knowledgeable about the two aspects of MTCT (19 percent each), while those in Asmara are the most knowledgeable (57 percent of women and 50 percent of men). Knowledge of MTCT is lowest among respondents with no education (17 percent of women and 8 percent of men) and highest among those with more than secondary education (59 percent of women and 47 percent of men). Level of knowledge on both aspects of MTCT increases from 15 percent of women and 20 percent of men in the lowest wealth quintile to 55 percent of women and 48 percent of men in the highest wealth quintile (Table 13-6).

Table 13-4 Comprehensive knowledge about AIDS: Women

Percentage of women age 15-49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly reject local misconceptions about AIDS transmission or prevention, and the percentage with a comprehensive knowledge about AIDS by background characteristics, Eritrea 2010

Background characteristic	Percentage of respondents who say that: A healthy-looking person can have the AIDS virus	AIDS cannot be transmitted by mosquito bites[1]	AIDS cannot be transmitted by supernatural means[2]	A person cannot become infected by sharing food with a person who has AIDS[1]	Percentage who say that a healthy looking person can have the AIDS virus and who reject the two most common local misconceptions	Percentage with a comprehensive knowledge about AIDS[3]	Number of women
Age							
15-24	81.6	72.4	87.4	83.8	60.9	24.7	4,045
15-19	79.9	71.4	86.5	81.5	58.3	22.3	2,301
20-24	84.0	73.8	88.7	86.8	64.2	27.8	1,744
25-29	81.6	70.9	87.9	85.8	61.2	25.0	1,646
30-39	77.1	64.0	85.0	81.0	53.2	20.1	2,656
40-49	75.5	58.8	82.5	76.0	47.6	16.8	1,891
Marital status							
Never married	83.9	76.8	88.8	86.0	65.8	26.3	2,878
Ever had sex	89.0	82.3	91.6	92.0	72.4	33.1	151
Never had sex	83.6	76.4	88.7	85.7	65.4	25.9	2,727
Married/Living together	76.7	63.1	84.5	79.5	51.9	19.9	6,183
Divorced/Separated/ Widowed	81.8	67.5	86.9	84.8	58.0	23.3	1,177
Residence							
Asmara	95.8	84.5	96.0	95.8	79.6	36.8	1,870
Other Town	87.0	79.2	94.3	91.4	68.7	26.2	2,255
Rural	71.5	57.9	79.8	74.2	44.9	16.1	6,113
Zoba							
Debubawi Keih Bahri	64.2	60.0	75.0	73.4	44.8	22.2	163
Maekel	95.5	84.1	96.7	96.2	79.2	39.1	2,535
Semenawi Keih Bahri	69.0	59.3	84.7	72.5	42.4	9.7	1,122
Anseba	79.5	61.0	85.0	79.7	48.0	11.4	1,436
Gash-Barka	57.0	51.2	67.2	63.0	35.8	9.9	2,255
Debub	87.8	72.7	93.3	90.0	63.5	27.0	2,727
Education							
No education	61.9	46.8	72.5	64.9	32.1	7.9	3,882
Primary	83.2	66.6	89.6	85.6	54.9	20.7	2,162
Middle	90.9	82.3	95.5	94.5	73.4	31.1	1,946
Secondary or above	95.4	90.4	97.4	96.8	84.3	39.1	1,967
Wealth quintile							
Lowest	60.3	48.3	71.0	61.9	32.6	5.7	1,746
Second	66.4	49.4	73.7	68.8	36.3	12.4	1,769
Middle	76.0	63.3	86.7	80.9	49.3	17.5	2,014
Fourth	89.6	80.6	95.0	93.7	71.3	31.0	2,223
Highest	95.4	85.4	96.6	95.7	80.1	36.2	2,485
Total 15-49	79.3	67.5	86.0	81.9	56.5	22.1	10,238

Note: Table is based on the CORE questionnaire.
[1] Two most common local misconceptions: Get AIDS from mosquito bites; Get AIDS by sharing food with person who has AIDS
[2] Witchcraft, God, curse, or other supernatural means.
[3] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention.

Table 13-5 Comprehensive knowledge about AIDS: Men

Percentage of men age 15-49[59] who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions by background characteristics, Eritrea 2010

Background characteristic	Percentage of respondents who say that: A healthy-looking person can have the AIDS virus	AIDS cannot be transmitted by mosquito bites[1]	AIDS cannot be transmitted by supernatural means[2]	A person cannot become infected by sharing food with a person who has AIDS[1]	Percentage who say that a healthy looking person can have the AIDS virus and who reject the two most common local misconceptions	Percentage with a comprehensive knowledge about AIDS[3]	Number of women
Age							
15-24	88.2	70.9	89.0	84.8	61.3	33.8	2,179
15-19	87.0	67.9	88.1	83.1	57.5	31.9	1,544
20-24	91.2	78.3	91.2	89.0	70.7	38.2	635
25-29	91.3	81.9	94.6	89.5	75.2	41.4	449
30-39	90.5	84.4	92.7	90.5	76.7	42.6	879
40-49	86.7	71.5	92.8	86.4	63.7	33.3	793
Marital status							
Never married	89.1	73.9	90.1	86.2	64.9	36.4	2,506
Ever had sex	94.3	85.8	94.9	93.2	78.9	49.7	545
Never had sex	87.7	70.6	88.7	84.2	61.1	32.7	1,961
Married/Living together	88.3	76.8	92.5	87.5	68.7	36.2	1,715
Divorced/Separated/ Widowed	85.8	67.4	89.7	89.8	61.6	34.7	78
Residence							
Asmara	96.4	89.8	96.0	96.0	84.6	47.0	855
Other Town	92.4	82.4	93.1	91.8	75.0	41.1	902
Rural	84.8	67.3	88.7	81.9	57.2	31.0	2,542
Zoba							
Debubawi Keih Bahri	78.5	83.2	75.6	79.4	65.2	26.8	67
Maekel	95.9	86.6	95.7	96.4	82.0	51.1	1,196
Semenawi Keih Bahri	84.9	71.8	92.3	85.3	60.8	33.0	470
Anseba	86.8	69.6	92.8	82.9	60.1	22.5	588
Gash-Barka	74.2	69.0	81.8	76.6	55.4	14.4	778
Debub	94.0	70.4	91.9	86.7	63.2	44.3	1,200
Education							
No education	62.5	43.8	74.5	60.4	29.8	10.4	599
Primary	87.4	66.2	88.0	79.8	55.6	25.4	659
Middle	90.3	75.1	93.0	90.1	64.6	32.9	1,188
Secondary or above	96.2	85.8	95.8	95.3	80.9	48.8	1,473
Wealth quintile							
Lowest	79.0	59.1	85.8	74.6	47.2	20.3	739
Second	80.6	63.0	84.4	77.1	50.8	25.1	699
Middle	88.6	73.0	90.5	86.7	63.2	31.7	753
Fourth	92.8	80.7	94.0	92.3	73.8	45.0	960
Highest	96.6	88.8	96.5	95.9	84.1	49.0	1,148
Total 15-49	88.7	74.9	91.1	86.8	66.4	36.3	4,299
50-59	80.5	64.8	88.9	82.0	53.7	27.5	722
Total men 15-59	87.6	73.5	90.7	86.1	64.6	35.0	5,021

Note: Table is based on the CORE questionnaire.
[1] Two most common local misconceptions: Get AIDS from mosquito bites; Get AIDS by sharing food with person who has AIDS
[2] Witchcraft, God, curse, or other supernatural means.
[3] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus,

Table 13-6 Knowledge of prevention of mother to child transmission of HIV

Percentage of women and men age 15-49 [59] who know that HIV can be transmitted from mother to child by breastfeeding and that the risk of mother to child transmission (MTCT) of HIV can be reduced by mother taking special drugs during pregnancy, by background characteristics, Eritrea 2010

	Women				Men			
Background characteristic	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of women	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of men
Age								
15-24	69.3	39.6	37.9	4,045	66.2	35.3	32.2	2,179
15-19	66.6	35.8	34.2	2,301	64.3	31.9	29.2	1,544
20-24	73.0	44.6	42.8	1,744	71.0	43.6	39.3	635
25-29	73.0	42.3	40.6	1,646	71.2	45.0	41.7	449
30-39	67.9	36.5	34.7	2,656	66.5	42.7	38.5	879
40-49	59.9	30.4	28.2	1,891	61.4	36.5	32.5	793
Marital status								
Never married	71.5	41.7	39.6	2,878	67.2	37.6	34.2	2,506
Ever had sex	80.5	60.8	57.0	151	76.2	50.6	46.6	545
Never had sex	71.0	40.7	38.7	2,727	64.7	34.0	30.7	1,961
Married/Living together	65.6	35.5	33.7	6,183	64.2	38.8	35.2	1,715
Divorced/ Separated/ Widowed	70.5	37.8	36.6	1,177	61.6	35.6	30.2	78
Currently pregnant								
Pregnant	69.5	39.9	38.6	756	-	-	-	0
Not pregnant or not sure	67.7	37.3	35.5	9,482	-	-	-	0
Residence								
Total urban	81.7	53.4	50.9	4,125	73.7	51.2	45.9	1,757
Asmara	85.5	59.8	56.6	1,870	78.4	56.0	49.9	855
Other Town	78.5	48.2	46.2	2,255	69.3	46.7	42.2	902
Rural	58.4	26.8	25.5	6,113	60.5	28.9	26.6	2,542

(*Continued*)

Table 13-6 (*Continued*)

Percentage of women and men age 15-49 [59] who know that HIV can be transmitted from mother to child by breastfeeding and that the risk of mother to child transmission (MTCT) of HIV can be reduced by mother taking special drugs during pregnancy, by background characteristics, Eritrea 2010

Background characteristic	Women				Men			
	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of women	HIV can be transmitted by breastfeeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of men
Zoba								
Debubawi Keih Bahri	50.6	24.4	23.3	163	47.0	23.5	21.7	67
Maekel	84.9	57.0	53.9	2,535	78.2	52.2	46.8	1,196
Semenawi Keih Bahri	58.4	26.2	25.0	1,122	58.8	34.6	32.0	470
Anseba	65.8	29.4	27.2	1,436	64.0	30.1	27.7	588
Gash-Barka	44.3	20.2	19.4	2,255	43.2	20.9	18.7	778
Debub	77.4	43.5	42.0	2,727	73.0	41.1	37.5	1,200
Education								
No education	47.8	17.7	16.7	3,882	35.0	8.7	8.1	599
Primary	71.8	37.9	35.8	2,162	56.5	26.5	23.9	659
Middle	79.4	48.7	46.5	1,946	66.8	35.6	32.2	1,188
Secondary or above	88.4	61.0	58.6	1,967	77.8	51.2	46.7	1,473
Wealth quintile								
Lowest	44.2	15.7	15.2	1,746	51.9	21.8	19.8	739
Second	53.0	21.2	20.0	1,769	57.3	24.3	22.4	699
Middle	65.9	31.4	29.5	2,014	62.6	35.2	32.2	753
Fourth	79.8	50.2	48.0	2,223	71.1	43.6	40.0	960
Highest	85.7	58.2	55.4	2,485	78.0	54.2	48.3	1,148
Total 15-49	67.8	37.5	35.7	10,238	65.9	38.1	34.5	4,299
50-59	na	na	na	na	51.9	28.1	23.4	722
Total men 15-59	na	na	na	na	63.9	36.6	32.9	5,021

Note: Table is based on the CORE questionnaire.
na = Not applicable

13.2 Accepting Attitudes Towards Those Living With HIV/AIDS

Widespread stigma and discrimination towards people infected with HIV or living with AIDS can adversely affect both people's willingness to be tested for HIV and their adherence to antiretroviral therapy. Thus, reduction of stigma and discrimination is an important indicator to the success of programs to prevent and control HIV/AIDS.

To assess survey respondents' attitudes towards people living with HIV/AIDS, respondents who had heard of AIDS were asked if they would be willing to care for a relative sick with AIDS in their own households; if they thought a female teacher who has the AIDS virus but is not sick should be allowed to continue teaching; and if they would want to keep a family member's HIV positive status secret.

Most women and men age 15-49 (75 percent of women and 81 percent of men) would willing to care at home for a relative with AIDS. Sixty-six percent of women and 65 percent of men believe that an HIV positive female teacher who is not sick should be allowed to continue teaching. Eighty-three percent of women and 80 percent of men would not want to keep secret the fact that a family member is infected with HIV. Overall, accepting attitudes regarding all three situations is the same in both women and men (49 percent) (Table 13-7 and Table 13-8).

Accepting attitudes are generally more common among respondents in urban areas than among those in rural areas and increase with education and wealth. Women and men residing in Maekel, Anseba and Debub are most likely to express accepting attitudes on all three indicators, while those living in Debubawi Keih Bahri and Gash-Barka are the least likely.

13.3 Adult Support of Education About Condom Use to Prevent AIDS

To gauge the extent of support for possible programs to increase condom knowledge among youth, all women age 18-49 and men age 18-59 were asked whether they thought that children age 12-14 should be taught about using condoms to avoid AIDS.

Half of the women and 68 percent of men age 18-49 agree that children age 12-14 should be taught about using condoms to avoid AIDS (Table 13-9). Women age 18-24 are somewhat more supportive of condom education for children than older women. Support for condom education is higher among urban than rural women (59 percent versus 44 percent), and it increases with education and wealth. There is considerable variability in the level of support for condom education among women, from 27 percent in the Debubawi Keih Bahri to 61 percent in Maekel.

Among adult men support for condom education does not vary consistently with age or urban-rural residence. As with women Debubawi Keih Bahri has the lowest percentage of men (40 percent) that agree children age 12-14 should be taught about condom use to avoid AIDS. There is no clear variation by education or wealth.

Table 13-7 Accepting attitudes toward those living with HIV/AIDS: Women

Among women age 15-49 who have heard of AIDS, percentage expressing specific accepting attitudes toward people with AIDS, by background characteristics, Eritrea 2010

Background characteristic	Percentage of respondents who:			Percentage expressing acceptance attitudes on all three indicators	Number of respondents who have heard of AIDS
	Are willing to care for a family member with the AIDS virus in the respondent's home	Say that a 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		
Age					
15-24	76.0	68.2	84.2	51.7	3,867
15-19	73.9	67.0	84.4	51.2	2,177
20-24	78.7	69.9	83.9	52.4	1,690
25-29	75.7	65.7	82.7	49.3	1,579
30-39	75.1	64.7	81.5	47.1	2,540
40-49	72.0	60.1	83.6	45.4	1,770
Marital status					
Never married	80.2	74.1	83.0	55.9	2,751
Ever had sex	84.4	76.3	79.8	54.5	147
Never had sex	79.9	74.0	83.1	56.0	2,604
Married/Living together	71.6	60.9	83.7	45.7	5,876
Divorced/Separated/ Widowed	80.2	67.5	80.5	49.3	1,128
Residence					
Total urban	87.3	82.4	81.0	61.5	4,104
Asmara	88.8	88.9	77.2	62.5	1,869
Other Town	85.9	77.1	84.2	60.8	2,234
Rural	66.1	53.1	84.7	39.9	5,652
Zoba					
Debubawi Keih Bahri	45.0	44.1	73.1	24.4	159
Maekel	89.3	87.6	77.9	62.3	2,530
Semenawi Keih Bahri	57.2	49.5	87.2	37.0	1,067
Anseba	67.5	58.7	87.2	44.2	1,408
Gash-Barka	64.7	47.0	79.6	36.2	1,891
Debub	81.6	68.6	87.4	54.1	2,700
Education					
No education	59.2	43.6	83.6	32.2	3,463
Primary	75.2	64.1	84.4	48.7	2,113
Middle	84.3	77.8	83.1	58.0	1,934
Secondary or above	90.9	89.5	82.2	68.1	1,966
Wealth quintile					
Lowest	53.6	39.0	86.2	29.5	1,543
Second	60.3	46.2	83.5	32.7	1,588
Middle	71.4	60.0	83.8	45.4	1,925
Fourth	88.5	78.1	84.2	61.7	2,217
Highest	88.5	87.0	79.6	62.9	2,483
Total 15-49	75.0	65.4	83.2	49.0	9,756

Note: Table is based on the CORE questionnaire.

Table 13-8 Accepting attitudes toward those living with HIV/AIDS: Men

Among men age 15-49 [59] who have heard of HIV/AIDS, percentage expressing specific accepting attitudes toward people with HIV/AIDS, by background characteristics, Eritrea 2010

Background characteristic	Percentage of respondents who: Are willing to care for a family member with the AIDS virus in the respondent's home	Say that a teacher with the AIDS virus and is not sick should be allowed to continue teaching	Would not want to keep secret that a family member got infected with the AIDS virus	Percentage expressing acceptance attitudes on all three indicators	Number of respondents who have heard of AIDS
Age					
15-24	78.6	59.4	80.1	44.1	2,131
15-19	75.1	56.9	79.4	41.6	1,507
20-24	86.9	65.5	81.8	50.4	624
25-29	87.4	75.7	79.2	56.8	441
30-39	85.0	73.2	79.0	55.9	863
40-49	80.4	66.2	79.0	49.9	778
Marital status					
Never married	80.3	64.6	79.3	47.9	2,453
Ever had sex	88.4	76.0	78.3	56.6	543
Never had sex	78.0	61.3	79.6	45.5	1,910
Married/Living together	82.0	65.9	79.4	49.9	1,684
Divorced/Separated/ Widowed	90.1	68.9	92.6	61.4	76
Residence					
Total urban	88.4	83.4	78.8	60.9	1,749
Asmara	89.8	89.6	73.3	59.7	855
Other Town	87.0	77.5	84.1	62.0	894
Rural	76.1	52.3	80.2	40.5	2,464
Zoba					
Debubawi Keih Bahri	51.8	51.7	87.2	36.3	64
Maekel	90.0	86.6	75.7	60.2	1,196
Semenawi Keih Bahri	70.0	57.5	81.4	42.4	466
Anseba	81.7	64.2	84.0	53.6	586
Gash-Barka	73.9	48.7	71.3	35.8	711
Debub	82.4	57.8	85.3	46.4	1,190
Education					
No education	59.9	32.5	73.5	25.7	538
Primary	76.8	51.7	78.4	39.1	642
Middle	79.9	61.6	80.5	46.1	1,182
Secondary or above	88.9	79.3	83.4	60.3	1,471
Wealth quintile					
Lowest	68.4	38.4	77.5	30.5	703
Second	70.5	47.5	80.2	35.3	667
Middle	81.3	56.5	81.7	45.3	739
Fourth	87.6	74.9	83.5	58.8	956
Highest	89.8	89.5	75.9	62.3	1,148
Total 15-49	81.2	65.2	79.6	48.9	4,213
50-59	74.4	52.5	77.1	39.2	702
Total men 15-59	80.2	63.4	79.2	47.6	4,915

Note: Table is based on the CORE questionnaire.

Table 13-9 Adult support of education about condom use to prevent AIDS

Percentage of women and men age 18-49 [59] who agree that children age 12-14 years should be taught about using a condom to avoid AIDS, by background characteristics, Eritrea 2010

	Women		Men	
Background characteristic	Percentage who agree	Number	Percentage who agree	Number
Age				
18-24	54.6	2,577	74.1	1,111
18-19	56.4	833	77.6	476
20-24	53.8	1,744	71.5	635
25-29	53.6	1,646	67.1	449
30-39	48.3	2,656	65.9	879
40-49	43.5	1,891	60.8	793
Marital status				
Never married	58.5	1,545	71.7	1,436
Married or living together	47.2	6,054	63.9	1,716
Divorced/separated/widowed	54.5	1,170	77.0	78
Residence				
Total urban	59.1	3,540	67.7	1,326
Asmara	57.6	1,626	63.4	677
Other Town	60.5	1,914	72.2	649
Rural	44.0	5,230	67.6	1,905
Zoba				
Debubawi Keih Bahri	27.1	149	39.9	57
Maekel	61.0	2,185	66.0	914
Semenawi Keih Bahri	41.9	1,004	68.8	368
Anseba	52.3	1,211	66.9	426
Gash-Barka	40.4	1,972	55.4	624
Debub	52.1	2,248	80.2	842
Education				
No education	36.4	3,668	48.0	557
Primary	58.2	1,878	66.3	496
Middle	62.1	1,388	75.1	691
Secondary or above	60.8	1,557	75.2	1,110
Wealth quintile				
Lowest	35.8	1,455	63.8	561
Second	37.6	1,544	65.2	538
Middle	48.8	1,757	70.9	557
Fourth	62.4	1,889	70.5	680
Highest	59.3	2,125	67.4	895
Total 18-49	50.1	8,770	67.6	3,232
50-59	na	na	57.0	722
Total men 18-59	na	na	65.7	3,953

Note: Table is based on the CORE questionnaire.
na = Not applicable

13.4 High-Risk Sexual Intercourse in the Past 12 Months

13.4.1 Multiple sexual partnership

The likelihood of HIV transmission is known to be greatly affected by the increase in the frequency and variety (multiple partners) of sexual intercourse. Women and men aged 15-49 were asked if they had intercourse in the period 12 months before the survey with a person who was neither their husband/wife nor who lived with them and the relationship of the partners with whom they had sexual intercourse in the past 12 months was asked. To understand the safety of the sex, the respondents were also asked if they had used a condom in their last sexual intercourse.

Among all women respondents aged 15-49, one percent had intercourse in the past 12 months with a person who was neither their husband nor lived with them (Table 13-10). Among those women who had intercourse 12 months before the survey, two percent did so with a person who was neither their husband nor who lived with them and 20 percent of these women reported to have used a condom in the last such intercourse. Due to the small number of women who admitted higher-risk sexual intercourse in the past 12 months, interpretation by background characteristics is difficult.

Among all men respondents age 15-49, nine percent had sexual intercourse with a person who was neither their wife nor who lived with them (Table 13-11). Among those men who had intercourse a year before the survey, 14 percent did so with a person who was neither their wife nor who lived with them and 89 percent of these men reported to have used a condom in the last such intercourse. Young men aged 20-24 were the highest to have had such intercourse (18 percent), followed by men aged 25-29 at 17 percent. Divorced/separated/widowed men tended to have more such intercourse (24 percent) than other groups of men with a different marital status. Sexual activity was also shown to be more in urban than rural areas. Risky sexual activity increased steadily with increase in educational levels and wealth. Similarly use of condom increased when men are more highly educated.

Percentage of men having intercourse with a person who was neither their wife nor who lived with them is general higher in younger men than older men due to the fact that younger men are unmarried. This is evident from the low proportion of men (0.6 percent) married or living together who had sex with a person who was neither their wife nor who lived with them as compared to those never married (14 percent) and divorced/separated/widowed, 24 percent (Table 13-11).

13.4.2 Payment for sexual intercourse and condom use

Male respondents in the EPHS2010 who had had sex in the past 12 months were asked whether they had paid anyone in exchange for sex in the past 12. They were also asked if they had used a condom the last time they had such sex.

Less than 1 percent of men reported that they had paid for sexual intercourse in the past 12 months. Due to low number of cases (ten), interpretation across different background characteristics is impossible. However, all the ten men who reported having paid for sexual intercourse reported that condom was used last time (table not shown).

Table 13-10 Multiple sexual partners and higher-risk sexual intercourse in the past 12 months: Women

Among all women age 15-49, the percentage who had intercourse in the past 12 months with a person who was neither their husband nor who lived with them; among women age 15-49 who had sexual intercourse in the past 12 months, the percentage who had intercourse in the past 12 months with a person who was neither their husband nor who lived with them; and among those having sexual intercourse in the past 12 months with a person who was neither their husband nor who lived with them, the percentage reporting that a condom was used at last intercourse with that person, by background characteristics, Eritrea 2010

	All respondents		Among respondents who had sexual intercourse in the past 12 months:		Among respondents who had intercourse in the past 12 months with a person who was neither their husband/wife nor who lived with them:	
Background characteristic	Percentage who had intercourse in the past 12 months with a person who was neither their husband/ wife nor who lived with them	Number	Percentage who had intercourse in the past 12 months with a person who was neither their husband/ wife nor who lived with them	Number	Percentage who reported using a condom at last sexual intercourse with that person	Number
Age						
15-24	0.8	4,045	2.3	1,344	25.1	31
15-19	0.6	2,301	3.5	381	38.7	13
20-24	1.0	1,744	1.8	963	14.8	18
25-29	1.9	1,646	2.7	1,179	31.9	32
30-39	1.9	2,656	2.6	1,931	14.5	51
40-49	0.9	1,891	1.3	1,324	5.6	18
Marital status						
Never married	1.8	2,878	89.0	60	32.1	53
Married or living together	0.3	6,183	0.4	5,567	8.3	20
Divorced/separated/widowed	5.0	1,177	38.7	151	13.1	58
Residence						
Total urban	1.8	4,125	4.0	1,859	26.6	74
Asmara	2.0	1,870	5.2	736	26.7	38
Other Town	1.6	2,255	3.2	1,123	26.5	36
Rural	0.9	6,113	1.5	3,919	11.7	58
Zoba						
Debubawi Keih Bahri	0.4	163	0.6	101	51.8	1
Maekel	1.8	2,535	4.2	1,066	28.8	44
Semenawi Keih Bahri	0.7	1,122	1.2	731	51.6	8
Anseba	0.4	1,436	0.6	849	16.3	5
Gash-Barka	2.0	2,255	3.0	1,506	15.5	45
Debub	1.0	2,727	1.8	1,525	3.8	28
Education						
No education	0.9	3,882	1.2	2,825	0.0	34
Primary	1.9	2,162	3.0	1,341	30.3	41
Middle	1.5	1,946	3.5	832	30.7	29
Secondary or above	1.3	1,967	3.5	708	20.2	25
Wealth quintile						
Lowest	0.4	1,746	0.5	1,176	0.0	6
Second	1.0	1,769	1.5	1,185	5.6	18
Middle	1.4	2,014	2.2	1,245	17.5	28
Fourth	2.0	2,223	4.0	1,108	17.8	45
Highest	1.4	2,485	3.3	1,064	36.0	35
Total 15-49	1.3	10,238	2.3	5,778	20.0	132

Note: Table is based on the CORE questionnaire.

Table 13-11 Multiple sexual partners and higher-risk sexual intercourse in the past 12 months: Men

Among all men age 15-49[59], the percentage who had intercourse in the past 12 months with a person who was neither their wife nor who lived with them; among men age 15-49 who had sexual intercourse in the past 12 months, the percentage who had intercourse in the past 12 months with a person who was neither their wife nor who lived with them; by background characteristics, Eritrea 2010

	All respondents		Among respondents who had sexual intercourse in the past 12 months:		Among respondents who had intercourse in the past 12 months with a person who was neither their husband/ wife nor who lived with them:	
Background characteristic	Percentage who had intercourse in the past 12 months with a person who was neither their husband/ wife nor who lived with them	Number	Percentage who had intercourse in the past 12 months with a person who was neither their husband/ wife nor who lived with them	Number	Percentage who reported using a condom at last sexual intercourse with that person	Number
Age						
15-24	10.4	2,179	70.2	324	91.9	227
15-19	7.3	1,544	88.0	129	90.4	113
20-24	18.0	635	58.4	195	93.4	114
25-29	16.6	449	27.1	275	91.2	75
30-39	6.8	879	8.2	731	74.3	60
40-49	2.0	793	2.1	736	79.5	15
Marital status						
Never married	13.9	2,504	98.6	353	89.5	348
Married or living together	0.6	1,716	0.6	1,681	60.8	10
Divorced/separated/widowed	24.4	78	62.1	31	84.7	19
Residence						
Total urban	12.1	1,757	27.6	771	87.8	213
Asmara	14.3	855	33.8	363	89.8	123
Other Town	10.0	902	22.2	408	85.1	90
Rural	6.5	2,542	12.7	1,294	89.3	164
Zoba						
Debubawi Keih Bahri	2.5	67	4.6	37	61.8	2
Maekel	12.5	1,196	30.5	491	91.6	150
Semenawi Keih Bahri	11.4	470	19.5	275	82.9	54
Anseba	7.5	588	15.9	276	91.2	44
Gash-Barka	5.3	778	9.1	455	87.0	41
Debub	7.2	1,200	16.4	531	86.3	87
Education						
No education	0.9	599	1.2	442	39.3	5
Primary	2.9	659	4.8	396	76.5	19
Middle	8.5	1,188	22.1	456	90.2	101
Secondary or above	13.5	1,473	35.1	567	91.1	199
Wealth quintile						
Lowest	6.3	739	12.0	390	86.5	47
Second	5.7	699	11.2	357	84.9	40
Middle	7.6	753	14.9	384	88.5	57
Fourth	8.8	960	20.0	424	90.5	85
Highest	13.0	1,148	29.2	510	88.9	149
Total 15-49	8.8	4,299	18.3	2,065	88.5	377
50-59	0.9	722	0.9	655	20.8	6
Total men 15-59	7.6	5,021	14.1	2,720	87.4	384

Note: Table is based on the CORE questionnaire.

13.5 Coverage of HIV Testing Services

13.5.1 General counseling and HIV testing

Knowledge of HIV status helps HIV-negative individuals make decisions to reduce risk and increase safer sex practices so that they can remain disease free. Among 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, since knowing your status is the first step to access all services related to HIV.

To assess awareness and coverage of HIV testing services, EPHS respondents were asked whether they had ever been tested for HIV. If they said that they had, they were asked whether they had received the results of their last test and where they had been tested. If they had never been tested, they were asked whether they knew a place where they could go to be tested.

Majority of the respondents (79 percent of women and 85 percent of men) knew of a place where they could get an HIV test (Table 13-12 and Table 13-13). Younger and older respondents (age 15-19 and 40-49) were less likely than those ages 20-39 to know a place where they could go to be tested. Never married respondents who had never had sex were less likely than others to know a place to get an HIV test.

Knowledge of a place to get an HIV test increased with both increasing education and wealth quintile and was somewhat more common among urban than rural residents, although the difference was more pronounced among men. Women and men who have never married and have ever had sex, who live in Maekel, who have secondary or higher education, and who are in the highest wealth quintile are more likely to know where to get an HIV test than their counterparts. Women and men who have never married and never had sex, who live either in Debubawi Keih Bahri or Gash-Barka, who have no education, and who are in the lowest wealth quintile are less likely to know where to get an HIV test than others.

A relatively larger proportion of men (59 percent) and women (57 percent) had never been tested (Table 13-12 and Table 13-13). Overall, 43 percent of women and 42 percent of men had ever been tested. Among women the likelihood of having ever had an HIV test was highest in the 20-29 age group (57-61 percent); among men rates were highest among those age 25-39 (64-69 percent). Urban residents were more likely than rural residents to have been tested and to have received the result. Among women, the percentage who were ever tested for HIV and received the result of the last test varied from 22 percent in Debubawi Keih Bahri to 55 percent in Maekel, while the percentage among men ranged from 27 percent in Debubawi Keih Bahri to 51 percent in Maekel. Among women, testing coverage increased markedly with education and wealth. Among men, testing coverage increased with wealth quintile, but the association between HIV testing and education was not clear (Table 13-12 and Table 13-13).

Nineteen percent of women and 16 percent of men had been tested in the 12-month period preceding the survey (Table 13-12, Table 13-13). Among women and men the likelihood of having an HIV test and receiving the results was highest in the 25-29 age groups (28 percent for both sexes). Among women, the percentages who were tested for HIV varied from 8 percent in Debubawi Keih Bahri to 24 percent in Maekel, while the percentage among men ranged from 11 percent in Debubawi Keih Bahri to 23 percent in Maekel. Women and men who have never married and have ever had sex, who live in Maekel, who have secondary or higher education, and who are in the highest wealth quintile were more likely to have had an HIV test in the last 12 months than others.

Table 13-12 Coverage of prior HIV testing: Women

Percentage of women age 15-49 who know VCT, percentage who know where to get an HIV test, percent distribution of women age 15-49 by testing status, and the percentage of women who were tested for HIV in the past 12 months, according to background characteristics, Eritrea 2010

Background characteristic	Percentage who know VCT	Percentage who know where to get an HIV test	Percentage tested in the last 12 months	Percentage ever tested	Number of women
Age					
15-24	71.8	80.7	19.1	38.2	4,045
15-19	68.3	76.4	12.9	23.7	2,301
20-24	76.4	86.5	27.2	57.3	1,744
25-29	75.1	83.3	28.2	61.4	1,646
30-39	69.5	80.6	19.9	51.7	2,656
40-49	62.3	69.8	8.1	25.9	1,891
Marital status					
Never married	74.3	80.0	10.8	22.1	2,878
Ever had sex	89.0	86.9	31.5	68.8	151
Never had sex	73.5	79.6	9.7	19.5	2,727
Married/Living together	67.8	78.4	23.4	53.4	6,183
Divorced/Separated/Widowed	71.2	80.8	13.6	40.6	1,177
Residence					
Total urban	86.6	93.4	25.4	54.8	4,125
Asmara	91.4	94.1	24.1	53.8	1,870
Other Town	82.7	92.8	26.4	55.7	2,255
Rural	58.7	69.4	14.3	35.2	6,113
Zoba					
Debubawi Keih Bahri	43.1	61.0	8.4	21.5	163
Maekel	89.7	92.7	24.2	55.0	2,535
Semenawi Keih Bahri	58.0	74.4	15.9	36.0	1,122
Anseba	65.8	75.0	17.0	38.4	1,436
Gash-Barka	47.6	58.5	14.3	30.3	2,255
Debub	78.9	88.6	20.0	49.4	2,727
Education					
No education	47.3	60.2	9.9	27.3	3,882
Primary	72.5	84.8	21.6	50.4	2,162
Middle	85.0	90.4	25.0	53.0	1,946
Secondary or above	93.4	96.4	26.2	55.1	1,967
Wealth quintile					
Lowest	42.7	56.7	8.3	22.0	1,746
Second	52.5	63.6	13.7	31.5	1,769
Middle	66.7	78.0	18.2	42.2	2,014
Fourth	84.7	92.3	24.7	56.7	2,223
Highest	91.1	94.9	24.7	54.9	2,485
Total 15-49	70.0	79.1	18.7	43.1	10,238

Note: Table is based on the CORE questionnaire.

Table 13-13 Coverage of prior HIV testing: Men

Percentage of men age 15-49 [59] who know voluntary counseling and testing (VCT), percentage who know where to get an HIV test, percent distribution of men age 15-49 by testing status, and the percentage of men who were tested for HIV in the past 12 months, according to background characteristics, Eritrea 2010

Background characteristic	Percentage who know VCT	Percentage who know where to get an HIV test	Percentage tested in the last 12 months	Percentage ever tested	Number of men
Age					
15-24	70.4	81.1	13.3	24.4	2,179
15-19	65.5	76.7	9.1	14.9	1,544
20-24	82.4	91.8	23.5	47.5	635
25-29	86.3	90.9	27.7	64.2	449
30-39	83.6	91.0	25.6	68.8	879
40-49	80.2	87.5	17.6	53.7	793
Marital status					
Never married	73.6	82.4	14.9	28.7	2,506
Ever had sex	91.8	96.2	34.7	63.9	545
Never had sex	68.6	78.6	9.4	18.9	1,961
Married/Living together	80.9	89.4	22.5	62.7	1,715
Divorced/Separated/Widowed	76.1	90.1	26.6	73.2	78
Residence					
Total urban	89.4	92.8	23.8	51.8	1,757
Asmara	93.9	94.4	24.4	54.9	855
Other Town	85.1	91.4	23.2	48.9	902
Rural	67.7	80.2	14.2	37.0	2,542
Zoba					
Debubawi Keih Bahri	38.4	63.7	10.7	27.3	67
Maekel	90.1	92.4	23.2	51.3	1,196
Semenawi Keih Bahri	81.6	85.1	15.3	38.7	470
Anseba	77.7	86.7	14.4	39.7	588
Gash-Barka	57.1	70.5	12.3	32.6	778
Debub	75.4	88.5	20.3	45.9	1,200
Education					
No education	46.3	57.6	3.9	17.4	599
Primary	69.6	81.6	12.3	44.7	659
Middle	72.6	86.8	17.7	39.3	1,188
Secondary or above	89.8	93.6	24.9	49.3	1,473
Wealth quintile					
Lowest	59.4	72.0	9.2	27.4	739
Second	63.5	78.3	13.1	35.7	699
Middle	73.6	85.9	17.0	43.5	753
Fourth	81.9	89.6	20.8	44.4	960
Highest	93.2	94.3	25.5	56.2	1,148
Total 15-49	76.6	85.3	18.1	43.1	4,299
50-59	67.5	79.1	6.4	31.9	722
Total men 15-59	75.3	84.4	16.4	41.5	5,021

Note: Table is based on the CORE questionnaire.
[1] Includes 'don't know/missing'.

13.5.2 HIV counseling and testing during pregnancy

HIV testing in pregnant women is one of the main strategies in the elimination of HIV transmission from a mother to her child. Fifty-two percent of women who gave birth during the two years preceding the survey received HIV counseling during antenatal care (Table 13-14). Forty-three percent of women reported they had both received counseling about HIV and had been offered, accepted, and received the results of an HIV test during antenatal care. Women were most likely to have been counseled and tested, if they had more than a secondary education (76 percent), lived in Maekel (74 percent), and if they are in the highest wealth quintile (75 percent). Women were least likely to report receiving the full range of counseling and testing services during antenatal care if they were in the lowest wealth quintile (17 percent), if they live in Debubawi Keih Bahri and Gash-Barka (21 and 24 percent, respectively) (Table 13-14) and Figure 13-3) and if their educational attainment did not extend beyond primary school.

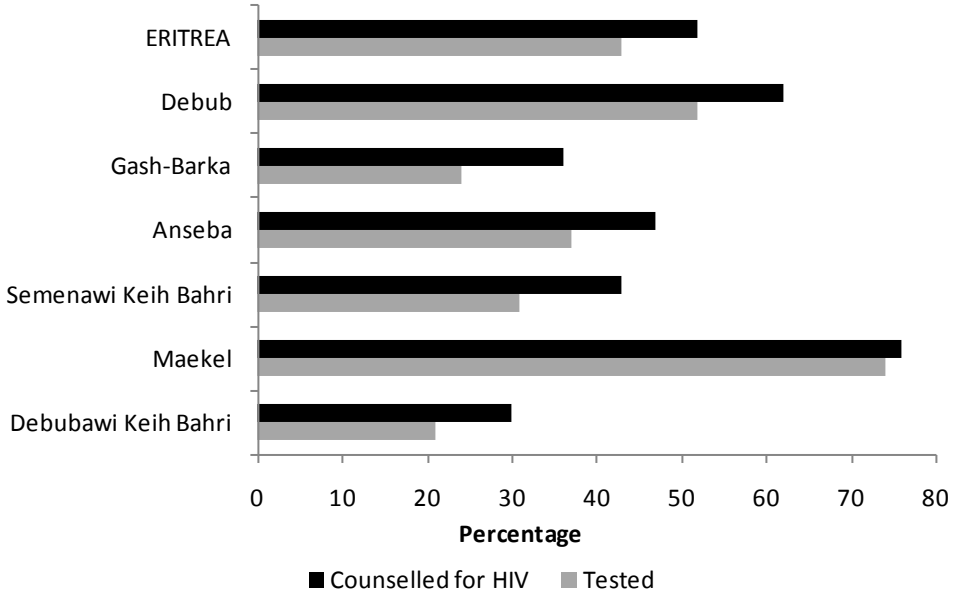
Table 13-14 Pregnant women counseled and tested for HIV

Among all women age 15-49 who gave birth in the two years preceding the survey, the percentage who received HIV counseling during antenatal care for their most recent birth, and percentage who accepted an offer of HIV testing, according to background characteristics, Eritrea 2010

Background characteristic	Percentage who received HIV counseling during antenatal care[1]	Percentage who were counseled, were offered and accepted an HIV test[2]	Number of women who gave birth in the last two years[3]
Age			
15-24	52.9	44.5	752
15-19	46.4	37.9	157
20-24	54.6	46.2	595
25-29	55.0	46.1	723
30-39	52.3	41.7	957
40-49	40.1	30.7	179
Residence			
Total urban	73.1	67.8	807
Asmara	76.1	74.9	279
Other Town	71.6	64.0	528
Rural	43.1	31.9	1,804
Zoba			
Debubawi Keih Bahri	30.3	21.1	39
Maekel	76.0	74.4	445
Semenawi Keih Bahri	43.0	30.9	318
Anseba	47.3	36.8	407
Gash-Barka	36.3	24.0	701
Debub	61.9	52.2	702
Education			
No education	34.4	22.2	1,152
Primary	57.7	46.7	634
Middle	67.5	63.1	449
Secondary or above	80.2	76.3	348
Wealth quintile			
Lowest	30.0	17.2	510
Second	39.0	24.8	558
Middle	49.3	38.7	585
Fourth	70.6	65.6	542
Highest	78.4	75.1	416
Total 15-49	52.4	43.0	2,611

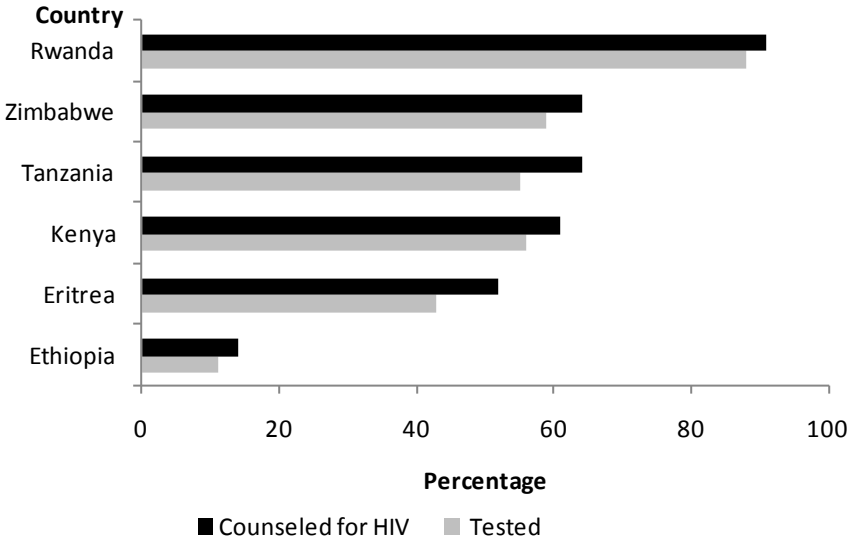
Note: Table is based on the CORE questionnaire.
[1] In this context, "counseled" means that someone talked with the respondent about all three of the following topics: 1) babies getting the AIDS virus from their mother, 2) preventing the virus, and 3) getting tested for the virus.
[2] Only women who 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.

Figure 13-3 Counseling and testing of HIV in pregnant women by zoba



The counseling and testing coverage of HIV in pregnant women is lower when compared with a number of other countries in sub-Saharan Africa that conducted DHS's in 2010-2011 such as Kenya (61 and 56 percent), Tanzania (64 and 55 percent), Zimbabwe (64 and 59 percent), and Rwanda (91 and 88 percent), but higher than that of Ethiopia (14 and 11 percent) (Figure 13-4).

Figure 13-4 Counseling and testing of HIV in pregnant women in selected sub-Saharan Africa



13.6 Male Circumcision

Circumcision is universally practiced in Eritrea for religious and cultural reasons. The EPHS2010 asked men if they were circumcised. Overall 98 percent of Eritrean men age 15-49 are circumcised. Circumcision is universal in all zobas, and no variability is observed by age group, residence, education and wealth quintile (Table 13-15).

Table 13-15 Prevalence of male circumcision

Percent distribution of all men 15-49 [59] circumcised, according to background characteristics, Eritrea 2010

Background characteristic	Percentage circumcised	Number of men
Age		
15-19	97.5	1,544
20-24	98.4	635
25-29	99.5	449
30-34	98.6	390
35-39	99.6	490
40-44	99.4	376
45-49	99.2	417
Residence		
Total urban	98.5	1,757
Asmara	97.8	855
Other Town	99.1	902
Rural	98.5	2,542
Region		
Debubawi Keih Bahri	99.4	67
Maekel	98.1	1,196
Semenawi Keih Bahri	99.4	470
Anseba	99.1	588
Gash-Barka	99.0	778
Debub	97.9	1,200
Education		
No education	98.8	599
Primary	98.3	659
Middle	98.3	1,188
Secondary or above	98.6	1,853
Wealth quintile		
Lowest	98.5	739
Second	98.3	699
Middle	98.3	753
Fourth	99.0	960
Highest	98.3	1,148
Total 15-49	98.5	4,299
50-59	99.2	722
Total men 15-59	98.6	5,021

Note: The table is based on the CORE questionnaires.

13.7 Self-Reporting, Treatment and Knowledge of Sexually Transmitted Infections

13.7.1 Self-reporting of STIs

Information about the incidence of sexually transmitted infections (STIs) is not only useful as a marker of unprotected sexual intercourse but also because STI infection is a co-factor in HIV transmission. The EPHS2010 asked respondents who had ever had sex whether they had had a disease that they acquired through sexual contact in the past 12 months. They were also asked whether, in the past 12 months, they had any genital discharge and whether they had experienced a genital sore or ulcer. These symptoms have been shown to be useful in identifying STIs in men. For women, however, discharge is less easily interpreted as a symptom because women experience non- STI conditions of the reproductive tract that also produce discharge.

The findings of this survey show that 0.1 percent of women and 0.3 percent of men, reported having had an STI in the past 12 months. Among women 1.3 percent and among men 0.6 percent reported having had an abnormal genital discharge, and 0.8 percent of women and 0.3 percent of men reported having had a genital sore or ulcer in the 12 months preceding the survey. These numbers may be underestimates because respondents may be embarrassed or ashamed to admit to having STIs. Given the low levels of reporting of STIs, variations across background characteristics are difficult to interpret (Table 13-16).

13.7.2 Treatment of sexually transmitted infections

Respondents aged 15-49 who reported an STI or symptoms of an STI in the last 12 months were asked whether they had sought advice or treatment and from which source they had sought it. Sixty-one percent of women and 53 percent of men who sought treatment did so from professional health providers, while three percent of men sought help from other sources. Thirty-three percent of women and 47 percent of men did not seek any advice or treatment from any source (Table 13-17)

13.7.3 Knowledge of symptoms of STI

In the EPHS2010, the level of awareness of STIs among women and men and their knowledge of the symptoms of STIs in men and in women was assessed.

Sixty-two percent of women in Eritrea report that they have no knowledge of STIs (Table 13-18). One in ten women (13 percent) do not know any of the symptoms of STIs in a man. Four percent of women mentioned only one symptom, and one-fourth mentioned at least two symptoms. An almost similar pattern is seen for knowledge of symptoms of STIs in a woman. One in ten women did not know any symptoms of STIs in a woman, four percent know only one symptom, and 21 percent know two or more symptoms. Knowledge of STIs and symptoms of STIs is especially low among women with no education and women in Debubawi Keih Bahri. Women in the age group 15-19, those in rural areas, and those who are married or living with a man also have very low levels of knowledge of STIs and symptoms of STIs.

Thirty-seven percent of men in Eritrea report that they have no knowledge of STIs. One in ten men does not know any of the symptoms of STIs in a man, nine percent of men mentioned only one symptom, and 45 percent mentioned at least two symptoms. One in four men did not know any symptoms of STIs in

Table 13-16 Self-reported prevalence of sexually-transmitted infections (STIs) and STIs symptoms

Among women and men age 15-49 [59] who ever had sexual intercourse, the percentage reporting having an STI and/or symptoms of an STI in the past 12 months, by background characteristics, Eritrea 2010

	Women					Men				
Background characteristic	STI	Bad smelling/ abnormal genital discharge	Genital sore/ ulcer	STI/ genital discharge/ sore or ulcer	Number of respondents who ever had sexual intercourse	STI	Bad smelling/ abnormal genital discharge	Genital sore/ ulcer	STI/ genital discharge/ sore or ulcer	Number of respondents who ever had sexual intercourse
Age										
15-24	0.0	1.0	0.7	1.4	1,649	0.0	0.2	0.5	0.5	412
15-19	0.0	1.6	1.1	2.2	454	0.0	0.0	0.8	0.8	156
20-24	0.0	0.7	0.5	1.1	1,195	0.0	0.4	0.4	0.4	256
25-29	0.0	1.6	0.6	1.8	1,471	0.4	0.2	1.1	1.4	327
30-39	0.3	1.7	0.9	2.0	2,523	0.2	0.3	0.5	0.6	815
40-49	0.1	0.9	0.7	1.3	1,860	0.4	0.4	0.4	0.4	784
Marital status										
Never married	0.0	1.3	0.6	1.3	151	0.5	0.5	0.8	1.0	545
Married or living together	0.1	1.2	0.7	1.5	6,175	0.2	0.3	0.5	0.5	1,715
Divorced/separated/ widowed	0.2	1.9	1.0	2.2	1,177	0.0	0.0	0.0	0.0	78
Residence										
Total urban	0.3	2.2	0.9	2.5	2,646	0.7	0.5	0.7	0.8	929
Asmara	0.1	2.7	1.0	3.1	1,052	0.9	0.5	0.9	1.1	449
Other Town	0.4	1.8	0.8	2.1	1,594	0.5	0.6	0.5	0.6	481
Rural	0.1	0.8	0.7	1.2	4,857	0.0	0.2	0.5	0.5	1,409
Zoba										
Debubawi Keih Bahri	0.0	0.0	0.0	0.0	123	0.0	0.0	0.0	0.0	39
Maekel	0.1	2.5	0.9	2.8	1,509	0.6	0.3	0.7	0.8	602
Semenawi Keih Bahri	0.3	1.4	0.8	1.8	910	0.9	1.3	1.0	1.4	302
Anseba	0.1	0.2	0.7	0.7	1,053	0.0	0.0	0.0	0.0	310
Gash-Barka	0.2	1.1	0.6	1.1	1,845	0.0	0.3	0.3	0.3	491
Debub	0.1	1.3	0.9	1.8	2,062	0.0	0.0	0.7	0.7	592
Education										
No education	0.1	0.9	0.7	1.2	3,568	0.1	0.0	0.0	0.1	470
Primary	0.3	1.5	1.0	2.1	1,784	0.8	0.8	1.1	1.1	432
Middle	0.1	2.0	0.9	2.2	1,112	0.0	0.2	0.4	0.4	516
Secondary or above	0.1	1.8	0.3	1.9	942	0.3	0.2	0.8	0.9	679
Wealth quintile										
Lowest	0.2	0.5	0.5	0.9	1,383	0.0	0.2	0.6	0.6	416
Second	0.0	0.7	0.6	1.1	1,458	0.1	0.0	0.0	0.1	397
Middle	0.1	0.9	0.8	1.1	1,604	0.2	0.2	0.9	0.9	428
Fourth	0.3	2.0	1.1	2.5	1,601	0.0	0.3	0.3	0.3	483
Highest	0.2	2.3	0.8	2.6	1,457	0.8	0.7	0.9	1.1	614
Total 15-49	0.1	1.3	0.8	1.7	7,503	0.3	0.3	0.6	0.6	2,338
50-59	na	na	na	na	na	0.1	0.0	0.5	0.6	718
Total men 15-59	na	Na	na	na	na	0.2	0.2	0.5	0.6	3,056

Note: Table is based on the CORE questionnaire.
na = Not applicable

Table 13-17 Women and men seeking treatment for STIs

Percentage of women and men age 15-49 reporting an STI or symptoms of an STI in the last 12 months who sought advice or treatment, Eritrea 2010

Source of advice or treatment	Women	Men
Clinic/hospital/private doctor/other health professional	61.1	53.3
Advice or medicine from shop/pharmacy	0.9	0.0
Advice or treatment from any other source	2.8	0.0
No advice or treatment	33.1	46.7
Number with STD and symptoms of STD	124	15

a woman, eight percent know only one symptom, and 31 percent know two or more symptoms. Knowledge of STIs and symptoms of STIs is especially low among men with no education and men in Gash-Barka. Men in the age group 15-19, those in rural areas and those who are never married also have very low levels of knowledge of STIs and symptoms of STIs (Table 13-19).

In comparison to EDHS2002, the level of knowledge of the symptoms of STIs nationally has decreased. It remained the same in Maekel, increased slightly in Semenawi Keih Bahri, while it declined in the remaining four zobas (Figure 13-5).

13.8 HIV/AIDS Knowledge and Sexual Behaviour Among Youth

This section addresses HIV/AIDS related knowledge and sexual behavior among youth, age 15-24. The period between the initiation of sexual activity and marriage is often a time of sexual experimentation and may involve risk behaviours. Comprehensive knowledge among youth of HIV/AIDS transmission and prevention as well as knowledge of where to obtain condoms, issues such as age at first sex, age difference between partners, sex related to alcohol use, and voluntary counseling and testing for HIV are covered in this section.

13.8.1 Comprehensive HIV/AIDS knowledge and condom source

Knowledge of how HIV is transmitted is crucial to enable people to avoid HIV infection, especially for young people, who are often at greater risk because they may have shorter relationships and thus more partners or may engage in other risk behaviors. As discussed, comprehensive knowledge is defined as: (1) one's knowledge that people can reduce their chances of getting the AIDS virus by having sex with only one uninfected, faithful partner and by using condoms consistently; (2) knowing that a healthy-looking person can have HIV; and (3) knowing that HIV cannot be transmitted by mosquito bites or by sharing food with infected persons.

About one-fourth of women (25 percent) and one-third of men (34 percent) aged 15-24 have comprehensive knowledge about AIDS (Table 13-20). Never married young adults who have ever had sex (35 percent of women and 45 percent of men) are the most likely to have comprehensive knowledge about AIDS. Urban youth (32 percent of women and 39 percent of men) are more likely than rural youth (20 percent of women and 30 percent of men) to have comprehensive AIDS knowledge.

Table 13-18 Knowledge of symptoms of STIs: Women

Percentage of women by knowledge of symptoms associated with sexually transmitted infections (STIs) in a man and in a woman, by background characteristics, Eritrea 2010

Background characteristic	No knowledge of STIs	Knowledge of symptoms of STIs in a man: No symptoms mentioned	One symptom mentioned	Two or more symptoms mentioned	Missing	Knowledge of symptoms of STIs in a woman: No symptoms mentioned	One symptom mentioned	Two or more symptoms mentioned	Missing	Number of women
Age										
15-24	66.3	12.3	3.9	17.6	0.0	12.6	3.2	18.0	0.0	4,045
15-19	72.6	10.7	3.0	13.8	0.0	10.9	2.8	13.7	0.0	2,301
20-24	58.0	14.4	5.0	22.7	0.0	14.8	3.7	23.6	0.0	1,744
25-29	56.4	14.4	5.9	23.3	0.1	15.6	4.0	24.0	0.0	1,646
30-39	58.5	13.7	3.8	24.1	0.0	13.7	3.7	24.1	0.0	2,656
40-49	62.3	11.7	3.9	22.1	0.1	11.3	4.4	21.9	0.1	1,891
Marital status										
Never married	60.6	13.3	4.6	21.4	0.0	13.2	4.3	21.8	0.0	2,878
Married or living together	64.0	12.3	3.8	19.9	0.0	12.8	3.2	20.0	0.0	6,183
Divorced/separated/ widowed	54.4	14.8	5.0	25.7	0.0	14.4	4.6	26.5	0.0	1,177
Circumcision										
Circumcised	62.4	12.6	4.2	20.8	0.0	12.8	3.8	21.0	0.0	8,495
Not circumcised	58.0	15.0	4.2	22.8	0.1	15.2	3.4	23.4	0.0	1,648
DK/Missing	90.5	1.4	1.0	7.2	0.0	2.2	1.0	6.3	0.0	95
Residence										
Total urban	43.7	18.8	6.3	31.2	0.0	19.0	5.5	31.8	0.0	4,125
Asmara	30.2	23.6	8.7	37.4	0.1	24.3	7.2	38.3	0.1	1,870
Other Town	54.9	14.8	4.2	26.0	0.0	14.5	4.1	26.4	0.0	2,255
Rural	74.3	8.8	2.7	14.2	0.0	9.2	2.5	14.1	0.0	6,113
Zoba										
Debubawi Keih Bahri	82.6	8.4	2.0	6.9	0.0	9.0	1.4	6.9	0.0	163
Maekel	33.5	22.8	9.2	34.5	0.0	23.6	7.4	35.5	0.0	2,535
Semenawi Keih Bahri	72.8	10.7	1.8	14.7	0.0	11.0	2.1	14.2	0.0	1,122
Anseba	69.8	10.0	3.1	17.1	0.0	10.2	2.7	17.3	0.0	1,436
Gash-Barka	77.6	6.4	1.7	14.3	0.0	6.6	1.7	14.1	0.0	2,255
Debub	65.7	11.6	3.1	19.5	0.1	11.4	3.1	19.8	0.0	2,727
Education										
No education	81.7	7.2	1.7	9.4	0.1	7.0	1.6	9.7	0.0	3,882
Primary	64.7	11.6	3.3	20.3	0.0	12.1	3.8	19.4	0.0	2,162
Middle	57.2	16.4	4.5	21.9	0.0	16.5	3.8	22.5	0.0	1,946
Secondary or above	31.7	20.8	9.1	38.4	0.0	22.1	7.1	39.1	0.0	1,967
Wealth quintile										
Lowest	83.7	7.0	1.4	7.9	0.0	7.3	1.1	7.9	0.0	1,746
Second	81.0	6.0	2.0	10.9	0.1	6.5	1.9	10.5	0.0	1,769
Middle	71.7	10.0	2.3	16.0	0.0	10.1	2.4	15.8	0.0	2,014
Fourth	51.9	15.8	5.2	27.2	0.0	15.4	5.1	27.6	0.0	2,223
Highest	34.2	21.6	8.2	35.9	0.0	22.3	6.5	37.0	0.0	2,485
Total 15-49	61.9	12.9	4.2	21.0	0.0	13.1	3.7	21.3	0.0	10,238

Note: Table is based on the CORE questionnaire.

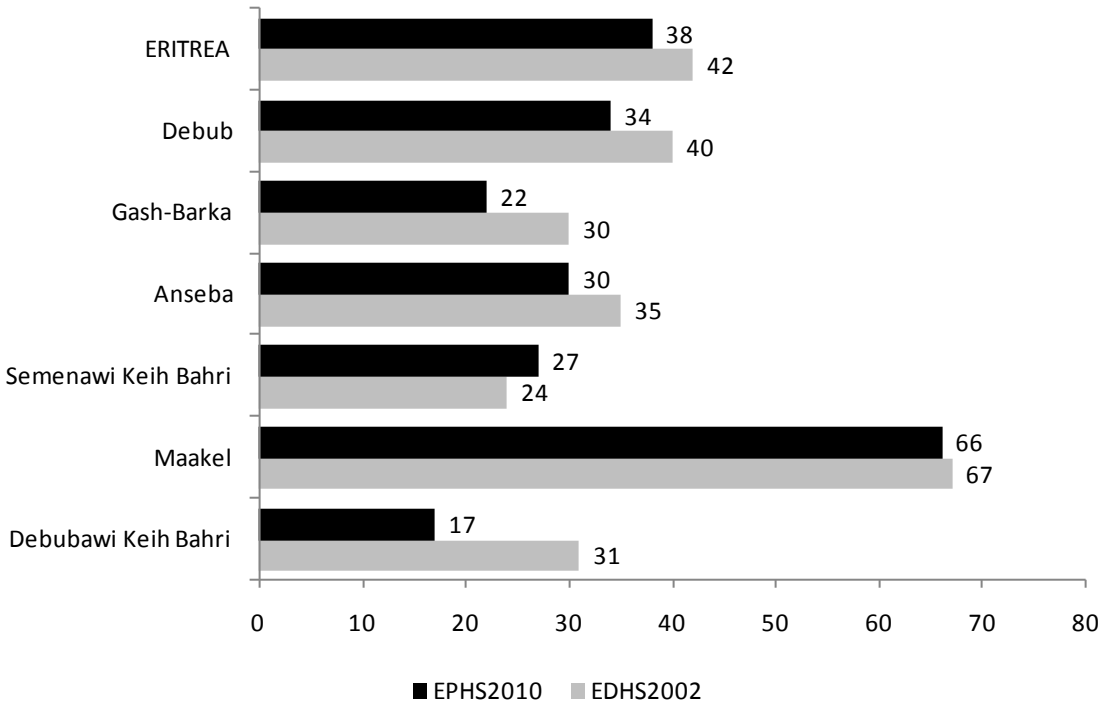
Table 13-19 Knowledge of symptoms of STIs: Men

Percentage of men by knowledge of symptoms associated with sexually transmitted infections (STIs) in a man and in a woman, by background characteristics, Eritrea 2010

Background characteristic	No knowledge of STIs	Knowledge of symptoms of STIs in a man			Knowledge of symptoms of STIs in a woman			Number of men
		No symptoms mentioned	One symptom mentioned	Two or more symptoms mentioned	No symptoms mentioned	One symptom mentioned	Two or more symptoms mentioned	
Age								
15-24	53.6	10.3	8.8	27.3	21.8	6.3	18.3	2,179
15-19	61.4	10.2	7.2	21.2	20.5	4.6	13.5	1,544
20-24	34.5	10.7	12.7	42.2	24.9	10.5	30.1	635
25-29	22.9	8.8	13.1	55.1	24.9	11.5	40.7	449
30-39	18.9	9.1	8.4	63.7	29.0	7.7	44.4	879
40-49	23.9	7.8	8.6	59.8	27.4	9.6	39.1	793
Marital status								
Never married	47.0	10.2	9.5	33.2	22.9	6.9	23.2	2,504
Married or living together	24.9	8.4	8.8	57.9	27.0	9.1	39.0	1,716
Divorced/separated/ widowed	24.9	7.1	3.7	64.3	27.9	5.9	41.3	78
Circumcision								
Circumcised	37.5	9.5	9.1	43.9	24.7	7.8	30.0	4,234
Not circumcised	57.3	8.0	14.6	20.1	20.4	7.5	14.9	59
DK/Missing	35.4	0.0	0.0	64.6	25.0	0.0	39.6	6
Residence								
Total urban	26.3	9.4	10.0	54.4	26.0	8.4	39.3	1,757
Asmara	15.3	9.1	13.9	61.8	28.3	10.5	45.9	855
Other Town	36.6	9.6	6.4	47.4	23.8	6.5	33.1	902
Rural	45.8	9.5	8.5	36.2	23.6	7.3	23.3	2,542
Zoba								
Debubawi Keih Bahri	49.4	5.6	0.3	44.6	16.1	0.0	34.5	67
Maekel	19.0	9.6	12.6	58.8	29.4	9.4	42.2	1,196
Semenawi Keih Bahri	41.8	10.5	7.8	40.0	27.5	6.5	24.2	470
Anseba	36.4	11.0	8.5	44.1	21.1	11.3	31.2	588
Gash-Barka	56.8	6.8	5.0	31.4	16.8	4.6	21.9	778
Debub	42.7	10.0	9.7	37.6	26.0	7.3	23.9	1,200
Education								
No education	62.1	9.9	5.6	22.3	20.1	5.2	12.5	599
Primary	46.1	8.4	7.5	38.0	21.5	8.4	23.9	659
Middle	45.5	11.0	8.5	35.0	25.5	6.8	22.3	1,188
Secondary or above	26.6	9.7	11.1	52.6	28.1	8.7	36.6	1,473
Wealth quintile								
Lowest	53.8	9.6	6.8	29.7	19.6	7.8	18.9	739
Second	54.3	9.8	7.1	28.8	20.4	6.1	19.2	699
Middle	42.2	8.9	9.1	39.8	23.2	8.1	26.5	753
Fourth	34.8	9.3	8.3	47.6	27.4	6.7	31.1	960
Highest	17.2	9.5	12.5	60.8	29.0	9.4	44.5	1,148
Total 15-49	37.8	9.4	9.1	43.6	24.6	7.7	29.8	4,299
50-59	32.1	10.4	7.6	49.9	24.5	8.0	35.5	722
Total men 15-59	37.0	9.6	8.9	44.5	24.6	7.8	30.6	5,021

Note: Table is based on the CORE questionnaire.

Figure 13-5 Percent distribution of women with knowledge of STI symptoms, 2002, 2010



The level of knowledge increases steadily with education. For example, four percent of young women with no education have comprehensive knowledge about AIDS, compared with 38 percent of young women with more than secondary education (Table 13-20). In addition, young women, those living in Maekel (40 percent), and those in the highest wealth quintile (37 percent) were most likely to have comprehensive AIDS knowledge. Young women were least likely to have comprehensive AIDS knowledge if they were in the lowest wealth quintile (8 percent), if they lived in Semenawi Keih Bahri, Gash-Barka, and Anseba (12 percent, 12 percent, and 13 percent, respectively). The same is also true for young men with less comprehensive knowledge observed in rural areas (30 percent), no education (7 percent), and lowest quintile (21 percent) (Table 13-20).

Because of the important role that condoms play in combating the transmission of HIV, respondents were asked if they knew where condoms could be obtained. Only responses about 'formal' sources were counted; friends, family members, and home were not included. The study indicated that young men are more likely than young women to know where to obtain condoms (85 percent versus 57 percent). Young women and men in urban areas are more likely than those in rural areas to know a source of condoms. Consistent with patterns for other indicators, respondents with more education are more likely than those with no or little education to know a source of condoms (Table 13-20).

Table 13-20 Comprehensive knowledge about AIDS and of a source of condoms among youth

Percentage of young women and young men age 15-24 with comprehensive knowledge about AIDS and percentage with knowledge of a source of condoms, by background characteristics, Eritrea 2010

	Women			Men		
Background characteristic	Percentage with comprehensive knowledge of AIDS	Percentage who know a condom source[2]	Number of respondents	Percentage with comprehensive knowledge of AIDS[1]	Percentage who know a condom source	Number of respondents
Age						
15-19	22.3	53.7	2,301	31.9	83.3	1,544
15-17	21.4	52.2	1,468	29.6	81.3	1,068
18-19	23.8	56.3	833	37.3	87.7	476
20-24	27.8	60.6	1,744	38.2	89.8	635
20-22	26.5	59.5	1,167	39.2	89.5	458
23-24	30.5	62.9	577	35.4	90.7	177
Marital status						
Never married	25.6	62.0	2,443	34.0	85.6	2,073
Ever had sex	34.8	88.8	55	44.8	97.3	306
Never had sex	25.4	61.4	2,388	32.1	83.5	1,767
Ever married	23.3	48.5	1,601	29.6	77.2	106
Residence						
Total urban	32.3	77.9	1,634	39.4	92.0	876
Asmara	38.8	81.4	755	43.1	93.4	403
Other Town	26.7	75.0	879	36.3	90.8	473
Rural	19.5	42.3	2,411	29.9	80.6	1,303
Zoba						
Debubawi Keih Bahri	24.7	34.7	52	18.8	67.3	26
Maekel	40.4	80.4	1,040	47.7	94.1	605
Semenawi Keih Bahri	12.2	43.5	413	28.4	82.6	211
Anseba	12.5	49.5	576	20.9	88.6	312
Gash-Barka	12.2	35.5	780	15.0	71.1	311
Debub	29.3	58.7	1,184	37.9	83.6	712
Education						
No education	4.3	11.0	730	6.9	32.4	116
Primary	14.1	37.9	817	13.7	68.2	256
Middle	28.7	67.3	1,188	27.6	86.3	781
Secondary or above	37.9	83.4	1,161	46.1	94.2	911
Wealth quintile						
Lowest	8.5	22.8	634	21.4	73.8	364
Second	16.2	35.4	667	23.9	74.5	357
Middle	19.0	48.7	819	30.7	85.6	398
Fourth	33.7	76.1	891	41.5	90.4	522
Highest	36.8	80.7	1,034	43.4	94.5	539
Total	24.7	56.7	4,045	33.8	85.2	2,179

Note: Table is based on the CORE questionnaire.

[1] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one uninfected faithful partner can reduce the chance of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention. The components of comprehensive knowledge are presented in Tables 13.2, 13.3.1, and 13.3.2.

[2] For this table, the following responses are not considered sources for condoms: friends, family members, and home.

13.8.2 Age at first intercourse

Age at first sex is an important indicator of both exposure to the risk of pregnancy and exposure to STIs. Young people who initiate sex at an early age face a higher risk of becoming pregnant or contracting an STI than young people who delay initiation of sexual activity. Consistent use of condoms reduces these risks.

Nine percent of young women and two percent of young men had had sexual intercourse before age 15; 38 percent of young women and 16 percent of young men had had sex before age 18. Among young women the older age cohorts are more likely to have had sex before age 15 or age 18 than those who reached those milestones more recently. Ever married young women are much more likely than never married young women to have had sexual intercourse before age 15 or 18. Twenty-two and 64 percent of ever married young women had sexual intercourse before age 15 and 18, respectively, compared with less than one and three percent, respectively, of never married women. Among young women a higher proportion of rural residents have had sex before age 15 and before age 18 than their urban counterparts (12 versus 4 percent; 50 versus 19 percent).

Education has an inverse relationship with sexual debut. Young women with no schooling are considerably more likely than those who attained secondary level education to have had sex by age 15 (21 percent compared with less than 1 percent). Variation in young men's sexual debut across background characteristics are small, except for variation associated with marital status. Similarly, ever married young men are much more likely than never married men to have had sexual intercourse before age 18 with 30 and 14 percent reported, respectively (Table 13-21). In comparison to selected sub-Saharan African countries that conducted DHS in 2010-2011, the percentage of men who had sexual intercourse before age 15 is lower than women in the same age in Eritrea (1.6 percent) and pattern is similar to that of Ethiopia , one percent (Figure 13-6).

13.8.3 Condom use at last sexual intercourse among youth

The Eritrean HIV control program advocates consistent condom use to reduce the risk of sexual transmission of HIV. Among those who had ever had sexual intercourse, less than two percent of women and 52 percent of men reported using a condom during their last sexual intercourse (Table 13-22). Due to the small number of women who report having used a condom at last sex interpreting these data by background characteristics is difficult. Among men, condom use is higher among urban than rural respondents, higher among never married than ever married and increases with education and wealth index.

13.8.4 Pre-marital sexual intercourse and condom use

EPHS2010 gathered information on premarital sexual intercourse and condom use among never married Eritrean youth age 15-24.

Ninety-eight percent of never married young women and 85 percent of never married young men have never had sexual intercourse. For young women and men, abstinence rates are highest among the youngest respondents (age 15-17) and those that do not know a condom source. There are no marked variations across zobas, residence and education levels for abstinence in young girls (Table 13-23).

Overall, less than two percent of never married young women and 11 percent of never married young men had sex in the past 12 months. Among those who had sex in the past year, 34 percent of women and 92 percent of men reported using a condom during their last sexual intercourse (Table 13-23). Due to

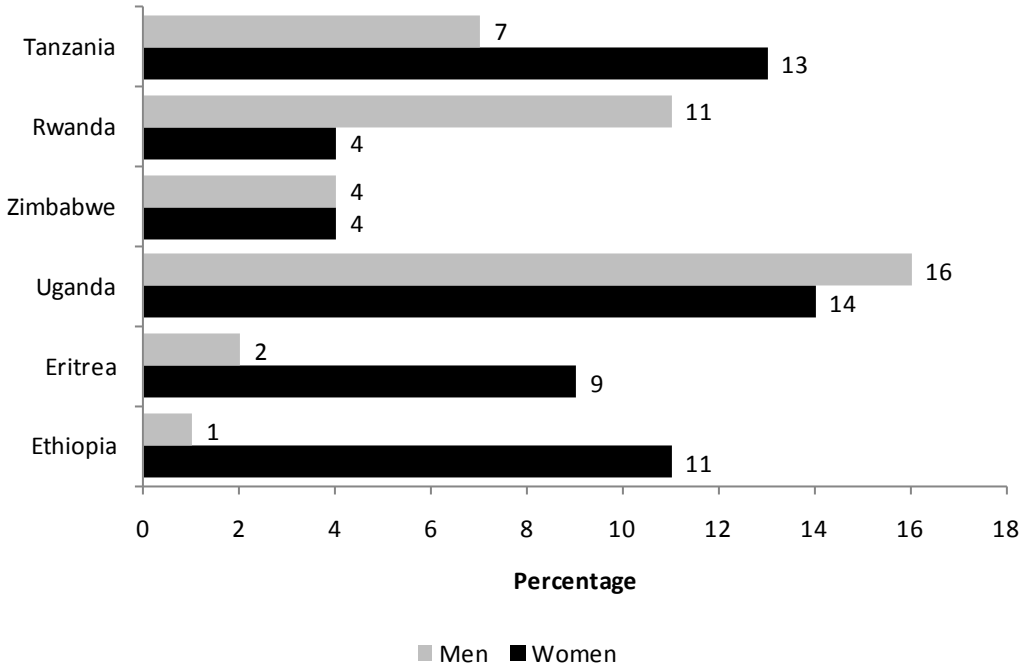
Table 13-21 Age at first sexual intercourse among youth

Percentage of young women and of young men age 15-24 who had sexual intercourse before age 15 and percentage of young women and of young men age 18-24 who had sexual intercourse before age 18, by background characteristics, Eritrea 2010

	Women				Men			
Background characteristic	Percentage who had sexual intercourse before age 15	Number of respondents (15-24)	Percentage who had sexual intercourse before age 18	Number of respondents (18-24)	Percentage who had sexual intercourse before age 15	Number of respondents (15-24)	Percentage who had sexual intercourse before age 18	Number of respondents (18-24)
Age								
15-19	6.0	2,301	na	na	1.8	1,544	na	na
15-17	4.5	1,468	na	na	1.5	1,068	na	na
18-19	8.7	833	30.4	833	2.2	476	17.7	476
20-24	12.4	1,744	41.0	1,744	1.3	635	14.2	635
20-22	13.8	1,167	42.7	1,167	1.1	458	15.2	458
23-24	9.6	577	37.5	577	1.8	177	11.5	177
Marital status								
Never married	0.3	2,443	2.4	1,110	1.6	2,072	14.2	1,004
Ever married	21.7	1,601	64.2	1,466	1.7	107	29.6	107
Knows condom source[1]								
Yes	5.7	2,292	29.4	1,526	1.8	1,855	16.6	987
No	12.8	1,753	49.5	1,050	0.7	323	8.3	123
Residence								
Total urban	3.6	1,634	19.4	1,049	1.5	876	13.4	445
Asmara	1.0	755	8.6	511	0.8	403	9.0	225
Other Town	5.9	879	29.7	538	2.2	473	17.9	220
Rural	12.2	2,411	50.1	1,528	1.7	1,303	17.2	666
Zoba								
Debubawi Keih Bahri	6.6	52	25.3	38	2.1	26	5.3	17
Maekel	1.7	1,040	13.2	691	0.5	605	10.1	323
Semenawi Keih Bahri	7.6	413	40.8	296	3.5	211	31.5	109
Anseba	2.7	576	33.7	351	2.5	312	18.8	150
Gash-Barka	13.4	780	49.9	497	2.8	311	15.4	158
Debub	15.3	1,184	54.0	704	1.1	712	15.2	354
Education								
No education	21.4	730	57.1	516	0.0	116	9.4	75
Primary	16.8	817	58.2	533	2.0	256	22.4	93
Middle	4.4	1,188	42.2	630	2.3	781	21.6	284
Secondary or above	0.7	1,161	12.6	751	1.2	911	14.8	548
Wealth quintile								
Lowest	11.7	634	46.5	343	2.1	364	18.7	186
Second	17.0	667	54.6	442	2.2	357	18.5	196
Middle	12.4	819	50.6	561	2.7	398	20.1	202
Fourth	5.3	891	35.5	557	0.7	522	17.4	241
Highest	1.8	1,034	12.7	673	1.0	539	7.2	287
Total	8.8	4,045	37.6	2,577	1.6	2,179	15.7	1,111

Note: Table is based on the CORE questionnaire.
na = Not available
[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

Figure 13-6 **Percentage who had sexual intercourse before age 15, selected sub-Saharan African countries**



the small number of women who report having had sex in the past year and using a condom at last sex, interpreting these data by background characteristics is difficult. Among men condom use is higher among urban respondents, among those who know a condom source and increases steadily with education.

13.8.5 Higher-risk sexual intercourse and condom use

In this study high-risk sexual intercourse is sexual intercourse with a partner who neither was a spouse nor who lived with the respondent. Respondents, age 15-24, were asked on if they had higher-risk sexual intercourse during the 12 months preceding the survey and if they used a condom during last higher-risk sex.

Overall two percent of women age 15-24 had higher-risk sexual intercourse in the past 12 months (Table 13-24). Among women, level of high-risk sexual intercourse is higher among those in the young age groups, those who know source of condom, urban residents, in Maekel, those with higher education, and those in the fourth or highest wealth quintile. Among women age 15-24 who reported higher-risk sex in the past 12 months, 25 percent reported using a condom at last sexual intercourse (Table 13-24). Due to the small number of women who have had high-risk sexual intercourse during the last 12 months, differentials in condom use at last sex by background characteristics is impossible.

Seventy percent of men age 15-24 had higher-risk sexual intercourse in the past 12 months. Among young men who had one or more partners in the past year, 47 percent reported using a condom at last sexual intercourse. Among men at time of higher-risk sexual intercourse, condom use is higher among urban respondents, among those never married, and those who know a condom source, and increases steadily with education (Table 13-25).

Table 13-22 Condom use at last sexual intercourse among youth

Among young women and young men age 15-24 who have ever had sexual intercourse, percentage who used a condom last time they had sexual intercourse, by background characteristics, Eritrea 2010

Background characteristic	Women		Men	
	Percentage who used a condom at last sexual intercourse	Number of respondents who have ever had sexual intercourse	Percentage who used a condom at last sexual intercourse	Number of respondents who have ever had sexual intercourse
Age				
15-19	2.0	454	67.0	156
15-17	0.0	137	78.1	57
18-19	2.9	317	60.7	99
20-24	0.9	1,195	43.4	256
20-22	1.0	753	46.9	164
23-24	0.6	442	37.2	92
Marital status				
Never married	16.2	55	67.9	306
Ever married	0.7	1,593	7.5	106
Knows condom source[1]				
Yes	2.4	824	56.1	379
No	0.0	825	8.2	32
Residence				
Total urban	2.9	430	62.5	153
Asmara	5.3	141	80.8	60
Other Town	1.7	288	50.8	94
Rural	0.6	1,219	46.4	259
Zoba				
Debubawi Keih Bahri	1.1	18	25.8	3
Maekel	3.9	238	70.4	86
Semenawi Keih Bahri	1.5	218	47.5	66
Anseba	1.4	222	53.6	61
Gash-Barka	0.9	395	42.9	62
Debub	0.0	557	47.6	133
Education				
No education	0.0	458	5.3	19
Primary	0.6	473	30.7	45
Middle	2.6	411	53.7	140
Secondary or above	2.0	294	60.4	182
Wealth quintile				
Lowest	0.0	274	51.7	69
Second	0.0	375	41.3	82
Middle	1.1	446	41.3	94
Fourth	2.1	337	62.0	84
Highest	3.3	217	66.9	82
Total	1.2	1,649	52.4	412

Note: Table is based on the CORE questionnaire.

[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

Table 13-23 Premarital sexual intercourse and condom use during premarital sexual intercourse among youth

Among never married women and men age 15-24, the percentage who have never had sexual intercourse, the percentage who had sexual intercourse in the past 12 months, and, among those who had premarital sexual intercourse in the past 12 months, the percentage who used a condom at the last sexual intercourse, by background characteristics, Eritrea 2010

	Women					Men				
Background characteristic	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the past 12 months	Number of never married respondents	Percentage who used condom at last sexual intercourse	Number of respondents	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the past 12 months	Number of never married respondents	Percentage who used condom at last sexual intercourse	Number of respondents
Age										
15-19	98.6	0.8	1,868	43.5	15	90.9	7.4	1,525	90.4	113
15-17	99.5	0.2	1,333	0.0	3	94.7	4.4	1,068	94.1	47
18-19	96.3	2.2	535	53.5	12	82.1	14.5	457	87.8	66
20-24	95.0	2.0	576	22.8	11	69.4	20.4	547	94.3	112
20-22	95.6	2.5	432	16.6	11	71.8	19.3	408	94.0	79
23-24	93.2	0.6	144	100.0	1	62.1	23.7	138	94.9	33
Knows condom source[1]										
Yes	96.8	1.6	1,516	37.2	24	83.2	12.3	1,772	93.7	219
No	99.3	0.2	928	0.0	2	97.2	2.0	299	44.1	6
Residence										
Total urban	97.6	1.0	1,232	40.3	12	84.1	11.3	860	94.1	97
Asmara	97.6	1.0	628	34.6	6	85.9	11.5	401	100.0	46
Other Town	97.7	0.9	604	46.8	5	82.6	11.1	459	88.8	51
Rural	97.8	1.2	1,211	29.5	14	86.1	10.5	1,212	91.0	128
Zoba										
Debubawi Keih Bahri	98.9	0.6	34	100.0	0	92.8	3.6	25	84.3	1
Maekel	97.6	1.1	822	43.3	9	86.3	9.8	601	100.0	59
Semenawi Keih Bahri	97.6	1.6	200	74.6	3	73.6	19.0	197	81.1	37
Anseba	98.5	0.6	358	0.0	2	83.0	11.3	303	95.4	34
Gash-Barka	96.5	2.3	393	25.6	9	87.5	10.5	285	84.8	30
Debub	98.3	0.3	637	0.0	2	87.5	9.6	661	93.9	63
Education										
No education	98.6	0.4	270	0.0	1	96.7	2.1	101	47.7	2
Primary	95.7	1.8	359	17.1	6	89.9	6.3	235	77.1	15
Middle	97.4	1.6	798	42.4	13	86.0	10.6	744	92.2	79
Secondary or above	98.4	0.6	879	42.6	6	82.8	12.7	881	94.8	112
Wealth quintile										
Lowest	98.7	0.6	361	0.0	2	87.2	11.2	336	88.7	38
Second	96.6	1.8	300	0.0	6	84.5	12.0	325	84.5	39
Middle	98.7	0.9	378	67.4	4	83.2	11.1	365	93.5	40
Fourth	96.1	1.9	575	43.8	11	85.7	10.2	511	95.0	52
Highest	98.4	0.5	829	46.9	4	85.5	10.4	535	97.0	56
Total	97.7	1.1	2,443	34.4	26	85.2	10.8	2,072	92.4	225

Note: Table is based on the CORE questionnaire.

[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

Table 13-24 Higher-risk sexual intercourse among youth and condom use at last higher-risk intercourse in the past 12 months: Women

Among young women age 15-24 who had sexual intercourse in the past 12 months, the percentage who had higher-risk sexual intercourse in the past 12 months, 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, by background characteristics, Eritrea 2010

	Respondents 15-24 who had sexual intercourse in the past 12 months:		Respondents 15-24 who had higher risk intercourse in the past 12 months:	
Background characteristic	Percentage who had higher-risk intercourse in the past 12 months[1]	Number of respondents	Percentage who reported using a condom at last higher-risk intercourse	Number of respondents
Age				
15-19	3.5	381	38.7	13
15-17	2.4	115	0.0	3
18-19	4.0	266	48.6	11
20-24	1.8	963	14.8	18
20-22	1.9	616	15.1	12
23-24	1.7	347	14.2	6
Marital status				
Never married	90.6	26	33.1	24
Ever married	0.6	1,318	0.0	8
Knows condom source[2]				
Yes	4.3	671	26.8	29
No	0.3	674	0.0	2
Residence				
Total urban	3.5	331	30.8	12
Asmara	7.1	105	13.8	8
Other Town	1.9	226	61.3	4
Rural	1.9	1,013	21.7	19
Zoba				
Debubawi Keih Bahri	1.3	16	100.0	0
Maekel	5.8	180	27.3	10
Semenawi Keih Bahri	1.7	189	74.6	3
Anseba	1.1	189	0.0	2
Gash-Barka	3.7	328	19.3	12
Debub	0.7	443	0.0	3
Education				
No education	0.6	366	0.0	2
Primary	1.8	389	15.1	7
Middle	4.5	332	37.0	15
Secondary or above	2.8	246	18.1	7
Wealth quintile				
Lowest	1.6	216	0.0	3
Second	2.4	307	0.0	7
Middle	1.5	376	42.0	6
Fourth	3.0	276	42.9	8
Highest	3.8	168	29.5	6
Total 15-24	2.3	1,344	25.1	31

Note: Table is based on the CORE questionnaire.
[1] Sexual intercourse with a partner who neither was a spouse nor who lived with the respondent.
[2] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

Table 13-25 Higher-risk sexual intercourse among youth and condom use at last higher-risk intercourse in the past 12 months: Men

Among young men age 15-24 who had sexual intercourse in the past 12 months, the percentage who had higher-risk sexual intercourse in the past 12 months, 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, by background characteristics, Eritrea 2010

	Respondents 15-24 who had sexual intercourse in the past 12 months:		Respondents 15-24 who had higher risk intercourse in the past 12 months:	
Background characteristic	Percentage who had higher-risk intercourse in the past 12 months[1]	Number of respondents	Percentage who reported using a condom at last higher-risk intercourse	Number of respondents
Age				
15-19	88.0	129	90.4	113
15-17	100.0	47	94.1	47
18-19	81.1	81	87.8	66
20-24	58.4	195	93.4	114
20-22	66.8	123	92.8	82
23-24	44.0	72	95.2	32
Marital status				
Never married	99.1	225	92.3	223
Ever married	4.6	99	72.3	5
Knows condom source[2]				
Yes	74.9	295	93.3	221
No	21.3	28	44.1	6
Residence				
Total urban	85.5	113	94.3	97
Asmara	95.8	49	100.0	47
Other Town	77.5	64	88.8	50
Rural	61.9	210	90.2	130
Zoba				
Debubawi Keih Bahri	39.5	2	100.0	1
Maekel	95.1	63	100.0	60
Semenawi Keih Bahri	72.3	52	81.1	37
Anseba	76.2	44	95.3	33
Gash-Barka	55.0	54	84.8	30
Debub	60.5	109	92.2	66
Education				
No education	19.0	18	29.7	3
Primary	48.5	33	79.1	16
Middle	72.1	111	92.4	80
Secondary or above	79.1	142	94.8	112
Wealth quintile				
Lowest	61.0	64	89.1	39
Second	59.1	66	84.5	39
Middle	58.4	71	90.6	42
Fourth	84.7	63	95.0	53
Highest	90.8	60	97.2	55
Total 15-24	70.2	324	91.9	227

Note: Table is based on the CORE questionnaire.
[1] Sexual intercourse with a partner who neither was a spouse nor who lived with the respondent.
[2] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

13.8.6 Age-mixing in sexual relationships

In many societies, young women have sexual relationships with men who are considerably older than they are. To examine age-mixing, the EPHS2010 asked respondents who had had sex in the 12 months preceding the survey to give their partner's age.

Only 14 women admitted to having sex with a man 10 years older or more in the 12 months preceding the survey, making interpretation and comparison by background characteristics difficult (Table 13-26).

Table 13-26 Age-mixing in sexual relationships among women age 15-19

Percentage of women age 15-19 who had higher-risk sexual intercourse in the last 12 months with a man who was 10 or more years older than themselves, by background characteristics, Eritrea 2010

Background characteristic	Percentage of women who had higher-risk[1] intercourse with a man 10+ years older	Number of women who had higher-risk intercourse in the last 12 months
Age		
15-17	0.0	3
18-19	9.7	11
Marital status		
Never married	7.7	13
Knows condom source[2]		
Yes	8.2	13
No	0.0	1
Residence		
Total urban	21.7	5
Asmara	49.0	2
Other Town	0.0	3
Rural	0.0	9
Zoba		
Maekel	26.4	4
Semenawi Keih Bahri	0.0	1
Anseba	0.0	1
Gash-Barka	0.0	6
Debub	0.0	2
Education		
Primary	0.0	3
Middle	0.0	8
Secondary or above	48.1	2
Wealth quintile		
Lowest	0.0	1
Second	0.0	3
Middle	0.0	2
Fourth	0.0	4
Highest	49.0	2
Total 15-19	7.7	13

Note: Table is based on the CORE questionnaire.
[1] Sexual intercourse with a partner who neither was a spouse nor who lived with the respondent
[2] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

13.8.7 Recent HIV tests among youth

Knowledge of one's HIV sero-status can motivate a person to protect himself/herself or to practice safer sexual behavior to avoid transmitting the virus to others. It is particularly important to measure the coverage of HIV testing among youths, not only because of their vulnerability, but also because they in particular may encounter obstacles to counseling and testing. The EPHS2010 asked respondents age 15-24 who had had sexual intercourse in the past 12 month whether they had been tested for HIV in the past 12 months.

Among young women and young men age 15-24, who have had sexual intercourse in the past 12 months; the percentage who had an HIV test in the past 12 months was 38 and 36 percent, respectively (Table 13-27). Younger women (age 15-19) were more often tested for HIV (40 percent) than the oldest youth (age 23-24), 36 percent. Women who know source of condom tend to test more (51 percent) than women who do not know source of condom, 24 percent (Table 13-27).

Young women in urban areas are more likely to be tested for HIV than those in rural areas (56 and 32 percent, respectively). HIV testing coverage ranges from a low of 18 percent among young women in Debubawi Keih Bahri to a high of 61 percent among those in Maekel (Table 13-27). Testing coverage increases with increasing level of education: uneducated women (18 percent), primary (33 percent), middle (49 percent), and secondary or more education (58 percent). The richer the woman is the more she is likely to get tested for HIV. Sixty percent of women in the highest wealth quintile, compared with 26 percent of women in the lowest wealth quintile, tested for HIV during the last 12 months (Figure 13-7 and Table 13-27).

Among men age 15-24 who have had sexual intercourse in the past 12 months, those who have been tested for HIV in the past 12 months was 36 percent. Men who live in Gash-Barka are less likely to be tested for HIV (27 percent) in comparison to the other zobas.

HIV testing coverage among young men increases proportionately with education from 24 percent in those with no education to 44 percent in those with secondary or above (Table 13-27).

13.8.8 Abstinence, being faithful and condom use (ABC)

The main strategies in Eritrea in the prevention of sexually transmitted HIV are promotion of sexual abstinence, mutually faithful monogamy among uninfected individuals, and condom use among the sexually active. EPHS2010 asked respondents of age 15-24 about abstinence, being faithful and condom use (ABC). Among women, 80 percent aged 15-19 and 32 percent aged 20-24 had never had sex in their lives. Among men, 90 percent aged 15-19 and 60 percent aged 20-24 had never had sex. Among women, 0.4 percent of the younger and 0.6 percent of the older women had sex with only one partner in the last 12 months and used a condom the last time. Among men this was six percent and 15 percent respectively. However, thirty-three percent of women and five percent of men aged 15-24 had sex with only one partner in the last 12 months without a condom (Table 13-28).

13.8.9 Drunkenness during sexual intercourse among youth

Sexual intercourse when one or both partners are under the influence of alcohol is risky because the couple may not be fully aware of their actions, which may lead to failure to use a condom. The proportion of women age 15-24 that had sexual intercourse in the past 12 months when drunk or with a partner who was drunk in the last sexual intercourse was almost zero. Similarly among men, who had sexual intercourse in the past 12 months when drunk was 0.5 and with a partner who was drunk was 0.6 percent (Table 13-29). Given the small number of young women and men reporting drunkenness and sexual intercourse, caution should be taken in interpreting the variations across background characteristics.

Table 13-27 Recent HIV tests among youth

Among young women and young men age 15-24 who have had sexual intercourse in the past 12 months, the percentage who have had an HIV test in the past 12 months and received the results of the test, by background characteristics, Eritrea 2010

	Women		Men	
Background characteristic	Percentage who have been tested for HIV in the past 12 months	Number of respondents	Percentage who have been tested for HIV in the past 12 months	Number of respondents
Age				
15-19	40.1	381	28.9	129
15-17	38.1	115	17.7	47
18-19	40.9	266	35.4	81
20-24	36.4	963	41.0	195
20-22	36.9	616	44.2	123
23-24	35.7	347	35.3	72
Marital status				
Never married	34.6	26	33.5	225
Ever married	37.5	1,318	42.2	99
Knows condom source[1]				
Yes	50.8	671	38.5	295
No	24.2	674	12.2	28
Residence				
Total urban	55.9	331	47.7	113
Asmara	57.1	105	37.0	49
Other Town	55.3	226	56.0	64
Rural	31.5	1,013	29.9	210
Zoba				
Debubawi Keih Bahri	18.3	16	40.5	2
Maekel	61.2	180	39.1	63
Semenawi Keih Bahri	34.6	189	35.9	52
Anseba	31.0	189	41.1	44
Gash-Barka	28.7	328	26.7	54
Debub	39.0	443	37.3	109
Education				
No education	17.8	366	24.3	18
Primary	32.8	389	28.8	33
Middle	49.4	332	30.1	111
Secondary or above	57.5	246	44.1	142
Wealth quintile				
Lowest	25.5	216	33.7	64
Second	25.1	307	18.4	66
Middle	35.5	376	37.5	71
Fourth	49.8	276	44.8	63
Highest	59.7	168	47.6	60
Total 15-24	37.5	1,344	36.2	324

Note: Table is based on the CORE questionnaire.
[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

Figure 13-7 HIV testing coverage among youth by education and wealth quintiles

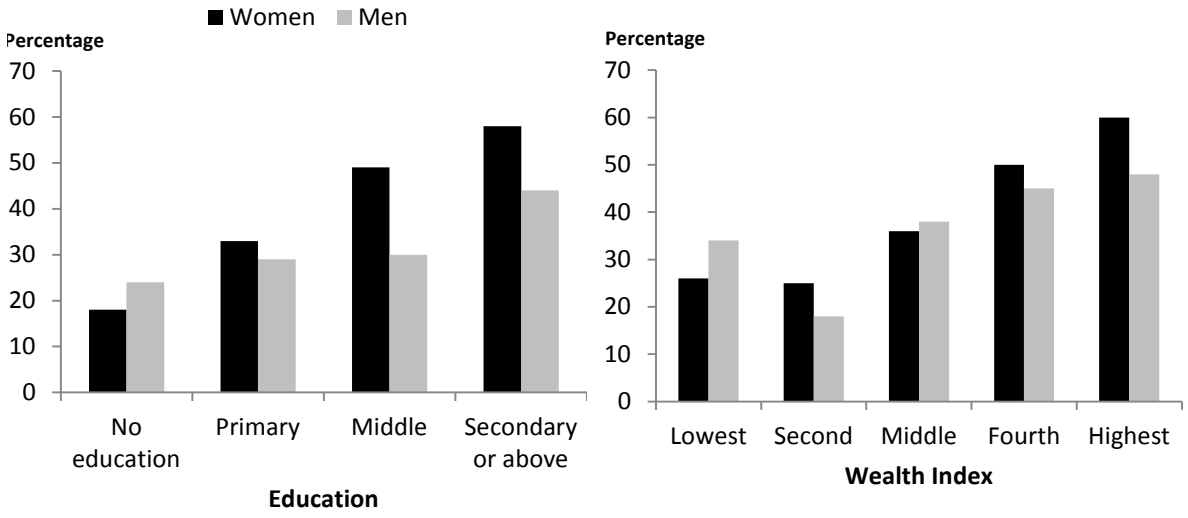


Table 13-28 Abstinence, being faithful and condom use

Abstinence, Being faithful and Condom use (ABC) among young women and men, Eritrea 2010

	15-19	20-24	Total 15-24
WOMEN			
Those who never had sex	80.3	31.5	59.2
Those who have had sex but not in last 12 months	3.2	13.3	7.5
Those who had sex with only one partner in the last 12 months and who used condom the last time	0.4	0.6	0.5
Those who had sex with only one partner in the last 12 months and who did not use condom the last time	16.1	54.5	32.7
Those who had sex with more than one partner in the last 12 months and who used condom the last time	0.0	0.0	0.0
Those who had sex with more than partner in the last 12 months and who did not use condom the last time	0.0	0.1	0.1
Total	100.0	100.0	100.0
Number	2,301	1,744	4,045
MEN			
Those who never had sex	89.9	59.7	81.1
Those who have had sex but not in last 12 months	1.8	9.5	4.0
Those who had sex with only one partner in the last 12 months and who used condom the last time	5.7	14.6	8.3
Those who had sex with only one partner in the last 12 months and who did not use condom the last time	1.5	12.7	4.8
Those who had sex with more than one partner in the last 12 months and who used condom the last time	1.0	2.9	1.6
Those who had sex with more than partner in the last 12 months and who did not use condom the last time	0.1	0.6	0.2
Total	100.0	100.0	100.0
Number	1,544	635	2,179

Table 13-29 Drunkenness during sexual intercourse among youth

Among all young women and young men age 15-24, the percentage who had sexual intercourse in the past 12 months while being drunk in the last sexual intercourse, and percentage who had sexual intercourse in the past 12 months when drunk or with a partner who was drunk in the last sexual intercourse, by background characteristics, Eritrea 2010

	Women		Men		
Background characteristic	Percentage who had last sexual intercourse in the past 12 months when drunk or with a partner who was drunk	Number of respondents	Percentage who had last sexual intercourse in the past 12 months when drunk	Percentage who had last sexual intercourse in the past 12 months when drunk or with a partner who was drunk	Number of respondents
Age					
15-19	0.0	2,301	0.2	0.4	1,544
15-17	0.0	1,468	0.4	0.4	1,068
18-19	0.0	833	0.0	0.5	476
20-24	0.1	1,744	1.1	1.1	635
20-22	0.1	1,167	1.5	1.5	458
23-24	0.0	577	0.0	0.0	177
Marital status					
Never married	0.0	2,443	0.5	0.6	2,072
Ever married	0.0	1,601	0.9	0.9	107
Knows condom source					
Yes	0.0	2,292	0.5	0.5	1,855
No	0.0	1,753	0.4	1.1	323
Residence					
Total urban	0.1	1,634	0.9	0.9	876
Asmara	0.1	755	1.2	1.2	403
Other Town	0.0	879	0.6	0.6	473
Rural	0.0	2,411	0.2	0.4	1,303
Zoba					
Debubawi Keih Bahri	0.0	52	0.0	0.0	26
Maekel	0.1	1,040	0.8	0.8	605
Semenawi Keih Bahri	0.0	413	0.3	0.3	211
Anseba	0.0	576	0.3	0.3	312
Gash-Barka	0.0	780	0.4	1.1	311
Debub	0.0	1,184	0.4	0.4	712
Education					
No education	0.0	730	0.0	0.9	116
Primary	0.1	817	0.6	1.1	256
Middle	0.0	1,188	0.8	0.8	781
Secondary or above	0.0	1,161	0.1	0.1	911
Wealth quintile					
Lowest	0.0	634	0.0	0.3	364
Second	0.0	667	0.8	1.1	357
Middle	0.0	819	0.0	0.0	398
Fourth	0.1	891	0.6	0.6	522
Highest	0.0	1,034	0.9	0.9	539
Total 15-24	0.0	4,045	0.5	0.6	2,179

Note: Table is based on the CORE questionnaire.
[1] For this table, the following responses are not considered a source for condoms: friends, family members, and home.

HIV PREVALENCE AND ASSOCIATED FACTORS 14

Key Findings

- Women have a 2.3 times higher HIV prevalence (1.13 percent) than men (0.5 percent).
- For both women and men, HIV prevalence increases substantially as the number of lifetime sexual partners increases.
- Among women and men age 15-49 found to be HIV positive, 67 percent were previously tested for HIV and received their result, whereas 33 percent had never been tested.
- Coverage rate for HIV testing was higher in women (90 percent) than for men (73 percent)

Much of the information on national HIV prevalence in Eritrea is derived from sentinel surveillance of HIV in women attending antenatal clinics. However, these surveillance data results do not provide an estimate of the HIV prevalence among the general population. The EPHS 2010 provided, for the first time, direct estimates of HIV prevalence among a representative sample of the general female and male populations in Eritrea and detailed information about HIV prevalence by age, residence, province, and other socioeconomic characteristics. In addition, HIV prevalence was analyzed according to demographic characteristics and sexual behavior to identify factors associated with the epidemic.

The methodology used in conducting HIV testing as part of the EPHS 2010 is described in detail in the first chapter of this report. This chapter addresses the results of the testing and provides information on HIV testing coverage rates among eligible survey respondents.

14.1 Coverage of HIV-Testing and Prevalence

All women age 15-49 and all men age 15-59 living in the households that were selected for core survey were eligible for the HIV testing component of the EPHS 2010. A total of 10,805 women and 6,436 men aged 15-49 were eligible for HIV testing. More than four-fifths (84 percent) of all eligible respondents were interviewed and consented to HIV testing (Table 14-1). Coverage rate for HIV testing was higher in women (90 percent) than for men (73 percent) of the 10,805 eligible women and 6,436 eligible men (Table 14-1). The most important reasons for non-response on the HIV-testing component were not being present at home at the time of blood collection (4 percent for women and 20 percent for men) and refusal to provide blood for testing (4 percent for both women and men).

Rural residents have higher rates of testing (92 percent for women and 75 percent for men) than urban residents (87 percent for women and 69 percent for men) (Table 14-1). Maekel has lower coverage rates (81 percent for women, 62 percent for men, and 74 percent of total) of testing than the other zobas.

HIV testing coverage rates for both women and men do not vary much by age, education and wealth index (Table 14-2). In general, when compared to the national average (90 percent for women and 72 percent for men); women in the age group 15-19 (87 percent), women with secondary or above education (85 percent), women in the highest wealth index (85 percent), men in the middle age groups, men with no education (67 percent) and men in the highest wealth index (67 percent) are less likely to consent to HIV testing than others (Table 14-2).

Table 14-1 Coverage of HIV testing by residence and zoba

Percent distribution of women age 15-49 and men age 15-59 eligible for HIV testing by testing status, according to residence and zoba (unweighted), Eritrea 2010

Background characteristic	Testing status								Total	Number
	DBS Tested[1]		Refused to provide blood		Absent at the time of blood collection		Other/ missing[2]			
	Interviewed	Not Interviewed	Interviewed	Not Interviewed	Interviewed	Not interviewed	Interviewed	Not interviewed		
					WOMEN					
Residence										
Total urban	86.8	0.3	5.9	0.7	1.3	4.6	0.1	0.4	100.0	4,597
Asmara	79.0	0.6	9.7	1.1	2.4	6.3	0.3	0.8	100.0	1,993
Other Town	92.7	0.0	2.9	0.3	0.5	3.3	0.0	0.1	100.0	2,604
Rural	92.3	0.2	2.3	0.2	0.6	4.2	0.1	0.2	100.0	6,208
Zoba										
Debubawi Keih Bahri	93.6	0.5	1.0	0.0	0.2	4.6	0.0	0.2	100.0	1,098
Maekel	81.3	0.5	8.1	0.8	2.1	6.3	0.2	0.6	100.0	2,478
Semenawi Keih Bahri	91.3	0.1	2.5	0.1	1.1	4.7	0.1	0.2	100.0	1,498
Anseba	92.9	0.0	3.0	0.2	0.3	3.5	0.1	0.1	100.0	1,441
Gash-Barka	90.2	0.3	3.9	0.7	0.5	4.0	0.2	0.2	100.0	1,936
Debub	94.4	0.1	1.8	0.1	0.7	2.8	0.0	0.1	100.0	2,354
Total men 15-59	89.9	0.2	3.8	0.4	0.9	4.4	0.1	0.3	100.0	10,805
					MEN					
Residence										
Total urban	69.4	0.3	5.5	1.3	2.5	18.4	0.3	2.3	100.0	2,816
Asmara	59.5	0.5	9.1	2.3	3.8	20.8	0.6	3.4	100.0	1,275
Other Town	77.6	0.1	2.6	0.5	1.4	16.5	0.0	1.4	100.0	1,541
Rural	75.3	0.2	1.9	0.2	1.1	20.3	0.0	0.9	100.0	3,620
Zoba										
Debubawi Keih Bahri	83.0	0.8	1.3	0.2	0.3	14.1	0.0	0.3	100.0	612
Maekel	62.1	0.4	7.7	1.9	3.2	21.3	0.5	2.9	100.0	1,603
Semenawi Keih Bahri	73.5	0.1	1.6	0.3	2.1	21.2	0.0	1.2	100.0	912
Anseba	78.0	0.0	2.2	0.5	0.2	18.6	0.0	0.5	100.0	837
Gash-Barka	66.2	0.1	3.5	0.4	1.4	26.3	0.0	2.1	100.0	1,120
Debub	82.4	0.2	1.5	0.3	1.3	13.5	0.0	0.8	100.0	1,352
Total 15-49	72.2	0.2	3.5	0.7	1.7	20.1	0.1	1.5	100.0	5,480
50-59	75.9	0.4	3.1	1.0	1.8	16.0	0.0	1.7	100.0	956
Total men 15-59	72.7	0.3	3.5	0.7	1.7	19.5	0.1	1.5	100.0	6,436
					TOTAL					
Residence										
Total urban	80.2	0.3	5.7	0.9	1.7	9.9	0.2	1.1	100.0	7,413
Asmara	71.4	0.6	9.5	1.5	2.9	12.0	0.4	1.8	100.0	3,268
Other Town	87.1	0.0	2.8	0.4	0.8	8.2	0.0	0.6	100.0	4,145
Rural	86.0	0.2	2.1	0.2	0.8	10.1	0.1	0.4	100.0	9,828
Zoba										
Debubawi Keih Bahri	89.8	0.6	1.1	0.1	0.2	8.0	0.0	0.2	100.0	1,710
Maekel	73.8	0.5	7.9	1.2	2.5	12.2	0.3	1.5	100.0	4,081
Semenawi Keih Bahri	84.6	0.1	2.2	0.2	1.5	10.9	0.1	0.6	100.0	2,410
Anseba	87.4	0.0	2.7	0.3	0.3	9.0	0.1	0.2	100.0	2,278
Gash-Barka	81.4	0.2	3.8	0.6	0.9	12.2	0.1	0.9	100.0	3,056
Debub	90.0	0.1	1.7	0.2	0.9	6.7	0.0	0.4	100.0	3,706
Total 15-49	84.0	0.2	3.7	0.5	1.2	9.7	0.1	0.7	100.0	16,285
50-59	75.9	0.4	3.1	1.0	1.8	16.0	0.0	1.7	100.0	956
Total men 15-59	72.7	0.3	3.5	0.7	1.7	19.5	0.1	1.5	100.0	6,436

Note: Table is based on the CORE questionnaires.

[1] Includes all Dried Blood Samples (DBS) tested at the lab and for which there is a result, i.e., positive, negative, or indeterminate. Indeterminate means that the sample went through the entire algorithm, but the final result was inconclusive.

[2] Includes: 1) other results of blood collection (e.g., technical problem in the field), 2) lost specimens, 3) non-corresponding bar codes, and 4) other lab results such as blood not tested for technical reason, not enough blood to complete the algorithm, etc.

Table 14-2 Coverage of HIV testing by age, education and wealth index

Percent distribution of women age 15-49 and men age 15-59 eligible for HIV testing by testing status, according to selected background characteristics (unweighted), Eritrea 2010

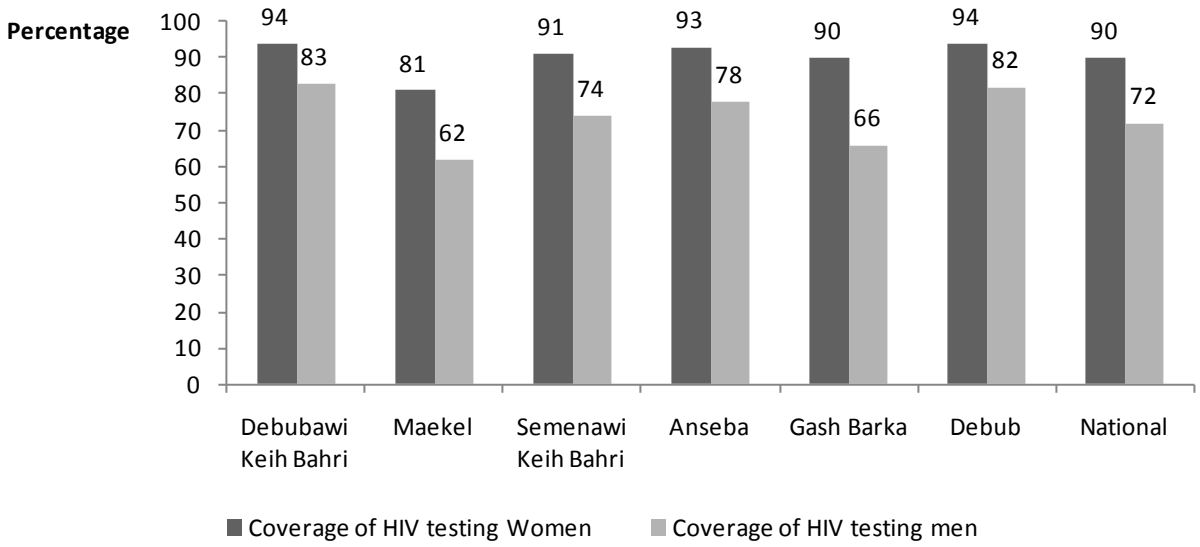
Background Characteristic	Testing status								Total	Number
	DBS Tested[1]		Refused to provide blood		Absent at the time of blood collection		Other/ missing[2]			
	Interviewed	Not interviewed	Interviewed	Not interviewed	Interviewed	Not interviewed	Interviewed	Not interviewed		
					WOMEN					
15-19	86.7	0.3	4.1	0.3	1.2	7.0	0.0	0.4	100.0	2,367
20-24	89.9	0.2	2.9	0.3	0.8	5.6	0.2	0.2	100.0	1,822
25-29	89.7	0.3	4.3	0.6	1.2	3.4	0.2	0.3	100.0	1,758
30-34	92.8	0.2	3.2	0.2	0.6	2.8	0.0	0.2	100.0	1,312
25-39	91.6	0.2	4.1	0.5	0.8	2.5	0.0	0.3	100.0	1,506
40-44	90.2	0.2	4.0	0.2	1.1	4.0	0.1	0.2	100.0	1,038
45-49	91.4	0.2	4.0	0.4	0.5	2.9	0.3	0.3	100.0	1,002
Education										
No education	91.7	0.3	2.7	0.2	0.5	4.2	0.1	0.3	100.0	4,407
Primary	92.8	0.1	3.0	0.4	0.6	2.8	0.1	0.2	100.0	2,130
Middle	89.3	0.2	3.8	0.3	1.3	4.7	0.0	0.4	100.0	1,937
Secondary or above	84.5	0.2	6.7	0.8	1.8	5.7	0.2	0.2	100.0	2,330
Missing	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1
Wealth quintile										
Lowest	92.1	0.2	2.0	0.2	0.5	4.5	0.3	0.2	100.0	1,680
Second	90.5	0.3	2.9	0.1	0.8	5.0	0.1	0.2	100.0	2,006
Middle	93.3	0.1	2.3	0.3	0.6	3.2	0.0	0.2	100.0	2,166
Fourth	91.1	0.3	3.3	0.3	0.8	3.9	0.0	0.3	100.0	2,242
Highest	84.5	0.3	7.1	0.8	1.7	5.1	0.2	0.4	100.0	2,711
Total 15-49	89.9	0.2	3.8	0.4	0.9	4.4	0.1	0.3	100.0	10,805
					MEN					
15-19	73.3	0.2	2.6	0.3	1.7	19.8	0.2	1.9	100.0	1,899
20-24	71.6	0.7	4.4	0.5	1.6	20.1	0.1	1.0	100.0	821
25-29	70.8	0.2	3.9	0.7	1.0	22.0	0.3	1.1	100.0	610
30-34	70.4	0.2	4.7	0.6	1.2	20.2	0.2	2.4	100.0	494
25-39	72.0	0.2	4.9	1.8	2.1	17.9	0.0	1.1	100.0	610
40-44	70.9	0.0	3.0	1.0	2.2	21.9	0.0	1.0	100.0	498
45-49	73.9	0.2	2.9	0.5	1.5	19.7	0.2	1.1	100.0	547
50-54	73.9	0.7	4.3	0.7	1.1	17.8	0.0	1.6	100.0	445
55-59	77.7	0.2	2.2	1.4	2.3	14.5	0.0	1.8	100.0	511
Education										
No education	67.3	0.5	1.8	0.3	0.7	27.4	0.0	2.0	100.0	1,503
Primary	74.0	0.2	2.0	0.4	1.7	20.5	0.0	1.2	100.0	1,033
Middle	75.3	0.3	3.0	0.9	1.6	17.5	0.1	1.3	100.0	1,510
Secondary or above	74.2	0.2	5.4	1.0	2.3	15.1	0.3	1.6	100.0	2,384
Missing	50.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	100.0	2
Wealth quintile										
Lowest	73.9	0.0	1.7	0.3	1.0	22.2	0.0	1.0	100.0	1,121
Second	72.6	0.4	2.2	0.4	1.2	22.1	0.0	1.3	100.0	1,111
Middle	77.4	0.1	1.3	0.1	1.4	18.1	0.0	1.7	100.0	1,150
Fourth	74.9	0.4	4.2	0.5	1.6	16.9	0.1	1.4	100.0	1,300
Highest	67.4	0.4	6.3	1.8	2.7	18.9	0.4	2.1	100.0	1,754
Total 15-49	72.2	0.2	3.5	0.7	1.7	20.1	0.1	1.5	100.0	5,480
50-59	75.9	0.4	3.1	1.0	1.8	16.0	0.0	1.7	100.0	956
Total men 15-59	72.7	0.3	3.5	0.7	1.7	19.5	0.1	1.5	100.0	6,436

Note: Table is based on the CORE questionnaires.

[1] Includes all Dried Blood Samples (DBS) tested at the lab and for which there is a result, i.e., positive, negative, or indeterminate. Indeterminate means that the sample went through the entire algorithm, but the final result was inconclusive.

[2] Includes: 1) other results of blood collection (e.g., technical problem in the field), 2) lost specimens, 3) non corresponding bar codes, and 4) other lab results such as blood not tested for technical reason, not enough blood to complete the algorithm, etc.

Figure 14-1 **Coverage of HIV testing by sex and zoba**



14.2 HIV Prevalence

14.2.1 HIV prevalence by age and sex

Results from the EPHS 2010 indicate that 0.93 percent of Eritrean adults age 15-49 are infected with HIV (Table 14-3 and Figure 14-2). This result was based on 130 DBS HIV-1 positive cases out of the total 14,016 DBS de-facto eligible respondents tested for HIV (Table 14-3). No cases of HIV-2 were found. Women are more than two times as likely to be infected with HIV as men (1.13 percent and 0.5 percent respectively). The female-to-male infection ratio of 2.26 is consistent with female-to-male infection ratios observed in a number of other countries in sub-Saharan Africa: Senegal - ratio of 2.3 (Senegal, Ministry of Health, 2005), Guinea - ratio of 2.1 (Guinea, National Directorate of Statistics, 2005), and Kenya - ratio of 1.9 (Kenya, Central Bureau of Statistics, 2004). Gender differences in infection levels reflect 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. A comparative graph for HIV prevalence in neighboring countries shows that Eritrea has a lower rate than the others (Kenya DHS, 2008-2009, Ethiopia DHS, 2011, Rwanda DHS, 2010) (Figure 14-3).

For both women and men, HIV prevalence levels rise with age starting with 0.2 percent for women in the age group of 15-19 years and for men starting with 0.3 percent in the age group 25-29 years and peaking among both women and men in their late 30s (2.9 percent for women and 1.6 percent for men) (Figure 14-2 and Table 14-4).

The age patterns suggest that young women are particularly vulnerable to HIV infection compared to young men. Among women age 15-19, for example, 0.15 percent are HIV infected, compared with zero/ nil for men for same age. The extremely low HIV-prevalence among young men age 15-24 could be mainly explained by the much lower percentage of men in that age group who have ever had sexual intercourse (19 percent) compared with their women counterparts (41 percent) (Table 6-7).

Table 14-3 Outcome of the lab work for HIV

Eritrea 2010

	Number of all DBS HIV-1 positive	Number of all DBS with a test result	Prevalence
De facto population with interview	130	14,399	0.9
De facto population without interview	0	43	0.0
Non-de facto population	2	527	0.4
Total population with a test result	132	14,969	0.9

14.2.2 HIV prevalence by socio-economic characteristics

Adult urban residents 15-49 years have a substantially higher risk of HIV infection (1.44 percent) than rural residents (0.59 percent) (Table 14-5). Prevalence level is the highest in Maekel (1.64 percent), followed by Debubawi Keih Bahri (0.98 percent) and Gash-Barka (0.84 percent), and the lowest is in Anseba (0.59 percent). The other zobas range between 0.59 percent to 0.67 percent.

HIV infection levels generally increase with education among women and are markedly higher among those who have a middle or higher education (1.87 percent and 1.33 percent, respectively) compared with those with no education or primary education (0.58 percent and 1.24 percent, respectively). The

Figure 14-2 **HIV prevalence by age and sex**

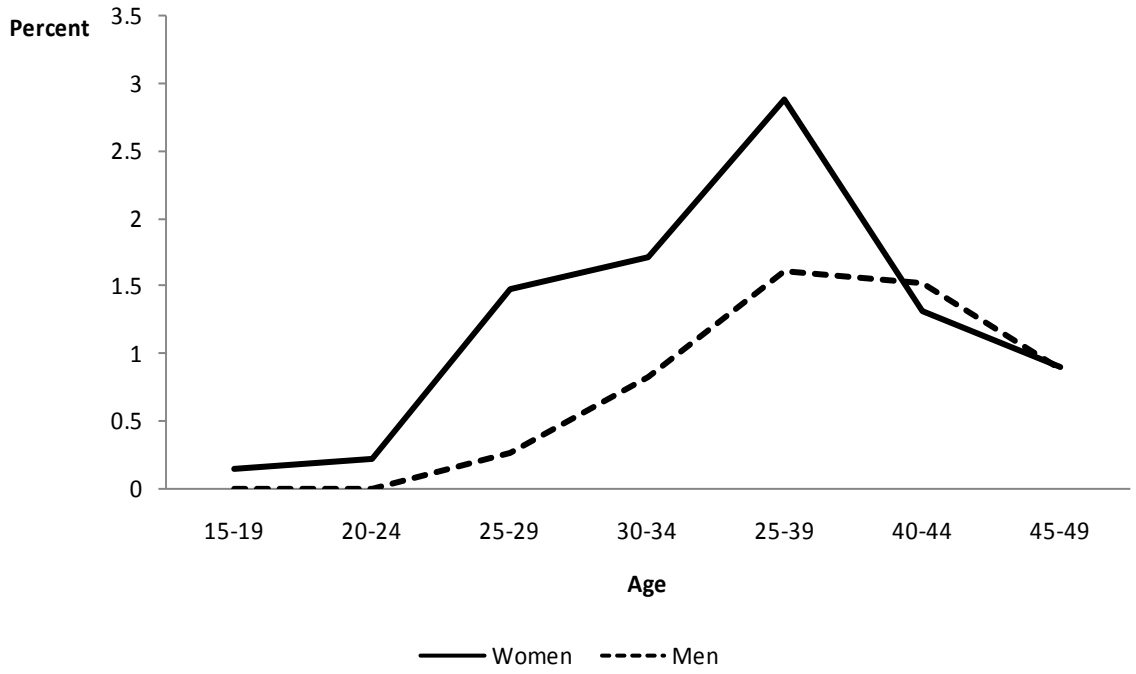


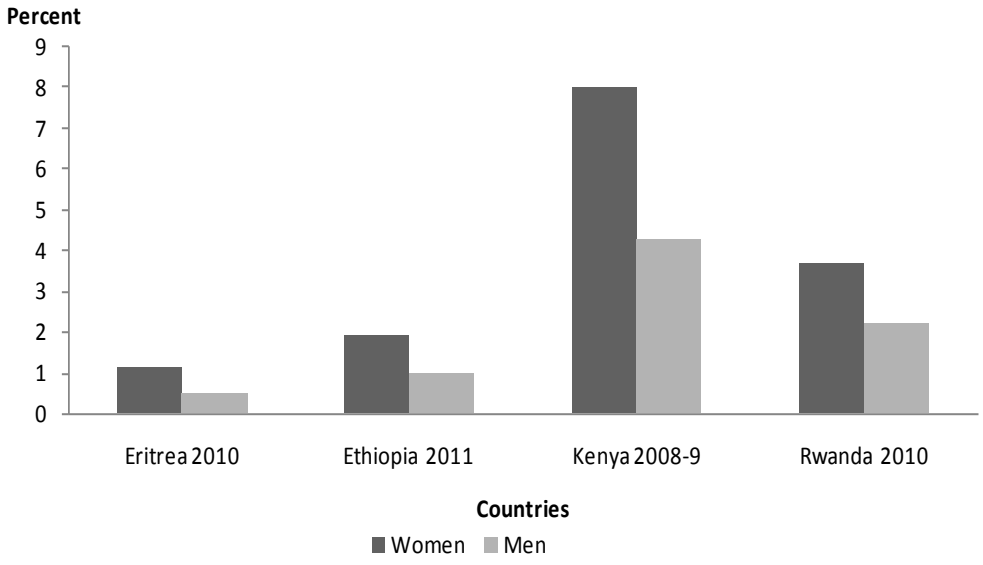
Table 14-4 HIV prevalence by age and sex

Among the de facto women age 15-49 and men age 15-59 who were interviewed and tested, the percentage HIV-1 positive, by age, Eritrea 2010

	Female		Male		Total	
Age	Number	Percent- age HIV-1 positive	Number	Percent- age HIV-1 positive	Number	Percent- age HIV-1 positive
15-19	2,188	0.15	1,553	0	3,741	0.09
20-24	1,652	0.23	632	0	2,285	0.16
25-29	1,560	1.49	447	0.26	2,007	1.21
30-34	1,167	1.72	388	0.82	1,555	1.5
25-39	1,354	2.89	487	1.61	1,841	2.55
40-44	892	1.32	376	1.52	1,268	1.38
45-49	901	0.91	418	0.89	1,319	0.9
Total 15-49	9,716	1.13	4,301	0.5	14,016	0.93
50-59	0	na	720	1.12	na	na
Total men 15-59	0	na	5,021	0.59	na	na

Note: Table is based on the CORE questionnaires.
na=Not applicable

Figure 14-3 HIV prevalence of neighboring countries



prevalence is, however, found to be higher among men with no education (0.66 percent) and those with secondary or above (0.62 percent) than those with primary (0.38 percent) and middle level (0.31 percent) of education (Table 14-5).

HIV prevalence is higher among the employed (1.11 percent) than the not employed (0.83 percent) and among adults with the highest wealth index is the highest (1.65 percent) and the lowest wealth index of 0.25 percent (Table 14-5).

Table 14-5 HIV prevalence by socioeconomic characteristics

Percentage HIV positive among women and men age 15-49 who were tested, by socioeconomic characteristics, Eritrea 2010

	Women		Men		Total	
Background characteristic	Percentage HIV[1] positive	Number	Percentage HIV[1] positive	Number	Percentage HIV[1] positive	Number
Residence						
Total urban	1.73	3,914	0.79	1,749	1.44	5,663
Asmara	1.79	1,669	0.73	790	1.45	2,459
Other Town	1.69	2,244	0.84	959	1.44	3,203
Rural	0.72	5,802	0.30	2,552	0.59	8,354
Zoba						
Debubawi Keih Bahri	0.82	161	1.34	71	0.98	232
Maekel	2.14	2,310	0.62	1,137	1.64	3,447
Semenawi Keih Bahri	0.78	1,074	0.39	481	0.66	1,555
Anseba	0.60	1,387	0.57	612	0.59	1,999
Gash-Barka	1.02	2,129	0.34	768	0.84	2,896
Debub	0.76	2,654	0.46	1,233	0.67	3,887
Education						
No education	0.58	3,691	0.66	603	0.59	4,295
Primary	1.24	2,077	0.38	664	1.03	2,741
Middle	1.87	1,866	0.31	1,195	1.26	3,062
Secondary or above	1.33	2,080	0.62	1,838	0.99	3,918
Missing	0.00	1	0.00	0	0.00	2
Employment (last 12 months)						
Not employed	0.92	7,504	0.36	1,380	0.83	8,884
Employed	1.82	2,211	0.57	2,921	1.11	5,131
Missing	0.00	1	-	0	0.00	1
Wealth quintile						
Lowest	0.20	1,662	0.36	744	0.25	2,406
Second	0.20	1,662	0.00	697	0.14	2,359
Middle	0.72	1,930	0.50	769	0.66	2,700
Fourth	1.86	2,155	0.73	963	1.51	3,119
Highest	2.12	2,306	0.71	1,128	1.65	3,433
Total 15-49	1.13	9,716	0.50	4,301	0.93	14,016
50-59	na	0	1.12	720	1.12	720
Total men 15-59	na	0	0.59	5,021	0.59	5,021

Note: Table is based on the CORE questionnaires.
na = Not applicable
[1] HIV positive refers only to individuals infected with HIV-1, *including those infected with both HIV-1 and HIV-2.*

14.2.3 HIV prevalence by demographic characteristics

HIV prevalence is by far the highest among women who are widowed (7.7 percent). The high prevalence of HIV among widowed and divorced men is not reliable because of the very small sample (Table 14-6). The data show that both women and men who ever had sex had higher prevalence (both 1.1 percent) than those never had sex (0.2 percent and zero/nil, respectively), and those never married (0.3 and 0.2 percent, respectively) (Table 14-6).

Women not currently in union are 3.8 times (1.9 percent) more likely to have HIV than are men (0.5 percent) who are not currently in union. Similarly, women in polygynous union have four times (0.8 percent) higher prevalence than men in the same union (0.2 percent). Women and men not in a polygynous union have a prevalence of 0.6 percent each (Table 14-6).

Table 14-6 HIV prevalence by demographic characteristics

Percentage HIV positive among women and men age 15-49 who were tested, by demographic characteristics, Eritrea 2010

	Women		Men			
Demographic characteristic	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Marital status						
Never married	0.3	2,686	0.2	2,490	0.3	5,176
Ever had sex	1.1	140	1.1	553	1.1	693
Never had sex	0.2	2,546	0.0	1,937	0.1	4,483
Married/Living together	0.7	5,920	0.6	1,739	0.6	7,658
Divorced or separated	4.7	744	1.6	59	4.4	804
Widowed	7.7	365	36.6	13	8.7	379
Type of union						
In polygynous union	0.8	483	0.2	69	0.7	553
Not in polygynous union	0.6	5,364	0.6	1,669	0.6	7,033
Not currently in union	1.9	3,796	0.5	2,560	1.3	6,356
DK/missing	1.5	72	0.0	3	1.5	75
Currently pregnant						
Pregnant	0.1	730	na	na	na	na
Not pregnant or not sure	1.2	8,985	na	na	na	na
ANC for last birth in the last 3 years						
ANC provided by health facilities	0.9	3227	na	na	na	na
No ANC/No birth in last 3 years	1.3	6,471	na	na	na	na
Circumcision						
Circumcised	na	na	0.5	4,240	na	na
Not circumcised	na	na	0.0	55	na	na
DK/Missing	na	na	0.0	6	na	na
Total 15-49	1.1	9,716	0.5	4,301	0.9	14,016
50-59	na	0	1.1	720	na	na
	na				na	na
Total men 15-59	na	0	0.6	5,021	na	na

Note: Table is based on the CORE questionnaires.
na = Not applicable
[1] HIV positive refers only to individuals infected with HIV-1, including those infected with both HIV-1 and HIV-2.

Pregnant women are 12 times (0.1 percent) less likely to have HIV infection than women who are not pregnant or not sure (1.2 percent). This could be because the majority of pregnant women are married and living together.

HIV prevalence is 0.9 percent among women who obtained antenatal care for their last birth in the last 3 years and 1.3 percent for those who did not obtain antenatal care or who had experienced no birth in the last 3 years (Table 14-6). The same table shows the prevalence in circumcised men is 0.5 percent. It is important to note here that male circumcision is nearly universal in Eritrea and results for uncircumcised men could not be reliable due to the small sample of that group.

14.2.4 HIV prevalence of women and men who ever had sexual intercourse/ sexual behavior

The prevalence of HIV among women and men 15-49 who have ever had sexual intercourse is 1.31 percent (1.4 percent and 0.92 percent, respectively) (Table 14-7). For women, there is a clear pattern of lower HIV prevalence with earlier sexual debut but for men the pattern is not so. As regards to risk-related sexual intercourse for both women and men in last 12 months, the prevalence status is as follows: had higher risk intercourse (1.69 percent), have not had higher risk sexual intercourse (0.63 percent) and no sexual intercourse in last 12 months (3.77 percent).

Comparison between women and men could not be done because of small sample sizes for some of the characteristics. Based on the number of sexual partners in the last 12 months, the prevalence for each of the characteristics are for no partner (3.85 percent) and for one partner (0.68 percent). Because of the very small sample size, the prevalence for 'more than one partners' is not reliable.

The prevalence for condom-related characteristics seems to be in disagreement with the general existing knowledge of use of condoms in the prevention of HIV. In this report the prevalence for women and men is observed to be (Table 14-7): ever used a condom (2.41 percent), never used a condom (1.17 percent), used condom at last sexual intercourse in the last 12 months (3.51 percent), did not use condom at last sexual intercourse in the last 12 months (0.52 percent), no sexual intercourse in the last 12 months (3.85 percent).

The prevalence for women and men who have experienced higher-risk sexual intercourse in the last 12 months is 2.15 percent for those used condoms, 0.51 percent for did not use condoms and 1.29 percent for no higher-risk intercourse in last 12 months. The prevalence of men who had no paid sexual intercourse or no intercourse in last 12 months is 0.92 percent – which is very difficult to interpret because only a quarter of the sample responded. Generally, in reviewing these results, one should note that responses to questions about sexual risk behavior may be subject to reporting bias. Also, sexual behavior in the 12 months preceding the survey may not adequately reflect lifetime sexual risk.

14.2.5 HIV prevalence among youth

The HIV prevalence for young women age 15-24 is 0.18 percent and for men of the same age is 0.12 percent indicating that women of this age group are 1.5 times more likely to be HIV positive than men (Table 14-8). Infection rates among youth provide some insight into the incidence of new cases, because young people living with HIV are more likely to have contracted the virus most recently compared with adults. Moreover, HIV prevention programs often target youth because they are generally more likely than older people to be experimenting with sex.

Table 14-7 HIV prevalence by sexual behavior

Percentage HIV-positive among women and men age 15-49 who ever had sex and were tested for HIV, by sexual behavior characteristics, Eritrea 2010

	Women		Men			
Sexual behavior characteristic	Percentage HIV[1] positive	Number	Percentage HIV positive[1]	Number	Percentage HIV[1] positive	Number
Age at first sexual intercourse						
<16	1.15	2,428	1.05	160	1.14	2,589
16-17	1.23	1,521	0.00	266	1.05	1,787
18-19	1.68	1,197	1.13	413	1.54	1,610
20+	1.76	1,713	0.98	1,417	1.41	3,130
Missing	2.15	303	1.31	103	1.94	405
Higher-risk intercourse in last 12 months						
Had higher-risk intercourse	3.35	122	1.17	385	1.69	507
Had sexual intercourse, not higher risk	0.68	5,412	0.49	1,706	0.63	7,119
No sexual intercourse in last 12 months	3.85	1,628	3.25	268	3.77	1,895
Number of sexual partners in last 12 months						
No	3.95	1,586	3.26	266	3.85	1,852
One	0.68	5,519	0.64	2,021	0.67	7,540
More than one	21.20	15	0.00	71	3.77	86
Missing	0.00	42	0.00	1	0.00	43
Condom use						
Ever used a condom	6.23	198	1.59	912	2.41	1,110
Never used a condom	1.31	6,957	0.49	1,448	1.17	8,405
Missing	3.54	7	-	0	3.54	7
Condom use at last sexual intercourse in last 12 months						
Used condom	13.73	75	1.53	388	3.51	463
Did not use condom	0.56	5,454	0.41	1,698	0.52	7,152
No sexual intercourse in last 12 months	3.95	1,586	3.25	268	3.85	1,853
Missing	0.00	47	0.00	6	0.00	53
Condom use at last higher-risk intercourse in last 12 months[2]						
Used condom	14.14	24	1.32	341	2.15	365
Did not use condom	0.74	98	0.00	44	0.51	142
No higher-risk intercourse/no intercourse last 12 months	1.41	7,040	0.87	1,974	1.29	9,014
Paid for sexual intercourse in last 12 months[3]						
Yes	na	0	0.00	10	0.00	10
Used condom	na	0	0.00	10	0.00	10
No (No paid sexual intercourse/no sexual intercourse in last 12 months)	na	0	0.92	2,349	0.92	2,349
Total 15-49	1.44	7,162	0.92	2,359	1.31	9,521
50-59	na	0	1.13	716	1.13	716
Total men 15-59	na	0	0.97	3,075	0.97	3,075

Note: Table is based on the CORE questionnaires.
na = Not applicable.
[1] HIV positive refers only to individuals infected with HIV-1, including those infected with both HIV-1 and HIV-2.
[2] Sexual intercourse with a partner who neither was a spouse nor who lived with the respondent.
[3] Includes men who report having a prostitute for at least one of their last three sexual partners in the last 12 months.

Table 14-8 HIV prevalence among young people by background characteristics

Percentage HIV-positive among women and men age 15-24 who were tested for HIV, by background characteristics, Eritrea 2010

Background characteristic	Women		Men		Total	
	Percentage HIV[1] positive	Number	Percentage HIV[1] positive	Number	Percentage HIV[1] positive	Number
Age						
15-19	0.15	2,188	0.09	1,551	0.13	3,739
15-17	0.23	1,386	0.13	1,073	0.19	2,459
18-19	0.00	803	0.00	478	0.00	1,281
20-24	0.23	1,652	0.16	634	0.21	2,287
20-22	0.06	1,107	0.04	459	0.05	1,566
23-24	0.56	545	0.42	176	0.53	721
Marital status						
Never married	0.18	2,298	0.09	2,075	0.14	4,374
Ever had sex	0.00	54	0.00	314	0.00	368
Never had sex	0.18	2,244	0.10	1,762	0.14	4,006
Married/Living together	0.13	1,405	0.12	101	0.13	1,507
Divorced/Separated/Widowed	0.73	137	0.69	8	0.72	146
Currently pregnant						
Pregnant	0.00	234	na	na	na	na
Not pregnant or not sure	0.19	3,607	na	na	na	na
Residence						
Total urban	0.17	1,549	0.11	874	0.15	2,423
Asmara	0.16	672	0.10	380	0.14	1,051
Other Town	0.18	877	0.12	495	0.16	1,372
Rural	0.19	2,292	0.12	1,311	0.16	3,603
Zoba						
Debubawi Keih Bahri	0.00	51	0.00	28	0.00	80
Maekel	0.46	946	0.29	585	0.40	1,531
Semenawi Keih Bahri	0.18	392	0.12	213	0.16	605
Anseba	0.16	556	0.10	322	0.14	878
Gash-Barka	0.14	733	0.10	303	0.13	1,036
Debub	0.00	1,163	0.00	734	0.00	1,896
Education						
No education	0.15	688	0.13	110	0.15	798
Primary	0.09	783	0.07	257	0.09	1,040
Middle	0.27	1,147	0.16	781	0.23	1,928
Secondary or above	0.18	1,222	0.10	1,037	0.14	2,258
Missing	0.00	1	0.00	0	0.00	1
Wealth quintile						
Lowest	0.00	603	0.00	369	0.00	972
Second	0.16	624	0.10	356	0.14	979
Middle	0.00	789	0.00	403	0.00	1,191
Fourth	0.21	864	0.13	521	0.18	1,385
Highest	0.44	961	0.28	538	0.38	1,499
Total	0.18	3,841	0.12	2,185	0.16	6,026

Note: Table is based on the CORE questionnaires.
na = Not applicable.
[1] HIV positive refers only to individuals infected with HIV-1, including those infected with both HIV-1 and HIV-2.

Among young women and men, HIV prevalence is highest for the 23-24 age groups (0.56 percent and 0.42 percent, respectively). HIV rates are somewhat higher among the never-married and never had sex women (both 0.18 percent) than among other sub-groups in the marital status (Table 14-8).

HIV prevalence among currently young not pregnant women is 0.19 percent while it is zero/nil among currently pregnant young women. There is no major difference in HIV prevalence for young women living in urban and rural areas (0.17 and 0.19 percent, respectively). The level of prevalence in the male youth living in urban and rural areas is also the same (0.10 to 0.12 percent). Young women and men in Maekel (0.46 and 0.29 percent, respectively) are more likely to have higher HIV than young women and men in other zobas (Table 14-8). Similarly, young women and men who are in the middle level of education have higher prevalence (0.27 and 0.16 percent, respectively) than young women and men in the other levels of education. Young women and men in the highest wealth index have higher prevalence (0.44 and 0.28 percent, respectively) than in the other wealth levels (Table 14-8).

14.2.6 HIV prevalence among young people by sexual behavior

Young women who ever had sex have two times higher prevalence (0.2 percent) than young men (0.1 percent) (Table 14-9). As regards to risk-related sexual intercourse for both young women and men in last 12 months, the prevalence status is as follows: had sexual intercourse not higher risk (0.1 percent) and no sexual intercourse in last 12 months (0.3 percent). There have been many studies that document the risk of unprotected sex and other forms of higher risk intercourse on the likelihood of being infected with HIV. However, in this study the low prevalence of HIV makes such risk factors impossible to detect reliably.

Based on the number of sexual partners in the last 12 months, the prevalence of young women and men who have one partner is the same (0.1 percent for each). Because of the very small sample size, the prevalence for 'more than one partner' is not reliable. In this survey the prevalence for both young women and men who never used condom is 0.2 percent while those who did not use condom at last sexual intercourse in the last 12 months is 0.1 percent (Table 14-9).

14.2.7 HIV prevalence by other characteristics

A strong link exists between sexually transmitted infections and the sexual transmission of HIV. Many studies have demonstrated that STIs are a co-factor for HIV transmission. Management and treatment of STIs can play an important role in the reduction of HIV transmission.

The prevalence of women and men age 15-49 who ever had sex and who had an STI and prior test for HIV in the past 12 months is 1.4 and 0.9 percent, respectively (Table 14-10). Although the sample size is small, a higher percentage of women with STI or STI symptoms in the past 12 months are HIV positive (5.7 percent) than those with no STIs or STI symptoms (for women 2.4 percent and for men 1.2 percent). HIV prevalence among women and men is higher among those ever tested for HIV (1.8 percent and 1.1 percent, respectively) than among those who were never previously tested for HIV (1.0 percent and 0.6 percent, respectively) (Table 14-10).

14.2.8 Prior HIV testing and current HIV status

Among women and men age 15-49 who are HIV positive, 67 percent were previously tested for HIV and received their result, whereas 33 percent had never been tested. Similarly, HIV positive adult women (64 percent) and men (77 percent) had previously tested for HIV and received their result, while 35 percent of HIV positive women and 23 percent of HIV positive men had never been tested for HIV previously (Table 14-11).

Table 14-9 HIV prevalence among young people by sexual behavior

Percentage HIV-positive among women and men age 15-24 who ever had sex and were tested for HIV, by sexual behavior, Eritrea 2010

	Women		Men		
Sexual behavior characteristic	Percentage HIV[1] positive	Number	Number	Percentage HIV[1] positive	Number
Relative age of first sexual partner					
10+ years older	0.0	9	na	na	na
<10 years older/same age/younger/DK	0.0	21	na	na	na
Missing	0.0	10	na	na	na
Higher-risk intercourse in last 12 months[2]					
Had higher-risk intercourse	0.0	31	232	0.0	262
Had sexual intercourse, not higher risk	0.1	1,264	100	0.1	1,364
No sexual intercourse in last 12 months	0.3	295	92	0.3	387
Number of sexual partners in last 12 months					
None	0.4	286	91	0.3	377
One	0.1	1,292	290	0.1	1,581
More than one	0.0	3	42	0.0	45
Missing	0.0	9	1	0.0	11
Condom use					
Ever used a condom	0.0	36	305	0.0	341
Never used a condom	0.2	1,551	119	0.2	1,670
Missing	0.0	2	0	0.0	2
Condom use at last sexual intercourse in last 12 months					
Used condom	0.0	18	220	0.0	239
Did not use condom	0.1	1,275	111	0.1	1,387
No sexual intercourse in last 12 months	0.4	286	92	0.3	378
Missing	0.0	10	0	0.0	10
Total	0.2	1,590	424	0.1	2,014

Note: Table is based on the CORE questionnaires.
na = Not applicable.
[1] HIV positive refers only to individuals infected with HIV-1, including those infected with both HIV-1 and HIV-2.
[2] Sexual intercourse with a partner who neither was a spouse nor lived with the respondent.

14.2.9 HIV prevalence among couples

In the EPHS2010 a total of 2,069 cohabiting couples were interviewed and tested for HIV. Results of this survey show that 99 percent of cohabiting couples are HIV negative, while in 0.3 percent of couples both partners are HIV positive (Table 1412). Discordant couples, that is, one partner infected and the other not infected, constitute 0.6 percent of those tested. This means that only 6 couples in 1,000 couples are discordant couples. There is no difference in discordant couples based on sex (in couples where the male partner is HIV positive and the female partner is HIV negative and vice versa) (Table 14-12).

Discordance is most marked in other towns (1.85 percent), urban areas (1.44 percent) and in Gash-Barka (1.03 percent). There is not much difference in discordance rates in the other characteristics (Table 14-12).

Table 14-10 HIV prevalence by other characteristics

Percentage HIV positive among women and men age 15-49 who ever had sex and were tested for HIV, by whether had an STI in the past 12 months and by prior testing for HIV, Eritrea 2010

	Women		Men			
Characteristic	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number
Sexually transmitted infection in past 12 months						
Had STI or STI symptoms	5.7	121	0.0	14	5.1	135
No STI, no symptoms	2.4	2641	1.2	1771	1.9	4412
DK/missing	0.7	4399	0.0	575	0.7	4974
Prior HIV testing						
Ever tested	1.8	3741	1.1	1489	1.6	5230
Never tested	1.0	3385	0.6	839	0.9	4223
Missing	3.4	36	0.0	32	1.8	68
Total 15-49	1.4	7162	0.9	2360	1.3	9521
50-59	na	0.0	1.1	716	1.1	716
Total men 15-59	na	0.0	1.0	3076	1.0	3076

Table 14-11 Prior HIV testing by current HIV status

Percent distribution of women and men age 15-49 by HIV testing status prior to the survey, according to whether HIV positive or negative, Eritrea 2010

	Women		Men		Total	
HIV testing prior to the survey	HIV positive	HIV negative	HIV positive	HIV negative	HIV positive	HIV negative
Previously tested	64.4	43.3	77.4	42.8	66.6	43.2
Not previously tested	34.5	56.3	22.6	55.4	32.5	56.0
Missing	1.1	0.4	0.0	1.8	0.9	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	109	9,606	22	4,279	131	13,885

Note: Table is based on the CORE questionnaires.
[1] HIV positive refers only to individuals infected with HIV-1, including those infected with both HIV-1 and HIV-2. Individuals infected with HIV-2 only are not counted as HIV positive when calculating the numerator of the percentages.

Table 14-12 HIV prevalence among couples

Percent distribution of couples living in the same household, both of whom were tested for HIV, by the HIV status, according to background characteristics, Eritrea 2010

Background characteristic	Both HIV[1] positive	Man HIV positive, woman HIV negative	Woman HIV positive, man HIV negative	Both HIV negative	Total	Number
Woman's Age						
15-19	0.00	0.00	0.00	100.0	100.0	114
20-29	0.20	0.00	0.00	99.8	100.0	714
30-39	0.56	0.53	0.84	98.1	100.0	754
40-49	0.00	0.46	0.00	99.5	100.0	487
Man's Age						
15-19	0.00	0.00	0.00	100.0	100.0	7
20-29	0.00	0.00	0.00	100.0	100.0	226
30-39	0.05	0.29	0.19	99.5	100.0	622
40-49	0.53	0.34	0.58	98.5	100.0	663
50-59	0.33	0.40	0.23	99.0	100.0	551
Age difference between partners						
Woman older	0.00	0.00	0.00	100.0	100.0	32
Same age/man older by 0-4 years	0.00	1.17	0.08	98.7	100.0	349
Man older by 5-9 years	0.36	0.00	0.49	99.2	100.0	685
Man older by 10-14 years	0.22	0.00	0.22	99.6	100.0	636
Man older by 15+ years	0.49	0.60	0.35	98.6	100.0	367
Type of union						
Monogamous	0.29	0.23	0.33	99.2	100.0	1,939
Polygynous	0.00	1.57	0.00	98.4	100.0	117
DK/missing	0.00	0.00	0.00	100.0	100.0	13
Residence						
Total urban	0.38	0.70	0.74	98.2	100.0	678
Asmara	0.48	0.00	0.80	98.7	100.0	263
Other Town	0.32	1.14	0.71	97.8	100.0	415
Rural	0.22	0.11	0.09	99.6	100.0	1,392
Zoba						
Debubawi Keih Bahri	1.14	0.00	0.66	98.2	100.0	42
Maekel	0.79	0.40	0.54	98.3	100.0	389
Semenawi Keih Bahri	0.00	0.58	0.00	99.4	100.0	264
Anseba	0.28	0.00	0.00	99.7	100.0	303
Gash-Barka	0.00	0.26	0.77	99.0	100.0	510
Debub	0.23	0.33	0.00	99.4	100.0	560
Woman's education						
No education	0.20	0.30	0.27	99.2	100.0	984
Primary	0.31	0.35	0.42	98.9	100.0	518
Middle	0.00	0.57	0.10	99.3	100.0	272
Secondary or above	0.71	0.00	0.41	98.9	100.0	295
Man's education						
No education	0.00	0.44	0.19	99.4	100.0	665
Primary	0.26	0.13	0.29	99.3	100.0	495
Middle	0.00	0.00	0.53	99.5	100.0	399
Secondary or above	0.86	0.54	0.29	98.3	100.0	510
Wealth quintile						
Lowest	0.00	0.00	0.00	100.0	100.0	472
Second	0.00	0.41	0.37	99.2	100.0	382
Middle	0.00	0.00	0.33	99.7	100.0	392
Fourth	0.35	0.77	0.37	98.5	100.0	411
Highest	1.03	0.38	0.51	98.1	100.0	412
Total	0.27	0.30	0.31	99.1	100.0	2,069

Note: Table based on couples for which a valid test result (positive or negative) is available for both partners in the CORE questionnaires.
[1] HIV positive refers only to individuals infected with HIV-1, including those infected with both HIV-1 and HIV
[2] Individuals infected with HIV-2 only are not counted as HIV positive when calculating the numerator of the percentages.

WOMEN'S EMPOWERMENT AND DEMOGRAPHIC AND HEALTH OUTCOMES 15

Key Findings

- More than half of currently married employed women (55 percent) who earn cash mainly make independent decisions about how to spend their earnings.
- Seventy percent of currently married women participate in all six decisions pertaining to their own health care, major household purchases, household needs, visits to their family or relatives, food to cook and assisting her family.
- Five in ten women (51 percent) believe that wife beating is justified for at least one of the specified reasons.
- Contraceptive use increases with women's empowerment.

This chapter presents data on the status of women in Eritrea. Topics addressed include gender differences in employment, access to and control over cash earnings, participation in household decision making, and the relative earnings of husbands and wives. The chapter also explores how demographic and health indicators vary by women's empowerment, as measured by the number of decisions in which the woman participates and her ability to negotiate safer sexual relations with her husband.

Three separate indices of empowerment were developed based on (1) the number of household decisions in which the respondent participates, (2) her opinion of the circumstances under which a woman is justified in refusing to have sexual intercourse with her husband/partner, and (3) her opinion of whether specific actions justify wife beating. The relationship of these indices with selected demographic and health outcomes are analyzed. The ranking of women on the indices is associated with outcomes that include contraceptive use, need for family planning, and access to reproductive health care.

15.1 Employment and Form of Earnings

Employment, particularly employment for cash, and control over how earnings are used are important indicators of empowerment. Currently married respondents were asked whether they were employed at the time of the survey and, if not, whether they were employed in the 12 months that preceded the survey.

Overall, 18 percent of currently married women and 93 percent of currently married men age 15-49 were employed at some time in the year prior to the survey (Table 15-1). The percentage of currently married employed women and men increases with age, both peaking at the age group of 35-39 years, with 21 percent for women and 96 percent for men.

Payment in cash for both women and men are similar at 60 and 63 percent, respectively. The payment 'in kind only' is also similar at 8 percent each, but there is a difference when comes to payment in 'cash and kind', at three percent for women and eight percent for men. The percentage of women age 15-49 who work, but are not paid, is 29 percent compared to 20 percent of men in the same age group. The traditional role of men as breadwinners and the differences in employable skills between women and men may explain the gender differential in the rate of employment. Employment among currently married women declined by 25 percent from 24 percent in 2002 to 18 percent in 2010.

Table 15-1 Employment and cash earnings of currently married women and men

Percentage of currently married women and men age 15-49 [59] who were employed at any time in the last 12 months and the percent distribution of currently married women and men employed in the last 12 months by type of earnings, according to age, Eritrea 2010

Age	Currently married respondents		Percent distribution of currently married respondents employed in the last 12 months, by type of earnings						
	Percentage employed	Number of people	Cash only	Cash and in-kind	In-kind only	Not paid	Missing	Total	Number of people
				WOMEN					
Age									
15-19	14.7	402	29.0	2.1	6.1	62.8	0.0	100.0	59
20-24	15.2	1,057	54.5	1.2	8.9	35.4	0.0	100.0	161
25-29	18.0	1,252	69.2	2.6	8.3	19.4	0.5	100.0	225
30-34	18.2	967	62.9	2.5	4.7	29.9	0.0	100.0	177
35-39	20.6	1,088	63.7	3.8	7.3	25.1	0.0	100.0	224
40-44	17.2	715	55.8	5.1	10.3	28.9	0.0	100.0	123
45-49	19.7	701	58.7	1.0	8.8	31.5	0.0	100.0	138
Total 15-49	17.9	6,183	60.0	2.7	7.8	29.4	0.1	100.0	1,107
				MEN					
Age									
15-19	59.6	15	2.6	0.0	16.5	80.9	0.0	100.0	9
20-24	78.4	83	31.0	9.0	13.6	46.3	0.0	100.0	65
25-29	91.7	200	67.3	5.5	8.3	18.9	0.0	100.0	183
30-34	94.2	275	71.0	7.1	4.6	17.3	0.0	100.0	259
35-39	95.6	406	70.3	6.4	6.6	16.6	0.0	100.0	388
40-44	93.7	347	64.8	7.7	10.2	17.2	0.0	100.0	325
45-49	94.7	389	54.6	12.4	9.1	23.9	0.0	100.0	369
Total 15-49	93.2	1,715	63.4	8.1	8.2	20.4	0.0	100.0	1,599
50-59	93.3	683	45.8	13.9	12.7	27.6	0.0	100.0	637
Total men 15-59	93.2	2,398	58.4	9.8	9.4	22.4	0.0	100.0	2,236

Note: Table is based on the CORE questionnaires

15.1.1 Control over women's cash earnings and relative magnitude of women's earnings

Control over women's cash earnings is another dimension of empowerment. Married and employed women were asked about the relative magnitude of their earnings compared with their husband's or partner's earnings. In addition, they were asked who decides how the cash earnings are used. This information provides insight into women's empowerment within the family, their autonomy, and the extent of their control over resources. It is expected that employment and earnings are more likely to empower women if women themselves control their own earnings and if they perceive them as significant relative to those of their husbands or partners.

In the majority of women age 20-44, the direct control of earnings by wife ranges between 52 and 62 percent. If the percentage of joint control by the husband and wife is added, the degree of control by women increases to between 93 and 100 percent (Table 15-2). In the age 20-24, however, the percentage of control by women is 86 percent as the control by husbands is high, at 12 percent. In women under the age of 20 years, control of earnings directly or together with the husband is low at 70 percent, as control by others is high at 22 percent.

Table 15-2 Control over women's cash earnings and relative magnitude of women's earnings: Women

Percent distribution of currently married women age 15-49 who received cash earnings for employment in the 12 months preceding the survey by person who decides how wife's cash earnings are used and by whether she earned more or less than her husband, according to background characteristics, Eritrea 2010

	Person who decides how the wife's cash earnings are used:						Women's cash earnings compared with husband's cash earnings:						
Background characteristic	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	More	Less	About the same	Husband/ partner has no earnings/ does not bring money	Don't know/ Missing	Total	Number of women
Age													
15-19	32.1	37.7	8.4	21.8	0.0	100.0	39.9	30.2	16.2	6.5	7.2	100.0	18
20-24	62.0	23.8	11.6	1.5	1.1	100.0	36.6	41.5	12.9	1.3	7.8	100.0	90
25-29	64.0	35.1	0.2	0.7	0.0	100.0	37.9	43.9	12.3	2.8	3.1	100.0	162
30-34	52.8	42.2	4.2	0.8	0.0	100.0	43.6	34.9	12.5	3.8	5.3	100.0	115
35-39	52.8	44.5	2.5	0.0	0.1	100.0	34.5	42.6	11.6	7.1	4.2	100.0	151
40-44	52.3	47.7	0.0	0.0	0.0	100.0	24.6	53.1	11.8	7.5	2.9	100.0	75
45-49	47.1	45.9	7.0	0.0	0.0	100.0	18.2	51.2	7.5	9.6	13.5	100.0	83
Number of living children													
0	57.0	27.5	6.5	7.7	1.4	100.0	35.6	44.4	10.7	1.7	7.6	100.0	70
1-2	61.6	34.1	3.5	0.8	0.0	100.0	38.7	37.8	12.5	5.6	5.4	100.0	263
3-4	51.0	45.9	3.1	0.0	0.1	100.0	32.6	47.4	11.9	4.7	3.4	100.0	219
5+	49.6	45.9	4.5	0.0	0.0	100.0	27.8	46.5	10.5	6.5	8.7	100.0	142
Residence													
Total urban	55.0	40.6	3.4	0.7	0.3	100.0	33.1	45.4	12.1	4.4	5.1	100.0	454
Asmara	53.7	41.2	3.9	0.8	0.4	100.0	26.1	52.4	12.1	4.1	5.3	100.0	246
Other Town	56.5	40.0	2.8	0.6	0.1	100.0	41.3			4.6	4.8	100.0	208
Rural	55.9	37.6	4.8	1.7	0.0	100.0	36.4	37.0	12.2	6.6	6.7	100.0	240
Zoba													
Debubawi Keih Bahri	36.1	59.0	2.9	0.0	2.0	100.0	35.5	44.0	8.6	5.4	6.5	100.0	10
Maekel	53.7	41.7	3.5	0.7	0.4	100.0	27.4	51.9	11.7	4.3	4.7	100.0	275
Semenawi Keih Bahri	58.8	41.2	0.0	0.0	0.0	100.0	38.6	44.8	8.1	6.0	2.5	100.0	42
Anseba	56.6	38.2	5.2	0.0	0.0	100.0	35.8	51.5	6.1	6.6	0.0	100.0	46
Gash-Barka	58.9	36.1	3.3	1.6	0.0	100.0	34.6	40.2	8.2	8.1	8.9	100.0	148
Debub	54.8	37.9	5.6	1.7	0.0	100.0	43.3	29.6	17.5	3.2	6.5	100.0	172
Education													
No education	64.6	30.9	4.5	0.0	0.0	100.0	35.8	37.4	9.4	9.3	8.1	100.0	169
Primary	53.4	40.1	3.9	2.6	0.0	100.0	35.3	41.1	8.8	7.4	7.3	100.0	151
Middle	62.6	33.9	3.5	0.0	0.0	100.0	34.3	47.5	8.9	2.1	7.2	100.0	99
Secondary or above	48.1	46.7	3.6	1.2	0.4	100.0	32.6	46.6	15.8	2.4	2.6	100.0	275
Wealth quintile													
Lowest	55.7	33.1	6.6	4.6	0.0	100.0	31.1	37.1	10.6	7.2	14.0	100.0	52
Second	51.9	37.9	7.9	2.3	0.0	100.0	36.6	40.6	11.0	4.9	6.9	100.0	70
Middle	61.4	37.4	1.1	0.0	0.0	100.0	40.7	36.4	7.8	7.6	7.5	100.0	84
Fourth	61.9	36.2	1.9	0.0	0.0	100.0	36.6	38.8	13.4	7.5	3.7	100.0	193
Highest	50.0	44.0	4.5	1.1	0.4	100.0	30.8	50.0	12.1	2.5	4.6	100.0	294
Total	55.3	39.6	3.9	1.1	0.2	100.0	34.2	43.3	11.7	5.1	5.6	100.0	694

Note: Table is based on the CORE questionnaires.

The number of living children has little influence on the control of cash by women, except in those with no children, where the control falls to 85 percent. With regard to zoba differences, only 30 percent of women in Debubawi Keih Bahri decide by themselves on how their earnings should be used, compared to the other five zobas, where women's decision ranges between 54 to 59 percent. It might be expected that women would gain more control over their cash earnings with more education. However, the survey results reveal that 65 percent of uneducated women have direct control of their earnings compared to 48 percent of women with secondary education or higher. The percentage of cash earnings, however, become 'about the same' at 16 percent. The pattern of decision on how to use wife's cash earnings did not vary by wealth quintile.

It can be concluded from the findings that most women have control over their own earnings either directly or together with their husbands, except for women who are less than 20 years old. The overall picture shows that nearly 95 percent of decisions on wife's earnings are the wife's own decision or a joint decision made by the wife and husband.

According to the EDHS2002, "Nearly three-fourths of women who receive cash earnings report that they alone decide how their earnings are used, while about one-fourth say that they decide jointly with their husband or someone else, with only four percent reporting that someone else alone decides how their earnings will be used", which is very similar to the EPHS2010 findings.

Thirty-four percent of wives reported that they earn more than their husbands and 43 percent indicated that their cash earnings are lower than their husbands (Table 15-2). Wive's cash earnings are higher than husband's cash earnings in women under the age of 20 and age 30-34. In the other age groups, husbands earn more than wives, especially in the 40-49 age group, where women's earnings show a significant decline.

Women's earnings in urban areas are less than men's with the difference being more prominent in Asmara where 52 percent of women earn less than their husbands. In rural areas, earnings of wives and husbands are more or less similar. Women earn less than men in all zobas, except Debub, where 43 percent of women earn more; and 30 percent earn less than men.

Eight percent of currently married men who receive cash earnings reported that their wives have decision making authority on how men's earnings are to be used (Table 15-3). According to currently married women, however, the percentage of the wife's control over husband's earnings increases to about 25 percent. Joint decision by husband and wife on how to spend husband's earnings is the most common with 55 percent of men and 56 percent of women reporting that both husband and wife make the decisions.

According to men, joint decision making is more common in urban areas (63 percent) compared to rural areas (49 percent), while the decisions made mainly by husbands are lower, at 27 percent in urban areas and higher in rural areas, at 43 percent. The reports of women show that there is no urban-rural difference on how the husbands' earnings are used.

According to men, decision making by 'mainly husbands', is the highest in Gash-Barka (61 percent) and lowest in Maekel (18 percent). According to women, decision making by 'mainly husband' is highest in Maekel (21 percent) and lowest in Anseba (11 percent). Higher percentages of currently married women than men reported that decisions are made 'mainly by husbands'.

Table 15-3 Control over men's cash earnings

Percent distributions of currently married men age 15-49 [59] who receive cash earnings and of currently married women 15-49 whose husbands receive cash earnings, by person who decides how men's cash earnings are used, according to background characteristics, Eritrea 2010

	Men							Women						
Background characteristic	Mainly wife	Husband and wife jointly	Mainly husband	Other	Missing	Total	Number	Mainly wife	Husband and wife jointly	Mainly husband	Other	Missing	Total	Number
Age														
15-19	0.0	0.0	100.0	0.0	0.0	100.0	0	11.1	55.8	18.5	14.6	0.0	100.0	58
20-24	4.0	38.6	53.3	4.2	0.0	100.0	26	27.9	49.5	21.5	1.1	0.0	100.0	159
25-29	5.1	54.5	40.3	0.0	0.0	100.0	133	30.0	50.3	16.4	0.9	2.4	100.0	221
30-34	8.7	54.1	37.2	0.0	0.0	100.0	202	25.7	59.3	14.9	0.0	0.1	100.0	172
35-39	9.5	59.8	30.4	0.0	0.3	100.0	298	25.2	57.7	17.1	0.0	0.0	100.0	213
40-44	8.4	54.0	37.1	0.0	0.5	100.0	236	20.3	66.4	13.4	0.0	0.0	100.0	117
45-49	8.8	53.1	38.1	0.0	0.0	100.0	247	15.5	59.5	21.9	2.1	0.9	100.0	130
Number of living children														
0	6.5	55.7	37.6	0.0	0.1	100.0	107	21.9	49.1	23.0	5.9	0.1	100.0	99
1-2	8.9	58.2	32.4	0.3	0.2	100.0	375	27.7	49.5	20.3	1.4	1.1	100.0	380
3-4	9.4	55.5	35.1	0.0	0.0	100.0	342	24.7	61.1	12.9	0.6	0.7	100.0	305
5+	7.2	50.5	41.9	0.0	0.4	100.0	318	19.8	62.6	16.8	0.7	0.0	100.0	287
Residence														
Total urban	9.4	63.0	27.0	0.2	0.3	100.0	473	23.9	57.1	17.4	0.5	1.0	100.0	515
Asmara	7.3	73.4	18.8	0.5	0.0	100.0	216	18.4	58.2	22.2	0.3	0.9	100.0	259
Other Town	11.3	54.3	33.9	0.0	0.5	100.0	257	29.5	56.1	12.6	0.7	1.2	100.0	256
Rural	7.5	49.4	42.9	0.0	0.1	100.0	670	24.5	55.5	17.6	2.2	0.2	100.0	556
Zoba														
Debubawi Keih Bahri	7.3	41.2	50.9	0.0	0.6	100.0	24	11.6	71.2	14.9	0.0	2.2	100.0	15
Maekel	7.8	74.2	17.6	0.4	0.0	100.0	292	18.3	59.3	21.4	0.3	0.7	100.0	304
Semenawi Keih Bahri	9.2	46.8	43.3	0.0	0.6	100.0	132	31.5	57.2	11.2	0.0	0.0	100.0	54
Anseba	4.6	42.5	52.2	0.0	0.7	100.0	177	32.9	49.8	14.2	3.1	0.0	100.0	46
Gash-Barka	9.8	29.0	61.2	0.0	0.0	100.0	234	30.9	54.3	12.1	1.6	1.1	100.0	216
Debub	9.6	69.4	20.9	0.0	0.0	100.0	284	23.6	55.2	18.7	2.1	0.4	100.0	435
Education														
No education	6.5	26.2	67.3	0.0	0.0	100.0	196	23.9	55.0	19.9	0.9	0.3	100.0	330
Primary	7.9	47.2	44.8	0.0	0.1	100.0	248	28.4	55.2	13.2	2.6	0.5	100.0	271
Middle	10.8	61.4	27.4	0.0	0.5	100.0	268	25.3	55.5	16.8	0.7	1.8	100.0	156
Secondary or above	7.8	68.8	22.9	0.3	0.2	100.0	431	20.2	59.0	19.1	1.3	0.4	100.0	314
Wealth quintile														
Lowest	6.0	33.1	60.9	0.0	0.0	100.0	155	16.8	56.8	22.7	3.7	0.0	100.0	118
Second	10.1	40.7	49.2	0.0	0.0	100.0	183	24.5	52.5	19.5	2.7	0.8	100.0	165
Middle	8.2	49.1	42.2	0.0	0.4	100.0	215	30.7	53.1	13.5	2.0	0.6	100.0	174
Fourth	8.6	64.7	26.3	0.0	0.5	100.0	269	27.2	58.2	12.8	0.4	1.4	100.0	281
Highest	8.3	69.7	21.7	0.3	0.0	100.0	321	20.7	57.9	20.8	0.5	0.1	100.0	333
Total 15-49	8.3	55.0	36.3	0.1	0.2	100.0	1,143	24.2	56.3	17.5	1.4	0.6	100.0	1,071
50-59	6.0	53.3	40.6	0.0	0.2	100.0	381	na	na	na	na	na	0.0	0
Total men 15-59	7.7	54.6	37.4	0.1	0.2	100.0	1,524	na	na	Na	na	na	0.0	0

Note: Table is based on the CORE questionnaires.
na = Not Applicable.

The percentage of men who reported that they are the main decision makers was high in those with no education (67 percent), but it decreased in those with secondary education or more to 23 percent. The joint decision making steadily increased with wealth quintiles from 33 percent in the lowest to 70 percent in the highest (Table 153). However, when it comes to the women no such trends are to be found. One way of interpreting this is that men's education and level of wealth have an effect on whether or not decisions are made by both husband and wife, whereas women's education and level of wealth do not produce this effect.

15.1.2 Women's control over their own earnings and over those of their husbands'

Table 15-4, shows that just over 55 percent of wife's have full control over their cash earnings and nearly 40 percent are decided jointly by the husband and wife. Husbands have very little say (4 percent) in the decision on how wife's earnings are used. Whether women earn more than the husband/partner or less or the same amount, the wife has a higher decision making authority than the husband in all the three categories. Decisions made by 'mainly husband' over husband's cash earnings range from 11 percent in a situation where wives earn same as husbands to 21 percent in a situations where wives earn less than husbands'\partners'. Otherwise, a higher percentage of respondents (37 percent) reported that decisions on husband's earnings are made by 'mainly wife' in a situation where women earn more than their husbands'\partners' than the other situations (21-24 percent). A consistent majority report is that the decisions on the use of husband's earnings is done either jointly or by 'mainly wife'.

Table 15-4 Women's control over her own earnings and over those of her husband

Percent distributions of currently married women age 15-49 with cash earnings in the last 12 months by person who decides how the wife's cash earnings are used and of currently married women age 15-49 whose husbands have cash earnings by person who decides how the husband's cash earnings are used, according to the relation between wife's and husband's cash earnings, Eritrea 2010

	Person who decides how the wife's cash earnings are used:							Person who decides how husband's cash earnings are used:						
Women's earnings relative to husband's earnings	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	Number	Mainly wife	Wife and husband jointly	Mainly husband	Other[1]	Missing	Total	Number of women
More than husband/partner	63.5	32.1	1.9	2.2	0.4	100.0	237	37.1	44.4	17.1	1.3	0.0	100.0	237
Less than husband/partner	49.8	45.1	4.7	0.4	0.1	100.0	300	23.7	55.5	20.8	0.0	0.0	100.0	300
Same as husband partner	40.8	49.2	10.0	0.0	0.0	100.0	81	20.6	67.9	10.8	0.8	0.0	100.0	81
Husband/ partner has no cash earnings/did not work	69.2	27.0	0.5	3.3	0.0	100.0	36	na	na	na	na	na	0.0	0
Woman has no cash earnings	na	na	na	na	na	0.0	0	18.4	64.1	14.5	2.7	0.3	100.0	413
Woman did not work in last 12 months	na	na	na	na	na	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	5,076
Don't know/ missing	65.9	34.1	0.0	0.0	0.0	100.0	39	18.6	27.8	39.7	0.0	14.0	100.0	39
Total[1]	55.3	39.6	3.9	1.1	0.2	100.0	694	4.2	9.8	3.1	0.2	0.1	17.4	6,147

Note: Table is based on the CORE questionnaires.
na = Not Applicable.
[1] Excludes cases where a woman or her husband/partner has no earnings and includes cases where a woman does not know whether she earned more or less than her husband/partner.

Table 15-5 Women's participation in decision making

Percent distribution of currently married women age 15-49 by person who usually makes decisions about six kinds of issues, Eritrea 2010

Decision	Mainly wife	Wife and husband jointly	Mainly husband	Someone else	Other	Missing	Total	Number of women
Own health care	85.5	8.8	5.0	0.5	0.2	0.0	100.0	6,183
Major household purchases	22.4	47.6	25.4	2.9	1.7	0.0	100.0	6,183
Purchases of daily household needs	39.6	32.7	23.2	3.0	1.5	0.0	100.0	6,183
Visits to her family or relatives	34.1	45.2	16.4	2.7	1.5	0.0	100.0	6,183
What food to cook each day	77.6	12.7	6.1	2.4	1.2	0.0	100.0	6,183
Assisting her family	26.1	50.7	18.1	2.9	2.1	0.1	100.0	6,183

Note: Table is based on the CORE questionnaires.

15.2 Women's Participation in Decision Making

Decision making at the household and personal level is important for the empowerment of women and serves as an important factor in national development. To assess decision making autonomy, information was sought on participation in six different types of household decisions: 1) Own health; 2) Major household purchase; 3) Purchases of daily household needs; 4) Visits to her family or relatives; 5) What food to cook each day; and 6) Assisting her family. Women are considered participants in decision making if they make decisions alone or jointly with their husband or someone else.

Eighty-six percent and seventy-eight percent of currently married women indicate that decision is mainly made by themselves for their own health care and the type of food to cook each day, respectively (Table 15-5). In the other four characteristics, however, women are less likely to make decisions alone. Women's involvement in decision making regarding these characteristics, either jointly or directly, is higher still, standing at above 70 percent.

15.2.1 Women's participation in decision making according to men

Table 15-6 shows percent distribution of currently married men 15-49 by who they think should have a greater say in making decisions about five kinds of issues. With the exception of purchase of daily household needs, the majority of currently married men respondents believe that the decision should be generally made jointly by wife and husband (Table 15-6). Husbands are believed to have greater say on 'major household purchases' (30 percent) than wives (9 percent) while the reverse is true regarding decisions on purchases of daily household needs (47 percent for wife and 21 percent for husband). The highest percentage (82 percent) indicate that decisions on the number of children to have should be made jointly with only 5 percent and 11 percent believing that decision should be made by wife and husband alone, respectively.

Table 15-6 Women's participation in decision making according to men

Percent distribution of currently married men 15-59 by person who they think should have a greater say in making decisions about five kinds of issues, Eritrea 2010

Decision	Wife	Wife and husband equally	Husband	Don't know/ depends	Total	Number of men
Major household purchases	9.3	60.3	30.2	0.2	100.0	1,715
Purchases of daily household needs	47.4	31.2	21.1	0.2	100.0	1,715
Visits to wife's family or relatives	21.1	62.9	15.4	0.6	100.0	1,715
What to do with the money wife earns	14.5	65.8	15.5	4.1	100.0	1,715
How many children to have	4.7	81.9	11.2	2.3	100.0	1,715

Note: Table is based on the CORE questionnaires.

15.2.2 Women's participation in decision making by background characteristics

Table 15-7 shows the percentage of currently married women age 15-49, who usually make specific decisions either by themselves or jointly with their husband, by background characteristics.

Nearly 60 percent of women participate in all six decisions and only two percent participate in none of the six decisions (Table 15-7). The percentage of women participating in decision making for 'own health care' is well over 90 percent and on 'what food to cook each day' is 90 percent. Participation in decision making on the other four issues ranges from 70 percent to 79 percent. Urban women are more likely than rural women (66 percent versus 56 percent) to participate in all of six decisions.

The participation of women in decision making of all six issues is the highest in Debub (78 percent) and the lowest in Anseba (47 percent).

Compared to the findings of EDHS2002, the EPHS2010 shows significant increase in each of the six decisions as follows.

- Own health care has increased from 85 to 94 percent.
- Making major household purchases has increased from 49 to 70 percent.
- Making purchases for daily household needs has increased from 58 to 72 percent.
- Visits to her family or relatives has increased from 64 to 79 percent.
- Deciding what food to cook each day has increased from 76 to 90 percent.
- Assisting her family has increased from 58 to 77 percent.

Likewise, the percentage of those who participate in all six decisions has increased from 41 percent in 2002 to 60 percent in 2010, an increase of 46 percent.

15.2.3 Men's attitude toward wives' participation in decision making

Overall, half of currently married men aged 15-49 think that a wife should have the greater say alone or equal say with her husband on five specific kinds of decisions (Table 15-8). Four percent of men aged 15-49 believe wives should not participate in any of the decisions. Working men paid in kind only are less likely (38 percent) than those employed for cash (56 percent) to believe that wives should participate in all of the five decisions. There is no marked variation in attitude among men by number of children ever born. With regard to residence, however, urban men are more likely see wives participating in all five decisions (72 percent) compared to those in rural areas (41 percent). The percentage for Asmara is 80 percent. By zoba, attitudes towards wives' participation in decision making is lowest in Gash-Barka (35 percent) and highest in Maekel (76 percent), indicating the need to address gender issues vigorously in the six zobas. The percentage of men, in favor of wives participation in all of the five decisions, increases with an increasing level of education from 27 percent among those with no education to 70 percent among those with secondary or higher education. A similar rising pattern is also observed by wealth quintile ranging from 28 percent for the lowest quintile to 76 percent for the highest quintile.

Table 15-7 Women's participation in decision making by background characteristics

Percentage of currently married women age 15-49 who usually make specific decisions either by themselves or jointly with their husband, by background characteristics, Eritrea 2010

Background characteristic	Own health care	Making major household purchases	Making purchases for daily household needs	Visits to her family or relatives	Deciding what food to cook each day	Assisting her family	Percentage who participate in all six decisions	Percentage who participate in none of the six decisions	Number of women
Age									
15-19	90.0	58.0	58.4	63.1	76.3	63.3	49.2	4.6	402
20-24	94.4	68.6	71.0	75.0	87.1	73.6	57.8	2.2	1,057
25-29	94.3	71.2	73.4	80.9	91.1	76.4	60.2	2.1	1,252
30-34	95.4	72.9	75.6	83.3	93.9	79.8	63.2	1.2	967
35-39	94.3	71.0	75.1	82.6	92.2	81.2	61.4	1.7	1,088
40-44	94.3	71.0	72.3	80.0	91.6	78.2	59.1	1.9	715
45-49	94.9	70.2	71.3	81.2	92.7	77.4	59.7	2.4	701
Employment (last 12 months)									
Not employed	93.5	67.3	69.2	77.2	89.4	74.8	56.0	2.5	5,076
Employed for cash	98.0	84.7	89.0	90.2	94.0	86.6	76.5	0.3	694
Employed not for cash	97.2	79.0	82.1	87.4	95.5	85.4	74.5	0.5	412
Missing	100.0	91.2	91.2	91.2	100.0	91.2	91.2	0.0	1
Number of living children									
0	90.1	57.9	59.8	65.0	77.5	65.9	46.8	4.2	621
1-2	95.0	70.9	73.1	78.7	89.9	75.2	61.1	2.0	1,944
3-4	95.1	74.3	77.3	84.0	93.2	80.8	64.4	1.5	1,679
5+	94.2	69.3	71.2	80.5	92.4	78.4	58.0	2.0	1,939
Residence									
Total urban	95.1	75.2	80.7	86.1	92.5	81.9	65.5	0.9	2,030
..Asmara	94.3	71.2	81.5	84.3	90.6	76.8	62.4	0.6	800
..Other Town	95.7	77.8	80.2	87.3	93.7	85.2	67.6	1.0	1,230
Rural	93.9	67.5	68.2	76.0	89.2	74.3	56.6	2.7	4,153
Zoba									
Debubawi Keih Bahri	94.1	63.5	72.0	68.8	88.5	68.6	58.1	3.7	111
Maekel	93.6	72.6	83.7	86.3	92.0	78.8	63.8	0.6	1,153
Semenawi Keih Bahri	90.9	63.2	59.7	75.3	90.8	77.4	48.8	2.3	789
Anseba	94.6	65.1	60.0	72.7	91.9	74.9	46.9	1.8	930
Gash-Barka	92.5	63.4	64.0	71.5	82.2	67.2	50.3	4.8	1,541
Debub	97.8	80.8	84.9	88.1	95.7	85.6	77.5	0.5	1,660
Education									
No education	93.1	64.9	64.4	74.9	89.1	73.3	53.3	3.1	3,017
Primary	94.5	74.9	77.3	82.4	92.3	79.4	63.8	1.4	1,432
Middle	95.8	74.8	80.0	83.3	91.0	80.2	65.4	0.9	883
Secondary or above	96.6	74.8	83.8	85.8	90.3	81.2	68.6	1.0	850
Missing	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	1
Wealth quintile									
Lowest	92.3	59.1	57.2	70.2	85.8	69.0	46.7	3.7	1,237
Second	93.0	65.5	64.4	73.0	88.2	71.7	53.8	3.1	1,256
Middle	94.1	73.8	74.7	81.5	91.7	79.4	63.4	2.3	1,333
Fourth	96.6	79.1	85.0	86.5	94.4	84.2	70.1	0.4	1,185
Highest	95.6	73.0	81.2	86.0	91.6	80.0	64.3	0.6	1,171
Total	94.3	70.0	72.3	79.3	90.3	76.8	59.6	2.1	6,183

Note: Table is based on the CORE questionnaires.

Table 15-8 Men's attitude toward wives' participation in decision making

Percentage of currently married men age 15-49 [59] who think a wife should have the greater say alone or equal say with her husband on five specific kinds of decisions, by background characteristics, Eritrea 2010

Background characteristic	Making major household purchases	Making purchases for daily household needs	Visits to her family or relatives	What to do with the money the wife earns	How many children to have	All five decisions	None of the five decisions	Number of men
Age								
15-19	86.8	83.1	80.9	42.3	84.4	29.5	0.0	15
20-24	69.6	69.5	78.4	81.6	82.6	40.1	1.8	83
25-29	66.0	75.9	78.7	79.0	84.1	49.2	6.1	200
30-34	64.3	77.4	79.8	73.9	82.0	44.0	6.5	275
35-39	73.9	83.2	88.1	84.5	89.7	58.9	1.9	406
40-44	73.6	80.3	85.0	82.5	86.6	52.6	2.9	347
45-49	66.4	76.6	85.7	80.5	88.7	50.1	3.3	389
Employment (last 12 months)								
Not employed	74.7	79.6	80.7	76.8	87.9	48.1	3.2	117
Employed for cash	72.6	81.3	87.0	84.6	89.5	56.3	2.7	1,143
Employed not for cash	60.7	71.8	77.1	70.6	78.8	38.3	6.0	456
Number of living children								
0	73.1	74.1	79.2	79.1	83.3	47.4	4.2	179
1-2	69.5	81.2	84.5	79.0	86.2	51.5	3.7	536
3-4	73.6	79.2	84.2	81.7	87.8	55.0	3.8	480
5+	64.8	77.1	84.8	80.9	86.9	47.9	3.2	521
Residence								
Total urban	83.8	91.2	93.4	91.1	96.3	71.9	0.4	570
Asmara	91.4	97.9	94.0	93.1	96.1	79.9	0.0	245
Other Town	78.0	86.1	92.9	89.6	96.5	65.8	0.7	324
Rural	62.5	72.4	79.3	75.0	81.7	40.5	5.2	1,146
Zoba								
Debubawi Keih Bahri	41.9	78.0	81.9	79.5	78.6	38.3	12.3	35
Maekel	90.7	96.6	92.7	91.5	95.5	75.6	0.0	347
Semenawi Keih Bahri	72.8	61.6	71.8	84.3	86.0	35.8	1.7	223
Anseba	64.8	63.6	85.8	88.7	91.0	44.4	1.7	229
Gash-Barka	52.8	66.4	76.9	63.4	73.1	34.8	11.2	426
Debub	72.1	92.5	89.2	81.6	91.0	58.9	0.5	455
Education								
No education	47.8	56.1	71.9	64.1	73.6	26.6	11.2	443
Primary	66.1	78.1	83.7	80.8	88.1	46.8	2.2	388
Middle	77.1	87.1	89.9	86.1	91.1	57.9	0.4	362
Secondary or above	85.5	92.4	90.4	89.9	93.3	69.9	0.5	521
Missing	100.0	100.0	100.0	100.0	100.0	100.0	0.0	0
Wealth quintile								
Lowest	52.5	58.7	71.0	68.7	78.0	27.9	5.9	341
Second	58.1	69.3	76.4	68.2	76.7	35.9	7.6	331
Middle	68.6	77.6	85.5	81.8	88.0	48.3	4.4	329
Fourth	80.6	88.6	91.4	89.1	92.5	63.6	0.6	348
Highest	86.3	97.1	94.5	92.5	96.6	76.3	0.0	366
Total 15-49	69.6	78.7	84.0	80.3	86.6	50.9	3.6	1,715
50-59	69.8	74.6	82.9	75.3	81.0	48.0	5.6	683
Total men 15-59	69.7	77.5	83.7	78.9	85.0	50.1	4.2	2,398

Note: Table is based on the CORE questionnaires.

15.3 Attitudes Towards Wife Beating

Gender-based violence (GBV) refers to violence that occurs as a result of the normative role expectations associated with each gender, along with the unequal power relationships between the two genders within the context of a specific society (Bloom, 2008). GBV cuts across cultures, ethnic groups, socioeconomic statuses, and religions. It is the most common type of violence that women experience worldwide, and it has serious consequences for women's mental and physical well-being, including their reproductive and sexual health (WHO, 1999).

15.3.1 Attitudes toward wife beating: women

Gender-based violence was declared to be a violation of human rights by the United Nations General Assembly in 1993 in its declaration on the elimination of violence against women (United Nations, 1993). GBV continues to occur despite various efforts to stop it. It remains a complex problem that requires examination from many different perspectives.

The EPHS2010 gathered information on women's and men's attitudes towards wife beating by asking women and men whether a husband is justified in beating his wife in five situations, if she: 1) burns food; 2) argues with him; 3) goes out without telling him; 4) neglects the children; or 5) refuses to have sexual intercourse with him. Women who believe that a husband is justified in hitting or beating his wife for any of the specified reasons may believe themselves to be inferior in status than men. High proportions of women who justify wife beating indicate that there is an acceptance of gendered violence in the society at large. However, as there is no data on the actual prevalence of partner violence in this DHS, it is not possible to say whether or not women who have experienced partner violence and women who have not differ with regards to attitudes on partner violence.

Table 15-9 shows the percentage of all women age 15-49 who agree that a husband is justified in hitting or beating his wife for specified reasons. The most commonly accepted reason (36 percent) for a husband to beat his wife is when she neglects their children, closely followed by those who go out without telling him at 35 percent, and those who argue with him at 32 percent. One-fourth (24 percent) and 18 percent of women show acceptance of wife beating when she refuses to have sexual intercourse and when she burns food, respectively. The proportion of women who agree with wife beating for at least one of the specified reason is 51 percent. The percentage of acceptance to wife beating falls in urban areas (42 percent), particularly in Asmara at 39 percent, compared to 58 percent in rural areas. The zoba variation ranges from 42 percent in Debubawi Keih Bahri to 61 percent in Debub. The proportion of women who accept wife beating for at least one of the specified reasons drops significantly in those with secondary education or more.

Compared to the findings of EDHS2002, the EPHS2010 shows significant reductions in 'justification for beating wife' in all the specified reasons:

- Burns the food has decreased from 29 to 18 percent
- Argues with him has decreased from 45 to 32 percent
- Goes out without telling him has decreased from 52 to 35 percent
- Neglects the children has decreased from 51 to 36 percent
- Refuses to have sexual intercourse with him has decreased from 48 to 24 percent

The percentage of women who agree with wife beating for at least one specific reason has decreased from 71 to 51 percent during the period 2002 and 2010.

Table 15-9 Attitude toward wife beating: Women

Percentage of all women age 15-49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Eritrea 2010

Background characteristic	Husband is justified in hitting or beating his wife if she:					Percentage who agree with at least one specified reason	Number
	Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him		
Age							
15-19	19.6	32.2	33.0	36.7	23.6	51.4	2,301
20-24	15.8	30.7	35.1	35.8	22.5	51.3	1,744
25-29	15.5	30.3	33.0	35.3	21.4	49.7	1,646
30-34	17.4	30.4	36.2	33.9	25.4	50.6	1,228
35-39	16.4	31.1	36.0	35.8	24.3	51.1	1,429
40-44	19.2	35.1	37.4	37.6	23.8	52.2	940
45-49	20.3	34.3	39.6	37.5	29.7	55.7	951
Employment (last 12 months)							
Not employed	17.8	32.5	36.2	36.3	24.5	52.1	7,860
Employed for cash	14.4	23.7	27.3	30.8	18.9	43.0	1,703
Employed not for cash	23.1	42.9	43.3	46.0	31.0	64.7	673
Missing	0.0	5.6	5.6	0.0	0.0	5.6	2
Marital status							
Never married	16.0	26.1	27.5	32.1	19.4	45.7	2,878
Married or living together	18.1	34.1	38.1	37.3	25.9	53.8	6,183
Divorced/separated/widowed	19.0	33.2	38.5	38.5	25.1	53.4	1,177
Number of living children							
0	16.7	28.2	30.0	33.1	21.0	47.2	3,564
1-2	17.2	33.4	36.3	37.2	24.6	52.9	2,553
3-4	16.3	30.6	36.2	36.1	22.9	51.3	2,008
5+	20.8	36.8	41.5	39.4	29.2	57.0	2,113
Residence							
Total urban	11.8	21.4	24.3	28.2	16.3	41.7	4,125
Asmara	11.4	16.6	19.8	26.3	13.4	39.1	1,870
Other Town	12.1	25.4	28.0	29.7	18.7	43.9	2,255
Rural	21.5	38.7	42.5	41.3	29.1	58.0	6,113
Zoba							
Debubawi Keih Bahri	16.4	31.4	31.3	26.2	13.9	41.9	163
Maekel	12.7	19.9	24.0	29.8	17.5	43.6	2,535
Semenawi Keih Bahri	18.3	34.0	36.1	33.8	27.4	52.8	1,122
Anseba	17.4	31.1	33.7	33.7	29.7	50.7	1,436
Gash-Barka	15.0	30.1	39.5	35.1	19.5	49.4	2,255
Debub	24.1	43.5	42.5	45.3	29.8	60.8	2,727
Education							
No education	21.1	39.5	44.7	40.9	28.7	58.0	3,882
Primary	21.7	36.0	40.1	40.4	29.9	56.6	2,162
Middle	15.8	29.2	31.4	35.5	21.3	50.9	1,946
Secondary or above	9.1	16.3	17.1	23.7	12.3	35.7	2,246
Missing	0.0	100.0	100.0	100.0	0.0	100.0	1
Wealth quintile							
Lowest	20.4	38.5	43.9	39.3	29.2	57.6	1,746
Second	24.4	41.1	44.0	43.4	31.3	58.0	1,769
Middle	22.5	39.5	42.9	42.4	29.4	58.7	2,014
Fourth	13.9	28.6	33.1	35.2	21.3	51.0	2,223
Highest	10.1	16.8	18.4	24.0	13.0	37.0	2,485
Total	17.6	31.7	35.2	36.0	24.0	51.4	10,238

Note: Table is based on the CORE questionnaires.

15.3.2 Attitudes towards wife beating: men

The EPHS2010 gathered information on men's attitudes towards wife beating by asking whether a husband is justified in beating his wife in the five situations stated above.

Thirty percent of the men regard neglecting the children as a reason for beating the wife. Twenty-seven percent if the wife goes out without telling him and 22 percent if she argues with him (Table 15-10). The percentage of men who accept beating wives decreases to 18 in a situation when the wife refuses to have sexual intercourse with him and to nine if she burns food. The percentage of men who agree with wife beating for at least one specified reason is 43 percent. Women are more likely than men to accept wife beating on at least one of the specified reasons.

The percentage of men who agree with at least one specified reason for beating wives decreases with increasing age, from 60 percent in the age group 15-19 years to 26 percent in those aged 40-44 years. However, what we see is that the biggest difference is between the two youngest age groups and the rest of the age groups. Some of this difference might be explained by the percentage of married men in the different age groups. Wife beating, with at least one specified reason, decreases with increasing number of children ever born and is lower in urban than rural areas (35 and 51 percent, respectively). The lowest rate of acceptance for wife beating is in Debubawi Keih Bahri, 16 percent; and highest in Debub, 70 percent.

No clear correlation between education and wealth is found, as the highest percentage of men who agree that a husband is justified in hitting or beating his wife for specific reasons is found among men with middle education, and middle wealth.

The EPHS2010 revealed that, generally, women recognize more reasons as having validity for wife beating when compared to men (Figure 15-1). Higher proportions of women who see justification for wife beating than men indicate that women generally accept the right of a man to control his wife's behavior through violence. However, a much lower percentage of justification of wife beating was reported by women in EPHS2010 than EDHS2002, which is considered as very good progress in narrowing the unequal power relationship between the two genders during the specified periods.

15.4 Attitudes Towards a Husband's Rights When His Wife Refuses to Have Sexual Intercourse

Overall, 53 percent of women age 15-49 report that the husband has the right to get angry and reprimand his wife when a she refuses to have sex with him when he wants her to (Table 15-11). The percentages range from 45 to 59, in all zobas, except for Gash-Barka where the percentage is very low, at 25 percent. Refusing her financial support is reported by 11 percent; using force to have sex is supported by seven percent; and having sex with another woman is supported by four percent.

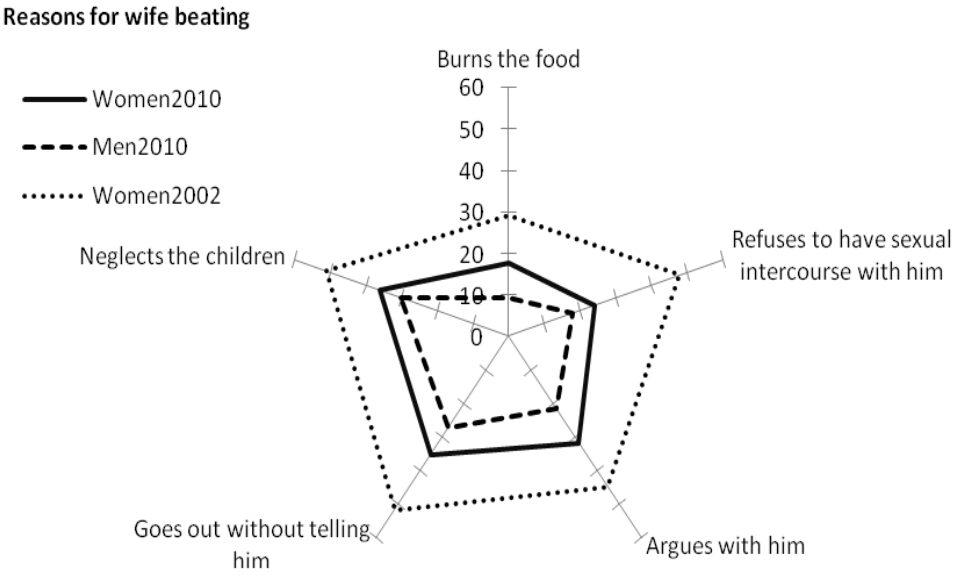
Table 15-10 Attitude toward wife beating: Men

Percentage of all men age 15-49 [59] who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Eritrea 2010

Background characteristic	Husband is justified in hitting or beating his wife if she:					Percentage who agree with at least one specified reason	Number
	Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him		
Age							
15-19	15.8	31.9	39.6	45.0	28.1	60.3	1,544
20-24	9.0	23.7	29.5	33.1	20.9	47.2	635
25-29	8.2	19.0	23.5	24.9	13.1	39.4	449
30-34	4.6	13.9	17.7	24.2	8.8	31.6	390
35-39	5.4	13.0	16.2	20.0	10.1	30.8	490
40-44	4.4	10.5	17.2	16.8	8.0	26.0	376
45-49	4.4	17.4	20.7	23.0	11.0	33.7	417
Employment (last 12 months)							
Not employed	12.2	27.3	34.4	40.6	23.8	53.5	1,364
Employed for cash	5.1	14.6	19.2	22.3	11.9	33.9	1,873
Employed not for cash	14.7	29.5	35.2	37.2	22.4	52.2	1,060
Missing	0.0	0.0	71.1	71.1	28.9	100.0	1
Marital status							
Never married	12.3	26.0	33.2	38.2	22.9	52.1	2,504
Married or living together	5.9	16.8	20.7	22.6	11.4	33.8	1,715
Divorced/separated/widowed	8.5	25.5	21.8	26.2	19.3	41.5	78
Missing	0.0	51.5	0.0	51.5	0.0	51.5	2
Number of living children							
0	12.5	25.9	32.9	37.6	22.7	51.6	2,681
1-2	5.7	19.4	21.2	23.3	12.9	35.5	598
3-4	5.0	12.4	18.4	20.7	8.5	30.0	493
5+	4.7	16.4	20.0	21.9	10.9	33.3	527
Residence							
Total urban	4.9	12.8	18.3	23.7	10.4	35.3	1,757
..Asmara	4.7	9.6	15.1	21.3	9.2	32.6	855
..Other Town	5.2	15.9	21.3	26.0	11.6	37.8	902
Rural	13.0	28.8	34.7	37.4	23.7	51.1	2,542
Zoba							
Debubawi Keih Bahri	2.9	8.5	11.5	7.5	3.7	16.1	67
Maekel	4.8	11.9	17.9	22.5	11.5	35.1	1,196
Semenawi Keih Bahri	6.7	23.2	23.1	27.8	17.5	40.0	470
Anseba	8.9	15.1	22.1	23.9	16.5	34.9	588
Gash-Barka	7.7	17.7	21.1	20.7	10.0	33.4	778
Debub	17.8	39.5	48.3	55.0	32.4	69.6	1,200
Education							
No education	8.9	21.8	26.9	24.4	15.5	37.1	599
Primary	12.0	25.5	30.5	32.5	19.4	44.7	659
Middle	13.9	30.5	38.8	43.3	26.6	58.2	1,188
Secondary or above	6.4	16.0	20.5	26.5	13.4	38.4	1,853
Missing	0.0	0.0	0.0	0.0	0.0	0.0	0
Wealth quintile							
Lowest	12.3	28.0	32.7	33.7	20.4	46.0	739
Second	14.2	32.0	39.2	38.8	28.0	54.6	699
Middle	13.1	31.1	34.0	38.2	24.4	53.3	753
Fourth	8.4	19.2	26.4	33.4	16.6	45.2	960
Highest	4.2	9.5	15.6	20.8	8.3	31.6	1,148
Total 15-49	9.7	22.3	28.0	31.8	18.3	44.6	4,299
50-59	6.1	16.6	21.7	20.9	15.1	32.6	722
Total men 15-59	9.2	21.5	27.1	30.2	17.8	42.9	5,021

Note: Table is based on the CORE questionnaires.

Figure 15-1 Reason for wife beating by men and women



15.4.1 Women's attitude towards a husband's rights when his wife refuses to have sexual intercourse

The percentage of those who agree with all of the specified reasons is only 1.2 percent and those who agree with none of the specified reasons account for 46 percent. The proportion of women who agree with none of the specified reasons is higher among the youngest (15-19), never married, those with no children, urban residents, in Debubawi Keih Bahri, those with at least secondary education, and those in the highest wealth quintile, compared to their counterparts (Table 15-11).

15.4.2 Men's attitudes toward a husband's rights when his wife refuses to have sexual intercourse

Overall, 45 percent of men report that the husband has the right to get angry and reprimand on his wife when she refuses to have sexual intercourse (Table 15-12). Men who agree with refusing wife financial support, using force to have sex, and have sex with another women when the wife refuses to have sex with him account for nine percent, five percent, and five percent, respectively. Fifty-three percent did not agree to any of the specified behaviors of husbands and those who agree with all of the specified reasons account for only 0.8 percent.

The percentage of men who agree with none of the specified reasons is highest in Debubawi Keih Bahri, with 82 percent and lowest in Debub, with 41 percent. This may indicate that women have more rights in Debubawi Keih Bahri as compared to other zobas.

Table 15-11 Women's attitude toward a husband's rights when his wife refuses to have sexual intercourse

Percentage of women age 15-49 who consider a husband to have the right to certain behaviors when a woman refuses to have sex with him when he wants her to, by background characteristics, Eritrea 2010

Background characteristic	When a woman refuses to have sex with her husband, he has the right to:				Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number
	Get angry and reprimand her	Refuse her financial support	Use force to have sex	Have sex with another woman			
Age							
15-19	47.7	10.1	5.5	3.3	0.9	50.6	2,301
20-24	52.9	9.8	6.8	4.1	1.0	45.2	1,744
25-29	52.6	9.5	8.2	4.4	1.3	45.4	1,646
30-34	52.9	11.1	8.2	4.3	0.7	45.4	1,228
35-39	55.0	11.8	7.5	4.6	1.5	43.5	1,429
40-44	54.8	11.1	8.1	4.6	1.9	43.6	940
45-49	56.6	10.6	10.0	4.4	1.5	42.2	951
Employment (last 12 months)							
Not employed	52.3	10.6	7.7	4.3	1.2	46.0	7,860
Employed for cash	51.0	8.3	5.5	3.8	1.0	47.3	1,703
Employed not for cash	59.1	14.7	9.4	3.0	1.5	39.3	673
Missing	0.0	0.0	0.0	0.0	0.0	100.0	2
Marital status							
Never married	45.7	8.4	4.3	3.3	0.8	52.7	2,878
Married or living together	54.8	11.5	8.8	4.6	1.4	43.4	6,183
Divorced/separated/widowed	57.1	10.0	7.6	3.6	0.9	41.5	1,177
Number of living children							
0	46.7	8.5	4.7	3.2	0.8	51.8	3,564
1-2	55.6	11.3	8.0	4.4	1.0	42.2	2,553
3-4	53.0	10.6	8.7	5.2	1.7	45.3	2,008
5+	58.1	12.6	10.1	4.4	1.7	40.6	2,113
Residence							
Total urban	48.3	7.1	4.1	3.8	0.7	50.4	4,125
Asmara	47.2	4.9	3.3	3.2	0.7	51.8	1,870
Other Town	49.3	8.9	4.7	4.2	0.8	49.3	2,255
Rural	55.3	12.7	9.7	4.4	1.5	42.7	6,113
Zoba							
Debubawi Keih Bahri	25.2	5.4	1.6	0.7	0.4	74.6	163
Maekel	51.3	6.2	4.2	3.4	0.9	47.7	2,535
Semenawi Keih Bahri	48.5	14.0	8.8	2.4	1.3	50.0	1,122
Anseba	61.8	7.6	11.1	4.2	0.6	35.7	1,436
Gash-Barka	46.0	12.2	6.2	6.2	1.3	52.0	2,255
Debub	57.4	13.3	9.3	4.1	1.6	40.8	2,727
Education							
No education	54.3	13.3	10.0	5.0	1.7	43.8	3,882
Primary	57.2	11.9	9.6	4.8	1.2	40.4	2,162
Middle	51.8	9.6	5.3	3.8	1.0	46.8	1,946
Secondary or above	45.4	4.7	2.7	2.4	0.3	53.6	2,246
Missing	100.0	100.0	0.0	0.0	0.0	0.0	1
Wealth quintile							
Lowest	53.7	13.5	10.3	4.4	1.3	44.5	1,746
Second	55.6	14.4	10.5	5.2	1.7	42.3	1,769
Middle	54.8	13.0	9.4	5.6	1.8	42.8	2,014
Fourth	54.3	8.6	5.6	3.4	0.8	44.3	2,223
Highest	45.9	5.1	3.2	2.7	0.6	53.0	2,485
Total 15-49	52.5	10.5	7.4	4.1	1.2	45.8	10,238

Note: Table is based on the CORE questionnaires.

Table 15-12 Men's attitude toward a husband's rights when his wife refuses to have sexual intercourse

Percentage of men age 15-49 [59] who consider that a husband has the right to certain behaviors when a woman refuses to have sex with him when he wants her to, by background characteristics, Eritrea 2010

Background characteristic	When a woman refuses to have sex with her husband, he has the right to:				Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number
	Get angry and reprimand her	Refuse her financial support	Use force to have sex	Have sex with another woman			
Age							
15-19	51.8	12.9	8.1	5.9	1.3	45.8	1,544
20-24	51.1	12.9	6.3	5.0	0.9	45.9	635
25-29	41.5	7.4	3.2	3.3	0.3	56.2	449
30-34	40.2	7.0	1.8	4.9	0.6	57.2	390
35-39	33.3	5.0	3.2	3.1	0.5	64.5	490
40-44	36.4	6.2	2.5	3.1	0.5	61.7	376
45-49	44.5	7.1	4.5	3.7	1.3	53.6	417
Employment (last 12 months)							
Not employed	48.1	11.4	7.4	4.9	1.1	50.0	1,364
Employed for cash	41.5	6.5	3.1	3.8	0.5	56.6	1,873
Employed not for cash	48.9	13.5	6.7	5.7	1.2	47.2	1,060
Missing	28.9	0.0	0.0	0.0	0.0	71.1	1
Marital status							
Never married	48.8	11.4	6.4	5.3	0.9	48.5	2,504
Married or living together	40.4	7.2	3.6	3.8	0.8	57.7	1,715
Divorced/separated/widowed	46.6	12.7	6.7	3.9	1.5	49.0	78
Missing	51.5	0.0	51.5	0.0	0.0	48.5	2
Number of living children							
0	48.7	11.5	6.4	5.1	1.0	48.7	2,681
1-2	42.1	6.7	3.9	4.6	0.8	55.6	598
3-4	35.0	6.0	3.3	2.1	0.2	63.1	493
5+	42.2	8.0	3.7	4.5	1.2	56.0	527
Residence							
Total urban	39.9	4.6	3.0	2.7	0.2	58.1	1,757
Asmara	40.8	4.4	2.2	3.0	0.0	56.5	855
Other Town	39.0	4.8	3.7	2.4	0.3	59.6	902
Rural	49.3	13.3	7.0	6.0	1.4	48.1	2,542
Zoba							
Debubawi Keih Bahri	17.2	1.8	1.1	0.9	0.8	82.2	67
Maekel	44.3	5.8	3.2	3.8	0.0	53.1	1,196
Semenawi Keih Bahri	55.8	11.7	6.3	2.1	0.9	41.9	470
Anseba	42.1	9.4	4.7	2.2	0.8	55.4	588
Gash-Barka	27.9	5.7	3.2	4.2	0.4	69.8	778
Debub	57.1	16.1	9.0	8.1	2.2	40.6	1,200
Education							
No education	40.6	10.7	7.5	5.4	1.7	56.3	599
Primary	48.8	13.0	6.0	6.3	1.9	49.4	659
Middle	50.8	11.9	7.4	6.1	1.2	46.6	1,188
Secondary or above	42.4	6.9	3.1	2.9	0.1	55.5	1,853
Missing	0.0	0.0	0.0	0.0	0.0	100.0	0
Wealth quintile							
Lowest	48.7	14.3	7.3	6.1	1.7	49.4	739
Second	51.1	15.4	9.6	7.9	2.1	45.7	699
Middle	47.9	10.4	5.3	4.5	1.0	49.7	753
Fourth	45.1	8.6	4.2	3.8	0.4	52.1	960
Highest	38.5	3.9	2.5	2.5	0.0	59.6	1,148
Total 15-49	45.4	9.7	5.4	4.6	0.9	52.2	4,299
50-59	40.6	7.0	4.2	3.4	0.1	58.1	722
Total men 15-59	44.7	9.4	5.2	4.5	0.8	53.0	5,021

Note: Table is based on the CORE questionnaires.

Not accepting all the specified behavior of husbands is slightly lower among men in young age group (15-24), those who are not employed or employed not for cash, those who are never married or divorced/widowed/separated, those with no children, those in rural areas, those with middle education, and those in the second wealth quintile, compared to their counterparts.

In general, the pattern of men's attitude toward a husband's right when his wife refuses to have sexual intercourse by background characteristics is similar to that of women, but the percentages are generally lower than that of women (Table 15-11 and Table 15-12) and the findings for both sexes is as follows.

- Get angry and reprimand her: 53 percent of women and 45 percent of men consider it justified.
- Refuse her financial support: 11 percent of women and 9 percent of men consider it justified.
- Use force to have sex: 7 percent of women and 5 percent of men consider it justified.
- Have sex with another woman: 4 percent of women and 5 percent men consider it justified.

15.5 Indicators of Women's Empowerment

Two women's empowerment indices were created for the EPHS2010; namely, women's participation in making household decisions and women's attitudes towards wife beating. The distribution of women by these two indices was then linked to select demographic and health indicators such as contraceptive use, ideal family size, unmet need for family planning, utilization of reproductive health care, and childhood mortality.

The index of women's participation in household decisions ranges in value from 0 to 3 and corresponds with the number of decisions in which women participate alone or jointly with their husbands/partners (see Table 15-5 for the list of decisions). This index reflects the degree of decision-making control that women are able to exercise in areas that affect their own lives and environments. A high score on this index indicates a high level of empowerment.

The index of women's attitudes towards wife beating ranges in value from 0 to 5 and corresponds with the total number of reasons for which the respondent feels that a husband is justified in beating his wife (Table 15-9 for the list of reasons). A low score on this index reflects a greater sense of self-worth and higher status of women.

The relation of these two indices to each other is presented in Table 1513. In general, the expectation is that women who participate more in making household decisions will be less likely to endorse wife beating.

A similar pattern is also observed between number of reasons for which wife beating is justified and percentage who disagree with all of the specific behavior of husbands when a wife refuses to have sexual intercourse (Table 15-13).

Table 15-13 Indicators of women's empowerment

Percentage of women age 15-49 who participate in all decision making, percentage who disagree with all reasons for justifying wife-beating, and percentage who agree with none of the specified behavior of husband when the wife refuses to have sexual intercourse, by value on each of the indicators of women's empowerment, Eritrea 2010

Empowerment indicator	Currently married women		Percentage who disagree with all the reasons justifying wife-beating	Percentage who disagree with all the specified behaviors of husband when a wife refuses to have sexual intercourse	Number of women
	Percentage who participate in all decision making	Number of women			
Number of decisions in which women participate[1]					
0	0.0	129	50.7	52.2	129
1-2	0.0	734	46.2	48.6	734
3-4	0.0	993	38.7	36.3	993
5-6	100.0	4,327	47.8	43.9	4,327
Number of reasons for which wife-beating is justified[2]					
0	72.4	2,858	100.0	65.2	4,971
1-2	70.0	1,463	0.0	38.8	2,425
3-4	68.5	1,220	0.0	22.9	1,869
5	62.1	641	0.0	8.2	973
Number of justified behaviors of husband when a wife refuses to have sexual intercourse[3]					
0	70.8	2,684	69.1	100.0	4,690
1-2	69.6	3,199	33.0	0.0	5,126
3-4	67.3	300	9.2	0.0	422

Note: Table is based on the CORE questionnaires.
[1] Restricted to currently married women. See Table 157 for the list of decisions.
[2] See Table 159 for the list of reasons.
[3] See Table 1511 for the list of reasons.

15.6 Current Use of Contraception by Women's Status

Among women age 15-49, current use of any method of contraception is very low, at 8.4 percent with 7.1 percent using any modern method and 1.3 percent using any traditional method (Table 1514).

Compared to the EDHS2002 (8 percent), contraceptive prevalence rate has remained almost constant in 2010. Contraceptive use is positively correlated with participation in household decisions. Use of any contraceptive method is lower among women who do not participate in any household decision (3 percent) than among women who participate in five to six household decisions (10 percent). Eight percent of women who participate in at least one household decision are currently using a method of family planning.

Contraceptive use is negatively correlated with the acceptance of wife beating. Use of any contraceptive method and use of any modern method is lower among women who agree with all the five reasons justifying wife beating (5 and 4 percent, respectively) than among women who agree with none of the reasons (11 and 9 percent, respectively).

Table 15-14 Current use of contraception by women's status

Percent distribution of currently married women age 15-49 by current contraceptive method, according to selected indicators of women's status, Eritrea 2010

Empowerment indicator	Any method	Modern methods				Any traditional method	Not currently using	Total	Number of women
		Any Modern Method[1]	Female sterilization	Temporary modern female methods	Male condom				
Number of decisions in which women participate[2]									
0	2.9	1.6	0.7	0.9	0.0	1.3	97.1	100.0	129
1-2	5.4	5.1	0.3	4.3	0.4	0.3	94.6	100.0	734
3-4	6.1	4.8	0.3	3.9	0.6	1.3	93.9	100.0	993
5-6	9.6	8.2	0.2	7.0	0.9	1.5	90.4	100.0	4,327
Number of reasons for which wife-beating is justified[3]									
0	10.5	8.9	0.3	7.4	1.1	1.7	89.5	100.0	2,858
1-2	8.5	7.2	0.3	6.2	0.8	1.3	91.5	100.0	1,463
3-4	5.5	4.6	0.0	4.2	0.4	0.9	94.5	100.0	1,220
5	4.6	4.0	0.1	3.4	0.4	0.6	95.4	100.0	641
Number of justified behaviors of husband when a wife refuses to have sexual intercourse[4]									
0	8.6	7.3	0.2	6.1	1.0	1.2	91.4	100.0	2,684
1-2	8.5	7.2	0.3	6.2	0.7	1.4	91.5	100.0	3,199
3-4	6.0	4.7	0.0	4.0	0.7	1.3	94.0	100.0	300
Total	8.4	7.1	0.2	6.1	0.8	1.3	91.6	100.0	6,183

Note: Table is based on the CORE questionnaires.
If more than one method is used, only the most effective method is considered in this tabulation.
[1] Pill, IUD, injectables, implants, female condom, diaphragm, foam/jelly and lactational amenorrhea method.
[2] See Table 157 for the list of decisions.
[3] See Table 159 for the list of reasons.
[4] See Table 1511 for the list of reasons.

15.7 Women's Empowerment and Ideal Number of Children and Unmet Need for Family Planning

Overall 'mean ideal number of children' for women 15-49 is high, at 5.6 (Table 15-15). The percentage of currently married women with an unmet need for family planning is also high, at 27 percent. There is no marked variation in mean ideal number of children and unmet need for family planning by women's empowerment status. Women with higher status, however, tend to desire a slightly lower number of children compared to those with lower empowerment status. The mean ideal number of children for women who do not participate in any of the decisions is 6.4, compared to 6.1 among those who participate in 5-6 decisions. Whereas the mean ideal number of children of women who did not agree with all of the reasons for which wife-beating is justified is 5.5, the corresponding figure for those who agree with all of the reasons is 6.1. Similarly, average ideal number of children ranges from 5.4 among women who do not agree with any of the specific behavior of husbands when she refuses to have sexual intercourse with him to 6.3 among those who agree with all of the specified behaviors.

Table 15-15 Women's empowerment and ideal number of children and unmet need for family planning

Mean ideal number of children for women 15-49 and the percentage of currently married women age 15-49 with an unmet need for family planning, by indicators of women's empowerment, Eritrea 2010

Empowerment indicator	Mean ideal number of children[1]	Number of women	Percentage of currently married women with an unmet need for family planning[2]			Number of women
			For spacing	For limiting	Total	
Number of decisions in which women participate[3]						
0	6.4	114	27.8	3.1	30.9	129
1-2	6.5	579	18.1	4.9	22.9	734
3-4	6.5	827	19.5	7.0	26.5	993
5-6	6.1	3,803	21.0	7.2	28.3	4,327
Number of reasons for which wife-beating is justified[4]						
0	5.5	4,346	21.3	6.2	27.5	2,858
1-2	5.7	2,131	20.7	7.2	27.9	1,463
3-4	5.8	1,675	20.4	7.1	27.5	1,220
5	6.1	862	17.8	8.0	25.8	641
Number of justified behaviors of husband when a wife refuses to have sexual intercourse[5]						
0	5.4	4,045	21.1	6.2	27.3	2,684
1-2	5.7	4,581	20.1	7.2	27.3	3,199
3-4	6.3	388	21.4	8.5	29.9	300
Total	5.6	9,015	20.6	6.8	27.4	6,183

Note: Table is based on the CORE questionnaires.
[1] Mean excludes respondents who gave non-numeric responses.
[2] See Table 7-4 for the definition of unmet need for family planning.
[3] Restricted to currently married women. See Table 157 for the list of decisions.
[4] See Table 159 for the list of reasons.
[5] See Table 1511 for the list of reasons.

15.8 Reproductive Health Care by Women's Empowerment

The EPHS2010 results show that 89 percent of women received antenatal care from health services personnel and 36 percent received delivery assistance from health services personnel. These are significant increases from the EDHS2002 findings of 70 percent for antenatal care and 28 percent for assisted delivery by health personnel (Table 15-16).

The proportion of women who received antenatal care from health personnel for a live birth in the five years preceding the survey increases with the number of decisions in which the women participates, from 77 percent among those who do not participate in any decision to 91 percent among those who have a say in all of the six decisions. Only 13 percent of women who do not participate in any decisions received delivery assistance from health personnel, compared with 39 percent of those who participate in all six decisions (Table 15-16).

Similarly, among women who do not justify wife beating for any reason, 90 percent received antenatal care from health professionals and 43 percent received delivery assistance from health professionals. In contrast, the corresponding proportions among who justify wife beating for all of the five specific reasons were 86 percent and 28 percent.

Generally, it can be concluded from the above findings that women with higher level of empowerment are likely to increase their ability to seek and use health services to better their own reproductive health needs.

Table 15-16 Reproductive health care by women's empowerment

Percentage of women age 15-49 with a live birth in the five years preceding the survey who received antenatal care, delivery assistance and postnatal care from health personnel for the most recent birth, by indicators of women's empowerment, Eritrea 2010

Empowerment indicator	Received antenatal care from health personnel[1]	Received delivery assistance from health personnel[1]	Received postnatal care from health personnel within the first two days since delivery	Number of women with a child born in the last five years
Number of decisions in which women participate[2]				
0	76.5	12.8	5.8	81
1-2	80.6	24.3	2.4	477
3-4	86.4	29.5	2.8	700
5-6	90.5	38.8	2.6	3,071
Number of reasons for which wife-beating is justified[3]				
0	89.8	42.8	2.9	2,170
1-2	87.9	36.9	2.5	1,145
3-4	87.3	27.2	1.5	929
5	86.2	21.1	2.5	466
Number of justified behaviors of husband when a wife refuses to have sexual intercourse[4]				
0	87.3	40.2	2.7	2,002
1-2	89.4	33.9	2.6	2,475
3-4	89.3	24.9	0.7	232
Total	88.5	36.1	2.5	4,709

Note: Table is based on the CORE questionnaires.
'Health personnel' includes doctor, nurse, midwife, or associate nurse or associate midwife.
[1] Includes deliveries in a health facility and not in a health facility
[2] Restricted to currently married women. See Table 157 for the list of decisions.
[3] See Table 159 for the list of reasons
[4] See Table 1511 for the list of reasons

15.9 Child Health Care by Women's Status

In Eritrea, 2010, 83 percent of children age 12-23 months were fully vaccinated. Full vaccination coverage has increased by 9 percent from the EDHS2002, which was 76 percent (Table 15-17).

The proportion of children age 12-23 months fully vaccinated and the proportion of children with ARI and diarrhea taken to health facility provider generally increases with the number of decisions in which the women participates (Table 15-17). The percentages, however, generally decline with the number of reasons women justifies wife beating and the number of specific behaviors husbands are justified to use when their wife refuses to have sexual intercourse.

Table 15-17 Child health care by women's status

Percentage of children age 12-23 who were fully vaccinated, and percentage of children under five years who were ill with symptoms of ARI and/or diarrhea, in the two weeks preceding the survey taken to a health provider for treatment, by indicators of women's empowerment, Eritrea 2010

Empowerment indicator	Percentage fully vaccinated[1]	Number of children 12-23 months	Percentage taken to a health provider[2]	Number of children with symptoms of ARI	Percentage taken to a health provider[2]	Number of children with diarrhea
Number of decisions in which women participate[3]						
0	84.9	25	37.6	11	15.8	8
1-2	70.3	131	37.4	74	40.8	64
3-4	85.0	198	43.2	167	27.6	104
5-6	84.4	883	46.1	462	35.9	389
Number of reasons for which wife-beating is justified[4]						
0	83.2	621	52.1	307	39.7	259
1-2	80.9	329	46.2	188	29.1	137
3-4	86.3	246	39.2	175	33.5	128
5	80.8	127	27.5	85	28.4	84
Number of justified behaviors of husband when a wife refuses to have sexual intercourse[5]						
0	81.7	559	53.0	287	39.3	224
1-2	85.1	692	40.0	429	31.8	345
3-4	73.2	72	37.8	39	29.9	39
Total	83.0	1,323	44.8	755	34.4	608

Note: Table is based on the CORE questionnaires.
[1] BCG, measles and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)
[2] Excludes pharmacy, shop and traditional practitioner
[3] Restricted to currently married women. See Table 157 for the list of decisions.
[4] See Table 159 for the list of reasons
[5] See Table 1511 for the list of reasons

FEMALE CIRCUMCISION 16

Key Findings

- Knowledge of Eritrean women who have heard of the proclamation regarding female circumcision 91 percent.
- Eighty-three percent of women reported that they had been circumcised, a decline of 12 percent since 1995. Younger women are less likely to be circumcised than older women.
- One-third of women (34 percent) were circumcised before the age of one while 59 percent of women were circumcised before they reached five years of age.
- Four-fifths (80 percent) of circumcision is performed by traditional 'circumcisers' and 4 percent by traditional birth attendants.
- Overall, 44 percent of women reported that at least one of their daughters had been circumcised, indicating a 19 percentage point decline since 1995. Prevalence of daughter's circumcision is considerably higher in Debubawi Keih Bahri (78 percent).
- The main reason for not being circumcised is because it is against the law; over two-thirds (67 percent). Highest score for against the law was observed in Anseba (86 percent) and lowest in Gash-Barka (53 percent).
- Nearly four-fifths (77 percent) of Eritrean women and 82 percent of men believe that there is no benefit from female circumcision.

The EDHS1995 and EDHS2002 were the first and second national-level surveys in Eritrea that included questions about the practice of female circumcision. Nowadays this practice is also called female genital cutting (FGC) and in this chapter these two terms are used interchangeably. The 1995 survey found that the practice was very widespread (95 percent) in Eritrea. In EDHS2002, however, it fell to 89 percent. Similar to the EDHS2002, the EPHS2010 also collected information on knowledge, attitude and practice of female circumcision in Eritrea from all eligible men and women age 15-49. This was aimed at further investigating the prevalence of and attitudes towards FGC among Eritrean women and to assess whether there is evidence of change in attitudes or behaviors since the first and second EDHS.

Female genital cutting (FGC) is a term used for a various types of ritual surgeries carried out on female genitals for traditional, religious, and aesthetic reasons, which is usually backed by social pressure. The negative consequences of FGC can be immediate and/or have long-term health risks and complications.

Although variations exist, there are three generally recognized types of circumcision: clitoridectomy, excision, and infibulation. Clitoridectomy is the removal of the prepuce with or without excision of all or part of the clitoris. Excision is the removal of the prepuce and clitoris along with all or part of the labia minora. Infibulation (also called "pharaonic circumcision") is the most severe form of female circumcision. It consists of removal of all or part of the external genitalia, followed by joining together of the two sides of the labia majora using threads, thorns, or other materials to narrow the vaginal opening (WHO, 1996). The types of circumcision are not strictly defined and categorization may not be exact because of variations in the procedure used by practitioners. For this reason unlike the EDHS1995, the names of these categories were not used in the EPHS2010 questionnaire; rather respondents were asked about the severity of the operations.

Concerned by the high prevalence of female circumcision, the procedure violating basic women's human rights, the possibility of seriously endangering the health of women, causing them considerable pain and suffering, and threatening their lives, Eritrea promulgated "The Female Circumcision Abolition Proclamation No. 158/2007" in 2007 (Eritrea, Proclamation of Female Circumcision Abolition, 2007). However, while the practice has been outlawed, it still occurs throughout the country.

16.1 Knowledge and Prevalence of Female Circumcision and Knowledge about the Proclamation

16.1.1 Knowledge and prevalence

Almost all female respondents (99 percent) have heard of female genital cutting (Table 16-1) and knowledge of female circumcision is almost universal among Eritrean women. FGC was common, historically, in Eritrea. Eighty-three percent of all women reported that they had been circumcised. Women aged 15-19 and 20-24 are less likely than older women to be circumcised (69 and 79 percent, respectively), declines which preceded the proclamation. Two-thirds of mothers reported they did not circumcise their youngest daughter because it is against the low. Moreover, 77 percent of women and 82 percent of men indicated that circumcision has no benefit and 82 percent of women want the practice to discontinue. There is no difference between towns other than Asmara and rural areas (both of them at 85 percent) in the prevalence of circumcision. Prevalence is lowest in Asmara (74 percent). The practice of female circumcision is somewhat lower in Maekel (75 percent) and Debub (71 percent) than in other zobas and Anseba has the highest prevalence (96 percent). The practice of female circumcision decreases from 89 percent among least affluent women to 75 percent among the most affluent women.

The 2010 prevalence of female circumcision showed a 12 percent decline compared to 1995 and a six percent decline from 2002 (Figure 16-1). As mentioned above, the decline is most notable among younger women (under 25) and among women in Debub.

16.1.2 Women's knowledge of the proclamation on female circumcision

Ninety-one percent of women age 15-49 in Eritrea have heard of the proclamation of banning female circumcision (Table 16-1). The youngest women (15-19) are less likely to know of the proclamation (87 percent) than older women (91-93 percent). Knowledge is lower among women in rural than urban areas (87 and 96 percent, respectively). In the zobas, the proportion of women who have heard of the proclamation ranges from a low of 75 percent among women in Gash-Barka to a high of 97 percent among women in Maekel and Anseba. Knowledge increases with an increasing level of education and wealth index. Youngest women, women in rural areas, in Anseba, those with no education and those in the first and second wealth quintile have lower levels of knowledge than the national average.

16.1.3 Activities against circumcision

Since the Eritrean proclamation on FGM in 2007, certain activities against FGM have been initiated. Overall, nearly six in ten women reported that there were activities against female circumcision in their area (Table 16-1). Women in Anseba have higher awareness (85 percent) of activities against FGM while Maekel has the least (41 percent). Other zobas fall in the range of 53-68 percent. Asmara women report little knowledge of anti-circumcision activities (37 percent) while other towns and rural areas reported such knowledge at levels of 73 percent and 60 percent, respectively. There are not major differences in knowledge of such activities on the part of women in the different age groups and in the wealth quintiles.

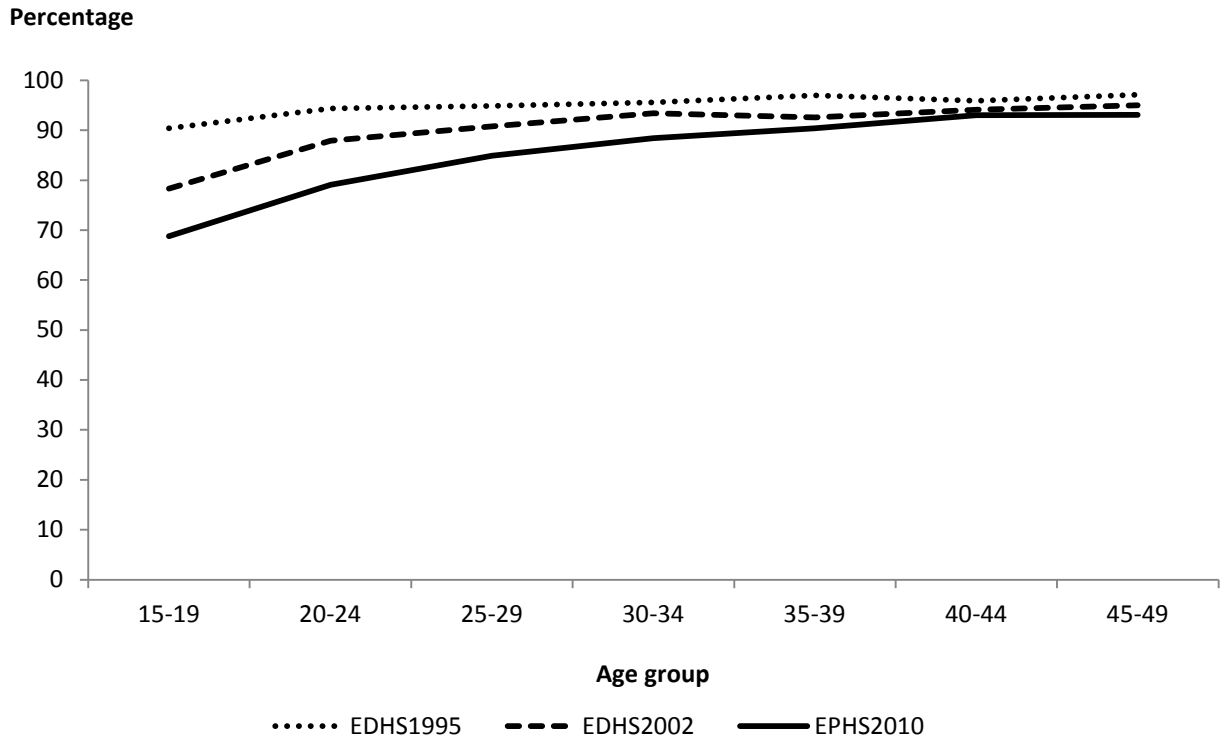
Table 16-1 Female knowledge and prevalence of female circumcision and knowledge of proclamation

Percentage of women who have heard of female circumcision, percentage of women circumcised, percentage of women who have heard of proclamation, and percentage of women who reported that there were activities against female, circumcision in the area, according to background characteristics, Eritrea 2010

Background characteristic	Percentage of women who heard of female circumcision	Percentage of women circumcised	Percentage of women who have heard of proclamation	Percentage of women reported activities against circumcision in the area	Number of women
Age					
15-19	97.8	68.8	86.9	51.3	2,301
20-24	99.5	79.1	92.7	55.9	1,744
25-29	99.8	84.9	92.3	60.7	1,646
30-34	99.4	88.4	91.8	61.6	1,228
35-39	99.6	90.4	92.1	63.0	1,429
40-44	99.6	93.0	91.3	64.8	940
45-49	99.1	93.1	91.4	64.6	951
Residence					
Total urban	99.5	80.0	96.1	56.7	4,125
Asmara	99.4	73.6	96.4	37.2	1,870
Other Town	99.6	85.4	95.9	72.8	2,255
Rural	98.9	85.0	87.4	60.4	6,113
Zoba					
Debubawi Keih Bahri	100.0	94.3	95.1	53.4	163
Maekel	99.4	74.7	96.5	41.1	2,535
Semenawi Keih Bahri	99.7	95.4	93.5	68.0	1,122
Anseba	99.9	95.9	97.0	85.2	1,436
Gash-Barka	99.1	91.2	75.4	54.0	2,255
Debub	98.3	71.2	94.0	62.2	2,727
Education					
No education	98.8	90.6	84.2	59.4	3,882
Primary	99.3	86.5	92.6	66.5	2,162
Middle	99.2	75.6	95.6	60.4	1,946
Secondary or above	99.6	72.8	96.8	49.4	2,246
Missing	100.0	100.0	100.0	100.0	1
Wealth quintile					
Lowest	98.6	89.4	82.5	58.3	1,746
Second	98.3	85.6	86.1	59.7	1,769
Middle	99.4	84.4	88.9	63.0	2,014
Fourth	99.8	83.3	96.9	65.3	2,223
Highest	99.5	75.2	96.5	49.7	2,485
Total	99.2	83.0	90.9	58.9	10,238

Note: The table is based on the CORE questionnaires.

Figure 16-1 Percent of women circumcised



16.2 Age at Circumcision

Female circumcision in Eritrea has traditionally been carried out mainly before the age of five years (Table 16-2). Thirty-four percent of women were circumcised at the age of one month or below while 59 percent of women were circumcised before age five. The remainder of circumcised women (27 percent) of women reported not knowing when they were circumcised. The proportion of women circumcised at 5 years or older is 15 percent.

Urban women are more likely to be circumcised at an early age than women in rural areas. Fifty-six percent of women in Debubawi Keih Bahri were circumcised within the first 30 days after birth, as were 30 percent in Debub and Maekel and the majority of women in other zobas were circumcised after infancy (Table 16-2). In Debubawi Keih Bahri the highest rate of circumcision occurs before the girl has reached eight days of age (49 percent) while a considerable proportion occurs at late ages (5 years and above) for Gash-Barka (28 percent), Semenawi Keih Bahri (26 percent) and Anseba (24 percent) (Table 16-2 and Figure 16-3). When it is seen geographically, the three lowland zobas show similar trends in the timing of circumcision. There were no major differences by educational level and wealth quintiles. An examination of the age at circumcision from the EDHS1995, EDHS2002, and the EPHS2010 shows that the younger cohorts of 2010 were circumcised less often before one month of age than the older cohorts. The apparent difference may be due to an increase in the proportion of women that do not know the age of their circumcision. If real, the change of timing may be presumed to have helped in the reduction of neonatal and infant mortality rates.

Figure 16-2 Age at circumcision women aged 15-49

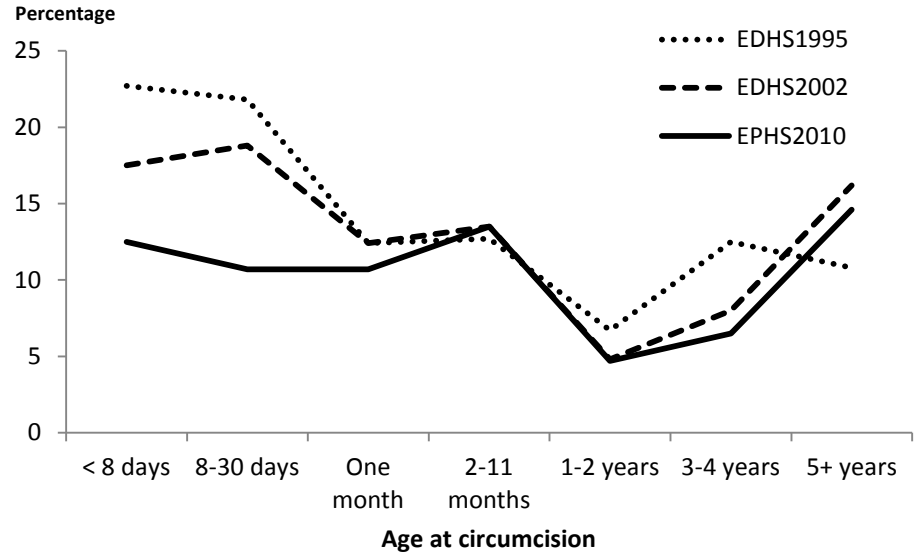


Figure 16-3 Age at circumcision by zoba

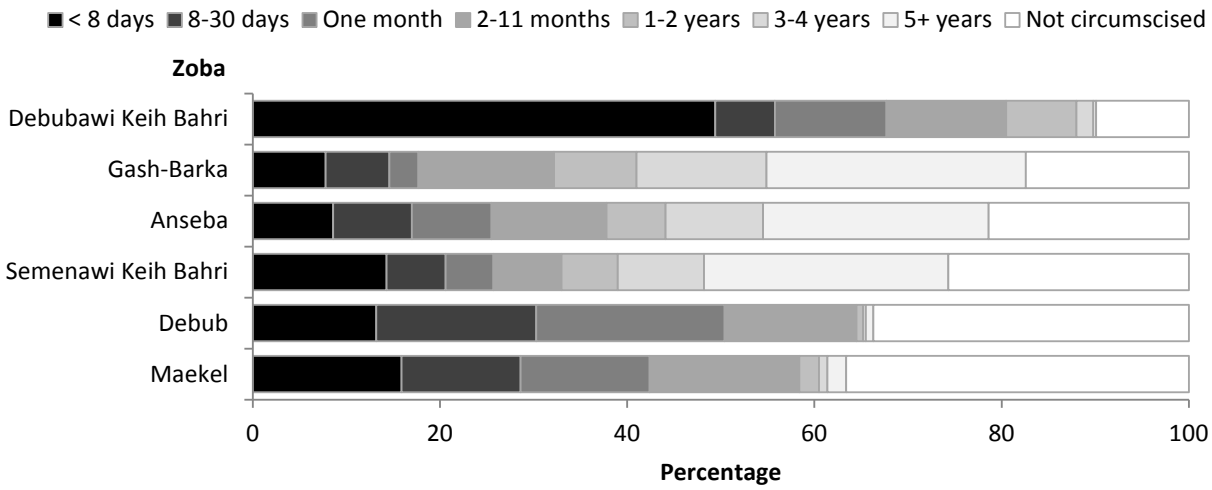


Table 16-2 Age at circumcision

Percent distribution of circumcised women 15-49 by age at circumcision, according to background characteristics, Eritrea 2010

Background characteristic	Age at circumcision								Total	Number of women circumcised
	< 8 days	8-30 days	One month	2-11 months	1-2 years	3-4 years	5+ years	Don't Know/ Missing		
Age										
15-19	10.8	10.5	11.2	15.7	6.9	6.5	14.3	24.0	100.0	1,582
20-24	10.1	9.6	12.0	16.9	6.0	6.3	14.6	24.4	100.0	1,380
25-29	12.9	11.0	9.4	12.6	4.6	5.9	17.0	26.5	100.0	1,397
30-34	13.1	11.2	9.3	13.3	4.3	6.1	13.3	29.5	100.0	1,085
35-39	13.5	11.0	10.4	11.4	3.3	6.2	14.4	29.8	100.0	1,292
40-44	14.2	11.6	10.4	10.7	2.7	9.1	14.2	27.1	100.0	874
45-49	15.0	10.0	12.0	11.5	3.1	6.0	13.2	29.2	100.0	885
Residence										
Total urban	15.0	12.0	13.2	14.1	4.0	3.5	7.8	30.3	100.0	3,302
Asmara	18.1	14.8	13.8	15.6	1.7	1.0	2.2	32.7	100.0	1,377
Other Town	12.8	10.0	12.8	13.1	5.6	5.3	11.9	28.6	100.0	1,925
Rural	10.9	9.8	9.1	13.0	5.1	8.4	18.8	24.8	100.0	5,193
Zoba										
Debubawi Keih Bahri	49.4	6.4	11.9	12.8	7.5	1.8	0.3	9.8	100.0	154
Maekel	15.9	12.7	13.8	16.0	2.1	0.9	2.0	36.6	100.0	1,894
Semenawi Keih Bahri	14.3	6.3	5.1	7.3	6.0	9.2	26.1	25.6	100.0	1,070
Anseba	8.6	8.4	8.5	12.3	6.3	10.4	24.1	21.2	100.0	1,378
Gash-Barka	7.8	6.8	3.1	14.5	8.8	13.9	27.7	17.4	100.0	2,057
Debub	13.2	17.1	20.1	14.1	0.7	0.3	0.8	33.7	100.0	1,943
Education										
No education	12.6	8.3	6.6	10.7	5.5	10.8	22.8	22.8	100.0	3,516
Primary	11.4	10.8	13.0	12.5	4.2	4.8	14.3	29.0	100.0	1,871
Middle	12.4	12.3	13.0	15.7	5.1	3.9	7.9	29.6	100.0	1,472
Secondary or above	13.7	14.0	14.8	18.6	3.1	1.6	3.1	31.0	100.0	1,634
Missing	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1
Wealth quintile										
Lowest	8.6	7.3	5.8	11.1	5.9	12.5	29.0	19.7	100.0	1,562
Second	11.2	9.5	7.3	11.4	4.8	10.2	22.6	22.9	100.0	1,514
Middle	12.7	10.6	9.2	13.1	6.3	7.0	16.2	24.9	100.0	1,700
Fourth	12.2	12.0	15.5	13.3	4.5	2.8	5.7	34.1	100.0	1,852
Highest	17.0	13.3	14.1	17.6	2.2	1.7	3.2	30.9	100.0	1,868
Total	12.5	10.7	10.7	13.5	4.7	6.5	14.6	26.9	100.0	8,495

Note: The table is based on the CORE questionnaires.

16.3 Male Knowledge on the Proclamation on Female Circumcision

Eighty-three percent of males 15-49 years of age in Eritrea have heard of the Eritrean proclamation of banning female circumcision (Table 16-3).

The percentages of males who have heard of proclamation on banning of female circumcision is lower than the national average for youngest males 15-19 (71 percent), rural residents (79 percent), Debubawi Keih Bahri (66 percent), Gash-Barka (76 percent), those with lower than secondary education (74-80 percent), and those in the second or lower wealth quintiles (Table 163). The level of knowledge increases with an increasing level of education and wealth index. Women are more likely to have heard of the proclamation against female circumcision than men, 91 and 83 percent, respectively (Table 16-1 and Table 16-3).

Table 16-3 Male knowledge on proclamation banning female circumcision

Percent distribution of all men 15-49 who have knowledge on the proclamation banning female circumcision in Eritrea, according to background characteristics, Eritrea 2010

Background characteristic	Percentage heard of proclamation banning female circumcision in Eritrea	Number of men
Age		
15-19	70.5	1,544
20-24	85.7	635
25-29	90.8	449
30-34	89.4	390
35-39	92.7	490
40-44	92.1	376
45-49	91.8	417
Residence		
Total urban	89.1	1,757
Asmara	87.8	855
Other Town	90.3	902
Rural	78.9	2,542
Zoba		
Debubawi Keih Bahri	66.2	67
Maekel	87.4	1,196
Semenawi Keih Bahri	92.6	470
Anseba	96.8	588
Gash-Barka	75.6	778
Debub	74.1	1,200
Education		
No education	73.5	599
Primary	79.8	659
Middle	79.8	1,188
Secondary or above	89.4	1,853
Missing	100.0	0
Wealth quintile		
Lowest	75.6	739
Second	75.5	699
Middle	82.8	753
Fourth	86.1	960
Highest	90.2	1,148
Total 15-49	83.1	4,299
50-59	90.6	722
Total men 15-59	84.2	5,021

Note: The table is based on the CORE questionnaires.

16.4 Person Performing Female Circumcision

The risks of complications and infections with female genital cutting are a function of the conditions under which the surgery is performed and the cleanliness of the instruments used for circumcising.

As in the previous EDHS, circumcised women were asked about the person who had performed their circumcision to indirectly gauge exposure to the risks. Four-fifths (80 percent) of circumcision is performed by a traditional 'circumciser' and four percent by traditional birth attendants (Table 16-4). The number of circumcisions performed by trained health professionals is negligible (less than one percent). In general, there is very little change with respect to person who performs female circumcision from the previous surveys. Some people believe that non-health workers who perform circumcisions have a financial interest in the continuation of the practice. Therefore, it may be practical to use health workers to dissuade people from circumcising their daughters.

Table 16-4 Person who performed female circumcision

Percent distribution of circumcised women by type of person who performed the circumcision, according to background characteristics, Eritrea 2010

	Health Professional		Traditional				
Background characteristic	Doctor	Trained nurse/midwife	Traditional "circumciser"	Traditional birth attendant	Don't know/ Missing	Total	Number of women circumcised
Age							
15-19	0.2	0.1	83.0	3.5	13.3	100.0	1,582
20-24	0.2	0.2	80.2	3.9	15.5	100.0	1,380
25-29	0.2	0.2	80.3	4.4	14.9	100.0	1,397
30-34	0.2	0.1	81.0	3.6	15.2	100.0	1,085
35-39	0.1	0.0	77.5	4.1	18.4	100.0	1,292
40-44	0.0	0.1	79.6	5.2	15.0	100.0	874
45-49	0.2	0.0	79.5	4.5	15.9	100.0	885
Residence							
Total urban	0.3	0.2	78.0	3.5	17.9	100.0	3,302
Asmara	0.4	0.2	74.8	3.3	21.3	100.0	1,377
Other Town	0.2	0.2	80.3	3.7	15.5	100.0	1,925
Rural	0.1	0.0	81.7	4.4	13.8	100.0	5,193
Zoba							
Debubawi Keih Bahri	0.0	0.0	89.5	4.7	5.8	100.0	154
Maekel	0.3	0.2	70.1	2.6	26.9	100.0	1,894
Semenawi Keih Bahri	0.0	0.3	83.1	3.7	12.9	100.0	1,070
Anseba	0.1	0.1	86.1	7.4	6.4	100.0	1,378
Gash-Barka	0.3	0.1	83.9	5.8	9.9	100.0	2,057
Debub	0.0	0.0	79.9	1.6	18.5	100.0	1,943
Education							
No education	0.1	0.0	83.9	4.6	11.3	100.0	3,516
Primary	0.1	0.1	79.3	4.3	16.2	100.0	1,871
Middle	0.2	0.1	78.3	3.1	18.3	100.0	1,472
Secondary or above	0.3	0.3	75.4	3.6	20.4	100.0	1,634
Missing	0.0	0.0	100.0	0.0	0.0	100.0	1
Wealth quintile							
Lowest	0.1	0.0	82.9	5.4	11.6	100.0	1,562
Second	0.1	0.1	84.2	5.5	10.1	100.0	1,514
Middle	0.1	0.0	82.3	3.7	13.9	100.0	1,700
Fourth	0.1	0.2	77.5	3.3	18.9	100.0	1,852
Highest	0.3	0.2	75.7	3.1	20.7	100.0	1,868
Total	0.2	0.1	80.3	4.1	15.4	100.0	8,495

Note: The table is based on the CORE questionnaires.

16.5 Reports on Circumcision of Daugthers

Overall, 44 percent of women reported that at least one of their daughters had been circumcised (Table 16-5), indicating a 19 percentage point decline since 1995. The proportion of mothers with at least one daughter circumcised increases substantially with increasing age of mothers. It increases from nine percent among mothers in the youngest age group (15-19) to 72 percent among the oldest mothers (45-49), clearly indicating a change of practice in the population regarding female circumcision.

Table 16-5 Daughter's circumcision experience

Percent distribution of all women with living daughter who have at least one daughter circumcised, percent of daughters under 15 or 5 years of age who have been circumcised, according to mother's background characteristics, Eritrea 2010

Mother's background characteristic	Percent with at least one daughter circumcised	Number of women with at least one living daughter	Percent circumcised	Number of daughters under 15 years of age	Percent circumcised	Number of daughters under 5 years of age
Age						
15-19	9.0	95	8.4	105	8.4	105
20-24	12.1	624	11.8	808	8.5	653
25-29	23.5	1,013	21.5	1,680	10.9	905
30-34	36.9	939	30.6	1,803	13.0	676
35-39	51.8	1,162	38.4	2,229	15.3	638
40-44	67.6	812	48.0	1,305	20.5	249
45-49	72.0	817	46.7	949	13.5	132
Residence						
Total urban	35.7	1,898	25.2	2,796	7.0	1,056
Asmara	29.3	715	17.2	962	4.0	387
Other Town	39.6	1,184	29.4	1,834	8.8	669
Rural	48.6	3,563	36.8	6,084	14.9	2,300
Zoba						
Debubawi Keih Bahri	77.8	84	75.0	132	61.8	47
Maekel	30.2	1,053	17.7	1,499	3.2	583
Semenawi Keih Bahri	58.3	646	45.8	1,096	19.7	417
Anseba	53.2	805	38.6	1,378	9.6	523
Gash-Barka	47.6	1,328	36.9	2,261	12.9	840
Debub	38.1	1,545	28.3	2,513	13.6	946
Education						
No education	56.1	2,810	40.4	4,844	16.8	1,531
Primary	39.4	1,273	31.7	2,014	12.1	815
Middle	28.3	734	20.6	1,135	8.2	571
Secondary or above	19.3	643	13.2	884	3.4	438
Missing	0.0	1	0.0	1	0.0	1
Wealth quintile						
Lowest	55.9	1,088	40.8	2,041	15.5	695
Second	49.9	1,029	38.5	1,736	16.2	668
Middle	42.9	1,134	33.3	1,865	13.4	759
Fourth	39.5	1,174	28.7	1,762	10.4	679
Highest	32.4	1,037	21.5	1,475	5.4	556
Total	44.1	5,461	33.2	8,879	12.4	3,356

Note: The table is based on the CORE questionnaires.

Reporting of daughter's circumcision is considerably higher in Debubawi Keih Bahri (78 percent) than in the other zobas ranging from 30 percent in Maekel to 58 percent in Semenawi Keih Bahri (Table 16-5). Higher rates of at least one daughter circumcised are observed in rural areas (49 percent) than in urban areas (36 percent) while with increasing educational and economic status of mothers, circumcision of daughters is more likely to decrease.

The prevalence of circumcision among daughters under 5 and under 15 years of age are 12 and 33 percent, respectively (Table 16-5). Circumcision among children under five years of age is most commonly practiced by mothers age 40-44, those in rural areas (15 percent), those in Debubawi Keih Bahri (62 percent), those with no education (17 percent), and those in the second or lowest wealth quintile (16 percent).

16.6 Daughter's Age at Circumcision

Nearly two-thirds (66 percent) of daughters are reported by their mothers to have been circumcised at infancy (Table 16-6). One-fifth (21 percent) are circumcised when the daughters were at ages 1-4 years. A comparison of age at circumcision for daughters indicate that mothers in Debub (97 percent), Maekel (91 percent) and Debubawi Keih Bahri (86 percent) have a tendency to circumcise their daughters at less than one year of age while the other zobas fall in the range of 37 to 59 percent. Mothers with no or lower education and mothers with lower economic status are more likely to have their daughters circumcised at later ages than those with higher education and higher economic status (Table 16-6).

16.7 Persons Who Performed Daughter's Circumcision

Female circumcision is performed the same way now as in 1995 and 2002. Traditional "Circumcisers" performed 92 percent of the daughters' circumcisions (Table 16-7); traditional birth attendants performed only a small proportion (6 percent). TBAs performed somewhat higher proportions of circumcisions in Anseba (11 percent).

16.8 Objections to Daughter's Circumcision

Among women who have at least one daughter circumcised, 95 percent reported that no one objected to the most recent circumcision, indicating acceptance of the continuation of the practice of circumcision by respondents, their relatives, and friends (Table 16-8) which is similar to the past two surveys. Mothers age 20-34 are more likely than older mothers to report that someone objected to the circumcision. The percentage of mothers reporting that someone objected to their daughter's circumcision is highest among mothers with at least secondary education (21 percent) and with higher socio-economic status (11 percent). People's objections to their daughter's circumcision were also higher among mothers living in urban areas (10 percent), Asmara (12 percent) and Maekel (11 percent), and in the highest quintile of the wealth index (11 percent). Fathers are more likely to object to their daughter's circumcision than mothers (3 percent and less than 1 percent, respectively) and this pattern holds true for almost all sub-groups.

Table 16-6 Daughter's age at circumcision

Percent distribution of the most recently circumcised daughter by age at circumcision, according to background characteristics of the mother, Eritrea 2010

Mother's background characteristic	Age of daughter when she was circumcised (in years)								Total	Number of most recently circumcised daughter
	0	1-4	5-6	7-8	9-10	11-12	13+	Don't know/ missing		
Age										
15-19	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	9
20-24	86.4	13.6	0.0	0.0	0.0	0.0	0.0	0.0	100.0	76
25-29	75.2	18.2	5.4	1.1	0.0	0.0	0.0	0.1	100.0	238
30-34	64.2	23.0	6.7	5.0	0.3	0.6	0.0	0.2	100.0	347
35-39	63.2	22.6	9.0	4.5	0.3	0.0	0.0	0.4	100.0	602
40-44	62.3	23.2	8.1	4.5	0.6	0.0	0.2	1.0	100.0	549
45-49	65.3	18.1	10.4	5.3	0.6	0.0	0.0	0.2	100.0	588
Residence										
Total urban	79.7	13.3	3.2	2.6	0.4	0.0	0.1	0.7	100.0	678
Asmara	92.0	5.0	0.4	0.6	0.0	0.0	0.0	1.9	100.0	209
Other Town	74.1	17.0	4.5	3.6	0.6	0.0	0.1	0.1	100.0	468
Rural	60.2	23.9	10.1	4.9	0.4	0.1	0.0	0.3	100.0	1,731
Zoba										
Debubawi Keih Bahri	85.6	13.8	0.2	0.0	0.0	0.0	0.3	0.2	100.0	65
Maekel	90.6	7.4	0.3	0.4	0.0	0.0	0.0	1.2	100.0	318
Semenawi Keih Bahri	50.2	27.9	13.3	6.6	1.2	0.2	0.3	0.4	100.0	376
Anseba	57.8	23.4	12.1	5.9	0.8	0.0	0.0	0.0	100.0	428
Gash-Barka	36.6	39.2	14.8	8.2	0.4	0.2	0.0	0.7	100.0	632
Debub	96.9	3.1	0.0	0.0	0.0	0.0	0.0	0.0	100.0	589
Education										
No education	56.4	25.5	11.5	5.6	0.6	0.1	0.1	0.3	100.0	1,576
Primary	80.6	13.2	2.6	2.8	0.3	0.0	0.0	0.4	100.0	501
Middle	85.9	13.5	0.6	0.0	0.0	0.0	0.0	0.0	100.0	207
Secondary or above	89.7	6.4	0.8	0.7	0.0	0.0	0.0	2.5	100.0	124
Wealth quintile										
Lowest	41.3	31.0	17.8	8.1	0.9	0.2	0.2	0.4	100.0	608
Second	56.5	28.1	9.8	5.0	0.5	0.1	0.0	0.0	100.0	514
Middle	71.2	19.1	4.8	4.2	0.3	0.0	0.0	0.4	100.0	487
Fourth	85.2	11.4	2.1	0.9	0.2	0.0	0.0	0.2	100.0	463
Highest	89.0	7.2	1.3	1.1	0.0	0.0	0.0	1.3	100.0	337
Total	65.7	20.9	8.1	4.3	0.4	0.1	0.1	0.4	100.0	2,409

Note: The table is based on the CORE questionnaires.

Table 16-7 Persons who performed daughter's circumcision

Percent distribution of the most recently circumcised daughter by type of person who performed the circumcision, according to mother's background characteristics, Eritrea 2010

Mother's background characteristic	Who performed circumcision of daughter					Total	Number of most recently circumcised daughter
	Doctor	Trained nurse/midwife	Traditional "circumciser"	Traditional birth attendant	Don't know, missing		
Age							
15-19	0.00	0.00	89.0	11.0	0.0	100.0	9
20-24	0.00	0.00	93.5	5.2	1.3	100.0	76
25-29	0.00	0.00	92.7	6.3	1.0	100.0	238
30-34	0.00	0.23	92.9	4.3	2.6	100.0	347
35-39	0.18	0.00	90.7	7.5	1.6	100.0	602
40-44	0.00	0.00	93.4	5.8	0.8	100.0	549
45-49	0.05	0.00	92.3	5.7	1.9	100.0	588
Residence							
Total urban	0.16	0.12	93.0	5.5	1.3	100.0	678
Asmara	0.45	0.00	97.7	0.4	1.4	100.0	209
Other Town	0.03	0.17	90.9	7.7	1.2	100.0	468
Rural	0.02	0.00	92.0	6.3	1.7	100.0	1,731
Zoba							
Debubawi Keih Bahri	0.20	0.00	93.2	5.9	0.7	100.0	65
Maekel	0.30	0.00	96.0	1.4	2.3	100.0	318
Semenawi Keih Bahri	0.07	0.21	91.5	7.4	0.8	100.0	376
Anseba	0.00	0.00	87.6	10.7	1.8	100.0	428
Gash-Barka	0.00	0.00	93.4	5.7	0.9	100.0	632
Debub	0.00	0.00	93.0	4.6	2.3	100.0	589
Education							
No education	0.02	0.05	91.7	6.8	1.5	100.0	1,576
Primary	0.00	0.00	92.9	5.0	2.2	100.0	501
Middle	0.46	0.00	93.4	4.1	2.0	100.0	207
Secondary or above	0.10	0.00	96.5	3.4	0.0	100.0	124
Wealth quintile							
Lowest	0.04	0.00	89.8	8.3	1.8	100.0	608
Second	0.00	0.00	92.2	6.1	1.7	100.0	514
Middle	0.00	0.00	91.4	6.5	2.2	100.0	487
Fourth	0.20	0.00	94.0	5.2	0.6	100.0	463
Highest	0.04	0.23	96.2	2.1	1.4	100.0	337
Total	0.06	0.03	92.3	6.0	1.6	100.0	2,409

Note: The table is based on the CORE questionnaires.

Table 16-8 Objections to daughter's circumcision

Among women who have at least one daughter circumcised, percentage mentioning objections by specific persons to the daughter's circumcision, according to mother's background characteristics, Eritrea 2010

Mother's background characteristic	Objections raised by:									Number of women with circumcised daughter
	Any person	Respondent	Respondent's husband	Respondent's son/daughter	Respondent's mother	Respondent's mother-in-law	Other relatives of respondent	Others	No one	
Age										
15-19	1.8	0.0	0.0	0.0	0.0	1.8	0.0	0.0	98.2	9
20-24	5.5	2.5	2.7	0.0	1.4	0.0	0.0	0.0	94.5	76
25-29	8.5	3.0	4.7	0.0	0.4	0.0	1.9	0.0	90.9	238
30-34	8.5	3.0	5.6	0.0	1.0	0.0	0.5	0.1	91.1	347
35-39	3.4	1.4	2.0	0.0	0.2	0.2	0.4	0.2	96.4	602
40-44	4.9	1.9	2.5	0.3	0.6	0.0	0.8	0.0	95.1	550
45-49	3.3	0.9	1.7	0.0	0.6	0.0	0.4	0.2	96.1	588
Residence										
Total urban	10.3	4.0	6.1	0.0	0.6	0.2	0.6	0.4	89.6	678
Asmara	11.5	4.6	8.0	0.0	0.5	0.4	0.0	0.0	88.5	209
Other Town	9.8	3.7	5.2	0.0	0.7	0.0	0.9	0.5	90.1	468
Rural	3.0	0.9	1.6	0.1	0.5	0.0	0.6	0.0	96.6	1731
Zoba										
Debubawi Keih Bahri	2.3	0.6	1.2	0.0	0.0	0.2	0.0	0.3	97.5	66
Maekel	10.7	4.8	6.4	0.0	0.8	0.3	0.0	0.0	88.9	318
Semenawi Keih Bahri	8.5	2.9	5.1	0.4	1.0	0.0	2.6	0.0	91.4	377
Anseba	3.1	1.1	2.1	0.0	0.2	0.0	0.0	0.0	96.4	428
Gash-Barka	2.6	0.4	1.1	0.0	0.6	0.0	0.6	0.2	97.3	632
Debub	4.1	1.6	2.1	0.0	0.4	0.0	0.3	0.2	95.5	589
Education										
No education	2.9	0.6	1.8	0.1	0.4	0.0	0.6	0.0	96.9	1576
Primary	4.6	1.5	2.5	0.0	0.7	0.2	0.3	0.2	94.9	501
Middle	13.0	5.7	7.4	0.0	1.1	0.0	1.6	0.0	86.2	207
Secondary or above	20.7	11.2	10.0	0.0	0.8	0.0	0.0	1.1	79.3	124
Wealth quintile										
Lowest	1.9	0.6	1.3	0.3	0.5	0.0	0.8	0.0	97.7	609
Second	2.0	0.0	1.2	0.0	0.5	0.0	0.4	0.0	97.8	514
Middle	4.7	2.2	1.7	0.0	0.2	0.0	1.0	0.0	94.8	487
Fourth	8.4	2.5	5.6	0.0	0.6	0.0	0.5	0.5	91.6	464
Highest	11.2	5.0	6.1	0.0	1.2	0.3	0.4	0.0	88.5	337
Total	5.0	1.8	2.8	0.1	0.6	0.0	0.6	0.1	94.7	2409

16.9 Reason For Being Not Circumcised

Over two-thirds (67 percent) of mothers with at least one daughter not circumcised state that the reason for "being not circumcised" is because it is against the law (Table 16-9). The highest score for against the law was observed in Anseba (86 percent) and the lowest in Gash-Barka (53 percent). The next most frequently cited reason for daughters not being circumcised is "too young" (8 percent) with the percentage highest in Gash-Barka (27 percent). There was no marked difference of reasons for "not being circumcised" by education and wealth levels.

Table 16-9 Reason for being not circumcised

Percent distribution of women age 15-49 with at least one daughter not circumcised by reasons for not circumcising, according to mother's background characteristics, Eritrea 2010

Mother's background characteristic	Reasons for not circumcising									Number of women with at least one daughter not circumcised
	Too young	No female circumciser	Against low	Family no longer practice	Against culture	Against religion	Other	Missing	Total	
Age										
15-19	12.8	1.8	73.7	6.2	0.2	2.0	3.3	0.0	100.0	85
20-24	7.9	0.6	76.6	4.6	3.0	0.9	5.0	1.3	100.0	559
25-29	9.3	1.0	70.7	3.6	4.2	1.2	8.0	1.9	100.0	842
30-34	8.3	0.7	69.7	5.0	4.3	0.8	7.5	3.8	100.0	708
35-39	7.7	1.8	62.7	6.6	4.3	0.7	10.4	5.7	100.0	816
40-44	7.0	2.1	62.3	6.7	3.2	0.5	11.4	6.9	100.0	449
45-49	4.3	3.5	52.5	8.4	6.3	2.2	14.8	8.0	100.0	387
Residence										
Total urban	2.3	1.4	67.6	6.6	4.0	1.0	13.6	3.5	100.0	1,449
Asmara	0.2	1.4	63.2	7.5	4.4	1.2	19.3	2.9	100.0	577
Other Town	3.8	1.5	70.5	6.0	3.7	0.9	9.8	3.9	100.0	873
Rural	11.3	1.5	66.5	4.9	4.1	1.0	6.1	4.5	100.0	2,396
Zoba										
Debubawi Keih Bahri	5.1	3.9	59.9	7.8	6.2	1.7	13.0	2.3	100.0	26
Maekel	0.3	0.9	61.4	8.8	5.0	1.1	20.0	2.5	100.0	867
Semenawi Keih Bahri	9.8	1.8	72.1	2.9	0.9	1.4	5.4	5.7	100.0	402
Anseba	3.3	1.4	85.5	2.2	0.9	1.0	3.8	1.8	100.0	551
Gash-Barka	26.9	1.5	52.8	5.0	5.4	0.8	3.7	3.9	100.0	889
Debub	0.2	1.7	71.7	5.9	5.0	0.9	8.3	6.2	100.0	1,111
Education										
No education	14.7	2.2	62.2	4.9	4.0	1.0	5.7	5.2	100.0	1,739
Primary	3.8	1.0	70.4	6.1	4.5	1.0	8.4	4.8	100.0	940
Middle	1.3	0.8	71.2	6.1	4.0	0.7	14.2	1.7	100.0	610
Secondary or above	0.9	0.7	70.9	5.9	3.7	1.4	14.3	2.2	100.0	555
Missing	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	1
Wealth quintile										
Lowest	19.7	1.8	64.1	2.7	4.4	0.7	3.0	3.6	100.0	691
Second	16.2	2.5	61.4	4.9	3.6	1.1	5.7	4.6	100.0	687
Middle	5.3	1.0	71.4	6.8	4.3	1.3	4.8	5.0	100.0	784
Fourth	1.5	1.0	70.9	5.2	3.5	1.0	12.0	4.9	100.0	870
Highest	0.1	1.2	65.5	7.6	4.6	1.0	17.4	2.5	100.0	814
Total	7.9	1.5	66.9	5.5	4.1	1.0	9.0	4.1	100.0	3,846

Note: The table is based on the CORE questionnaires.

16.10 Perceived Benefits of Female Circumcision by Women and Men

16.10.1 Perceived benefits of female circumcision by women

In the EDHS2002, for many Eritrean women, circumcision was an important factor in attaining social acceptance (42 percent), having better marriage prospects (25 percent) and religious approval (18 percent).

However, the results in the EPHS2010 show a considerably different pictures. Nearly four-fifths (77 percent) of Eritrean women now respond that there is no benefit from female circumcision (Table 16-10) as compared to 29 percent in the EDHS2002. Women older than 30 years, women living in rural areas, women living in Debubawi Keih Bahri, Semenawi Keih Bahri and Gash-Barka and women with no education responded at rates of less than 77 percent. Women who thought there is are benefits from circumcision were; for attaining social acceptance (10 percent), for having better marriage prospects (3 percent), for preserving virginity (6 percent) and for religious approval (1 percent). The highest view of perceived benefit of circumcision for personal cleanliness or hygiene was observed in women living in Debubawi Keih Bahri (33 percent); the lowest was in Maekel (3 percent) while in other zobas the range was from 4-13 percent.

Consistent with general historical and now contemporary patterns, in EPHS2010, women in the younger age groups, the more educated and the more affluent women are more likely to affirm that there is no benefit of circumcision compared to older women, less educated women, and less affluent women (Table 16-10).

16.10.2 Perceived benefits of female circumcision by men

Eighty-four percent of Eritrean men 15-49 years of age believe there is no benefit from female circumcision which is higher than that of women in the same age group (77 percent) (Table 16-11). Men over 40 years of age, living in rural areas and in Gash-Barka with lower education and less affluent have lower percentage for affirmation of "no benefit" of circumcision than their counterparts and the national average (82 percent).

The benefit of female circumcision most commonly mentioned by men 15-49 years of age is "preserving virginity" (8 percent), followed by social acceptance (5 percent). The highest view of perceived benefit of circumcision for social acceptance was observed in men living in Gash-Barka (17 percent) and in men with no education (16 percent). Most importantly, less than 1 percent of men said that religious approval and for better marriage prospects is a benefit of female circumcision (Table 16-11).

16.11 Benefits of Female Circumcision For Prevention of Premarital Sex

Overall, seventy-eight percent of women have the belief that female circumcision has no effect in the prevention of premarital sex (Table 16-12). Only 10 percent of women who have heard of female circumcision agree with the statement that female circumcision prevents premarital sex with a substantial decline compared to that of the EDHS2002 result which was 29 percent.

The belief that circumcision prevents premarital sex shows a similar negative pattern in relation to greater women's education and wealth. Women with no education (17 percent) and women with lower wealth (15 percent) believe that circumcision prevents premarital sex more than other women (Table 16-12).

Table 16-10 Benefits of female circumcision: Women

Percentage of women who have heard of female circumcision and who reported specific benefits of female circumcision for a girl, according to background characteristics, Eritrea 2010

Background characteristic	Benefits of female circumcision							Number of women who have heard of FGC
	No benefits	Cleanliness/ hygiene	Social acceptance	Better marriage prospects	Preserves virginity/ prevents premarital sex	Religious approval	Other	
Age								
15-19	84.0	3.6	6.1	2.0	4.2	0.6	3.6	2,251
20-24	82.3	4.3	7.9	2.0	4.3	0.9	3.8	1,734
25-29	79.1	6.2	9.2	2.6	4.9	1.0	4.2	1,643
30-34	75.5	6.2	10.9	3.2	7.3	1.7	5.2	1,221
35-39	74.0	5.3	12.7	3.0	7.3	1.4	5.5	1,424
40-44	67.9	8.3	14.5	3.5	9.7	1.0	5.9	936
45-49	64.3	9.9	15.6	3.6	10.8	1.1	7.4	943
Residence								
Total urban	85.2	3.8	5.1	1.7	5.3	0.8	2.4	4,105
..Asmara	87.4	2.8	4.6	1.3	4.7	0.6	1.3	1,859
..Other Town	83.4	4.7	5.5	2.1	5.8	1.0	3.2	2,246
Rural	71.7	7.0	13.5	3.3	6.9	1.2	6.4	6,047
Zoba								
Debubawi Keih Bahri	44.9	32.9	33.9	14.3	11.0	3.9	42.4	163
Maekel	88.3	2.6	3.6	1.0	4.9	0.5	1.0	2,520
Semenawi Keih Bahri	74.7	13.6	7.9	1.5	4.6	1.4	7.8	1,118
Anseba	84.2	5.6	4.0	2.5	3.6	0.9	5.0	1,435
Gash-Barka	56.2	5.0	27.3	4.7	6.4	1.5	8.8	2,235
Debub	83.4	4.3	4.6	2.4	9.2	0.9	1.2	2,681
Education								
No education	61.7	10.2	18.6	4.4	8.3	1.7	9.6	3,836
Primary	80.9	4.5	7.6	2.6	7.1	1.1	2.6	2,146
Middle	86.8	2.6	4.5	1.6	5.0	0.5	1.4	1,931
Secondary or above	91.8	1.8	2.6	0.6	3.1	0.5	1.4	2,237
Missing	100.0	0.0	0.0	0.0	0.0	0.0	0.0	1
Wealth quintile								
Lowest	63.9	9.3	18.4	3.8	7.6	1.4	7.5	1,721
Second	67.2	7.0	16.8	4.6	7.0	1.5	8.5	1,739
Middle	75.4	7.2	10.3	2.9	6.7	0.9	5.8	2,002
Fourth	84.2	3.7	5.9	1.7	6.4	0.7	2.1	2,218
Highest	88.5	2.9	3.1	1.2	4.3	0.9	1.7	2,472
Total	77.2	5.7	10.1	2.7	6.3	1.1	4.8	10,152

Note: The table is based on the CORE questionnaires.

Table 16-11 Benefits of female circumcision: Men

Percentage of men who have heard of female circumcised and who reported specific benefits of female circumcision for a girl, according to background characteristics, Eritrea 2010

Background characteristic	Benefits of female circumcision							Number of men who have heard of FGC
	No benefits	Cleanliness/ hygiene	Social acceptance	Better marriage prospects	Preserves virginity/ prevents premarital sex	Religious approval	Other	
Age								
15-19	85.6	1.4	4.7	0.8	5.7	0.5	1.7	1,281
20-24	84.2	2.3	3.6	1.3	8.8	0.9	1.6	602
25-29	89.4	2.0	3.8	0.7	5.6	0.6	0.5	429
30-34	83.2	0.9	5.6	0.8	8.1	1.3	4.5	383
35-39	85.9	0.6	5.8	0.7	6.6	0.2	2.8	480
40-44	77.6	3.9	6.7	1.3	10.7	0.2	2.9	371
45-49	75.3	3.7	10.0	1.8	13.2	1.0	3.1	411
Residence								
Total urban	89.6	1.4	2.9	0.9	4.9	0.7	1.6	1,655
Asmara	90.2	1.8	3.1	1.1	4.8	0.8	1.4	804
Other Town	89.1	1.0	2.8	0.8	5.0	0.6	1.7	852
Rural	79.6	2.3	7.2	1.1	9.8	0.6	2.7	2,300
Zoba								
Debubawi Keih Bahri	80.8	1.8	10.1	0.5	3.4	0.0	7.1	50
Maekel	89.5	1.9	2.2	1.1	6.5	0.6	1.0	1,124
Semenawi Keih Bahri	85.8	5.4	2.3	0.7	5.4	1.3	2.6	454
Anseba	91.0	1.3	4.0	1.0	4.6	0.3	1.0	580
Gash-Barka	69.3	1.3	17.1	1.8	6.9	0.9	6.7	718
Debub	82.8	1.2	2.6	0.5	12.8	0.5	0.7	1,028
Education								
No education	66.5	4.2	16.4	1.8	9.7	1.1	7.0	553
Primary	78.1	3.2	6.9	1.5	11.5	1.1	2.2	581
Middle	85.3	1.1	3.6	1.2	8.4	0.3	2.3	1,055
Secondary or above	90.2	1.3	2.5	0.5	5.5	0.6	0.7	1,766
Missing	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Wealth quintile								
Lowest	74.9	3.3	11.1	1.0	9.0	1.0	3.8	665
Second	76.5	1.5	7.6	1.9	11.0	0.7	3.6	626
Middle	82.9	2.2	5.2	1.3	8.7	0.6	2.6	686
Fourth	87.7	1.8	3.0	0.3	7.4	0.3	1.4	885
Highest	90.8	1.3	2.8	0.9	4.7	0.7	1.0	1,094
Total 15-49	83.8	1.9	5.4	1.0	7.7	0.6	2.2	3,955
50-59	70.4	4.1	11.1	2.0	13.5	1.1	4.5	709
Total men 15-59	81.8	2.3	6.3	1.2	8.6	0.7	2.6	4,665

Note: The table is based on the CORE questionnaires.

Table 16-12 Beliefs about female circumcision

Percent distribution of all women who have heard of female circumcision and who agree that female circumcision prevents premarital sex, according to background characteristics, Eritrea 2010

Background characteristic	Prevent sex	No effect	Do not know	Missing	Total	Number of women who have heard of FGC
Age						
15-19	6.8	78.0	14.7	0.5	100.0	2,251
20-24	7.2	82.4	10.2	0.2	100.0	1,734
25-29	8.5	80.4	10.8	0.3	100.0	1,643
30-34	11.6	77.0	11.0	0.4	100.0	1,221
35-39	11.6	76.1	12.0	0.3	100.0	1,424
40-44	15.5	74.2	10.2	0.2	100.0	936
45-49	16.3	70.5	12.9	0.3	100.0	943
Residence						
Total urban	6.2	85.3	8.1	0.4	100.0	4,105
Asmara	4.7	85.5	9.2	0.6	100.0	1,859
Other Town	7.4	85.1	7.2	0.3	100.0	2,246
Rural	12.7	72.6	14.4	0.3	100.0	6,047
Zoba						
Debubawi Keih Bahri	8.5	53.5	37.8	0.1	100.0	163
Maekel	5.2	85.9	8.5	0.4	100.0	2,520
Semenawi Keih Bahri	10.8	79.5	9.5	0.2	100.0	1,118
Anseba	9.6	84.8	5.3	0.3	100.0	1,435
Gash-Barka	16.8	59.3	23.6	0.3	100.0	2,235
Debub	9.1	82.4	8.2	0.3	100.0	2,681
Education						
No education	16.6	65.7	17.3	0.3	100.0	3,836
Primary	10.0	78.8	11.0	0.2	100.0	2,146
Middle	4.8	85.3	9.5	0.4	100.0	1,931
Secondary or above	3.5	90.7	5.5	0.3	100.0	2,237
Missing	0.0	100.0	0.0	0.0	100.0	1
Wealth quintile						
Lowest	15.4	68.0	16.4	0.3	100.0	1,721
Second	15.0	67.3	17.4	0.3	100.0	1,739
Middle	12.0	75.3	12.4	0.3	100.0	2,002
Fourth	6.6	84.3	8.8	0.2	100.0	2,218
Highest	4.4	87.8	7.3	0.4	100.0	2,472
Total	10.1	77.7	11.9	0.3	100.0	10,152

Note: The table is based on the CORE questionnaires.

16.12 Attitudes Toward Continuation of Female Circumcision in Women

The attitude of Eritrean women towards continuation of female circumcision is very low (12 percent) while their attitude towards discontinuation of the practice includes all others (82 percent) (Table 1613). When compared to the EDHS2002 in which a favorable attitude towards discontinuation was 49 percent, it has now increased by 33 percentage points. Similarly, from the EDHS1995 which was 38 percent it has now increased by 44 percentage points.

Greater support for continuing the practice than the national prevalence of attitude towards continuation of female circumcision (12 percent) are: in older age groups (13-17 percent), women residing in rural areas (16 percent), women in Gash-Barka (26 percent), Debubawi Keih Bahri (22 percent), Semenawi Keih Bahri (14 percent) women with no education (21 percent) and those in the lower three wealth indices (13-21 percent) (Table 16-13).

Support for discontinuation of female circumcision in EPHS2010 increased from 28 percent in 1995 to 77 percent among rural women and from 15 percent in 1995 to 61 percent among women in Gash-Barka (Table 1613). Nonetheless, the changes in attitude do not imply that a similar change in practice will follow soon, because the practice of female circumcision in Eritrea has its roots deep in tradition.

16.13 Attitudes Toward Continuation of Female Circumcision in Men

In the EPHS2010 (Table 16-14), the overall support of men 15-49 years of age for the continuation of female circumcision is not high (10 percent) which is similar to the women's attitude (12 percent) while their attitude towards discontinuation of the practice is very high (85 percent).

The attitude of Eritrean men towards discontinuation of female circumcision (85 percent) has increased significantly when compared to the EDHS1995 (42 percent) – an increase of 43 percentage points (Table 16-14).

The support for continuation of the practice that is greater than the national average (10 percent) are: in older age groups (13-14 percent), men residing in rural areas (14 percent), Debub (14 percent), Gash-Barka (14 percent), Debubawi Keih Bahri (12 percent) and Semenawi Keih Bahri (11), men with no and primary schooling (20 and 14 percent, respectively) and men in the lowest and second wealth index (15-16 percent) (Table 16-14).

The support of men for discontinuation of female circumcision increased dramatically compared in all variables from that of EDHS1995; among urban residents (63 percent went up to 91 percent), rural residents (32 percent went up to 80 percent), Debubawi Keih Bahri (20 percent went up to 86 percent), Semenawi Keih Bahri (33 percent is now up to 86 percent), Anseba (26 percent to 92 percent) and Gash-Barka (19 percent to 74 percent). Men with no or lower education and those in lower wealth index remain the most likely to disagree with discontinuation of circumcision (Table 16-14).

Table 16-13 Attitudes toward continuation of female circumcision: Women

Percent distribution of all women who have heard of female circumcision by attitude towards female circumcision, according to background characteristics, Eritrea 2010

Background characteristic	Female circumcision should be:				Total	Number of women who have heard of FGC
	Continued	Discontinued	Depends	Don't know/missing		
Age						
15-19	9.1	85.2	2.1	3.6	100.0	2,251
20-24	9.6	86.1	2.2	2.2	100.0	1,734
25-29	11.8	84.3	1.9	2.1	100.0	1,643
30-34	14.6	79.7	3.0	2.7	100.0	1,221
35-39	12.9	80.9	3.8	2.4	100.0	1,424
40-44	16.1	77.2	4.4	2.3	100.0	936
45-49	17.2	74.6	5.9	2.4	100.0	943
Residence						
Total urban	6.8	90.5	1.3	1.4	100.0	4,105
Asmara	4.4	92.9	1.3	1.4	100.0	1,859
Other Town	8.8	88.5	1.3	1.4	100.0	2,246
Rural	15.9	76.6	4.1	3.5	100.0	6,047
Zoba						
Debubawi Keih Bahri	22.2	65.4	6.8	5.7	100.0	163
Maekel	4.8	93.1	1.1	1.1	100.0	2,520
Semenawi Keih Bahri	13.9	81.6	3.2	1.3	100.0	1,118
Anseba	6.9	90.2	1.4	1.5	100.0	1,435
Gash-Barka	26.2	60.7	6.1	7.0	100.0	2,235
Debub	9.0	86.9	2.7	1.4	100.0	2,681
Education						
No education	21.4	68.7	5.3	4.6	100.0	3,836
Primary	10.3	84.5	3.1	2.2	100.0	2,146
Middle	6.3	91.4	1.2	1.2	100.0	1,931
Secondary or above	3.4	95.2	0.5	0.9	100.0	2,237
Missing	0.0	100.0	0.0	0.0	100.0	1
Wealth quintile						
Lowest	20.5	68.8	5.0	5.6	100.0	1,721
Second	20.4	70.4	5.1	4.2	100.0	1,739
Middle	13.0	81.0	3.6	2.4	100.0	2,002
Fourth	6.9	90.4	1.6	1.1	100.0	2,218
Highest	4.7	93.4	0.8	1.0	100.0	2,472
Total	12.2	82.2	3.0	2.6	100.0	10,152

Note: The table is based on the CORE questionnaires.

Table 16-14 Attitudes toward continuation of female circumcision: Men

Percent distribution of all men who have heard of female circumcision by attitude towards female circumcision, according to background characteristics, Eritrea 2010

	Female circumcision should be:					
Background characteristic	Continued	Discontinued	Depends	Don't know/ missing	Total	Number of men who have heard of FGC
Age						
15-19	10.2	84.7	1.4	3.8	100.0	1,281
20-24	10.3	84.3	1.7	3.7	100.0	602
25-29	7.8	89.0	1.0	2.2	100.0	429
30-34	9.0	84.0	3.7	3.3	100.0	383
35-39	5.7	90.1	2.9	1.3	100.0	480
40-44	13.3	83.0	1.4	2.3	100.0	371
45-49	14.3	79.1	4.4	2.2	100.0	411
Residence						
Total urban	5.2	91.3	1.0	2.5	100.0	1,655
Asmara	4.9	91.1	1.1	2.8	100.0	804
Other Town	5.5	91.4	0.9	2.1	100.0	852
Rural	13.5	80.4	2.9	3.2	100.0	2,300
Zoba						
Debubawi Keih Bahri	11.8	85.9	0.6	1.7	100.0	50
Maekel	6.7	89.5	0.9	2.8	100.0	1,124
Semenawi Keih Bahri	10.6	86.3	2.3	0.8	100.0	454
Anseba	3.9	92.0	2.5	1.5	100.0	580
Gash-Barka	13.8	73.7	5.2	7.3	100.0	718
Debub	14.0	83.2	1.0	1.8	100.0	1,028
Education						
No education	20.2	67.9	5.1	6.8	100.0	553
Primary	14.0	78.9	3.9	3.2	100.0	581
Middle	10.5	85.2	1.8	2.5	100.0	1,055
Secondary or above	5.3	92.1	0.8	1.9	100.0	1,766
Missing	0.0	100.0	0.0	0.0	100.0	0
Wealth quintile						
Lowest	15.8	75.2	4.4	4.5	100.0	665
Second	15.2	78.3	3.4	3.2	100.0	626
Middle	9.4	85.4	2.2	3.0	100.0	686
Fourth	9.2	87.8	0.6	2.4	100.0	885
Highest	4.5	92.1	1.2	2.2	100.0	1,094
Total 15-49	10.0	84.9	2.1	2.9	100.0	3,955
50-59	15.3	75.2	7.1	2.4	100.0	709
Total men 15-59	10.8	83.5	2.9	2.8	100.0	4,665

Note: The table is based on the CORE questionnaires.

16.14 Women's Perception About Their Husband's Attitude Towards Circumcision

Eight percent of women respondents believe that their husbands support the continuation of the practice of circumcision as opposed to 43 percent in EDHS2002. Of the wives, 68 percent feel that their husband supports discontinuation of the practice of circumcision as compared to 35 percent in 2002 (Table 16-15). Twenty-three percent of women do not know their husband's attitude, which may mean that many couples either do not consider circumcision an important issue to discuss or they are embarrassed to discuss it.

The women's perception of their husband's attitude towards discontinuation of female circumcision increased dramatically in all background characteristics from that of EDHS2002 but was most apparent among urban residents going from 53 percent up to 80 percent, rural residents from 25 percent up to 63 percent, Debubawi Keih Bahri from 27 percent up to 57 percent, Semenawi Keih Bahri from 21 percent up to 70 percent, Anseba from 24 percent up to 82 percent, Debub from 44 percent up to 71 percent and Gash-Barka from 14 percent up to 46 percent. Additionally, husbands of women with higher education and those in higher wealth index are more likely to agree to the statement concerning discontinuation of circumcision than their contemporaries (Table 16-15).

Table 16-15 Women's perception about their husband's attitude toward circumcision

Percent distribution of currently married women by their perception of their husband's attitude towards female circumcision, according to background characteristics, Eritrea 2010

Background characteristic	Wife believes husband's attitude towards female circumcision				Total	Number of currently married women who heard about circumcision
	Continued	Discontinued	Do not know	Missing		
Age						
15-19	6.7	59.0	33.7	0.6	100.0	390
20-24	5.9	72.8	21.1	0.2	100.0	1,053
25-29	7.2	73.4	19.3	0.2	100.0	1,249
30-34	8.6	68.6	22.5	0.4	100.0	964
35-39	7.2	68.5	24.3	0.1	100.0	1,084
40-44	10.3	65.4	23.9	0.4	100.0	712
45-49	10.8	61.2	27.9	0.2	100.0	693
Residence						
Total urban	4.7	79.9	15.0	0.4	100.0	2,024
Asmara	3.0	85.1	11.7	0.1	100.0	798
Other Town	5.9	76.5	17.2	0.5	100.0	1,226
Rural	9.5	62.8	27.5	0.2	100.0	4,121
Zoba						
Debubawi Keih Bahri	13.8	56.6	29.4	0.2	100.0	111
Maekel	3.3	83.1	13.4	0.2	100.0	1,151
Semenawi Keih Bahri	10.0	69.5	20.5	0.0	100.0	786
Anseba	4.0	81.9	13.9	0.2	100.0	930
Gash-Barka	14.3	46.4	38.9	0.3	100.0	1,530
Debub	6.0	71.4	22.3	0.3	100.0	1,638
Education						
No education	11.1	56.5	32.3	0.1	100.0	2,992
Primary	6.8	73.7	19.3	0.2	100.0	1,424
Middle	4.4	81.2	14.4	0.0	100.0	880
Secondary or above	2.3	88.5	8.3	0.9	100.0	849
Missing	0.0	100.0	0.0	0.0	100.0	1
Wealth quintile						
Lowest	11.3	54.5	34.0	0.2	100.0	1,227
Second	11.5	58.0	30.4	0.1	100.0	1,240
Middle	7.8	69.0	22.9	0.3	100.0	1,324
Fourth	5.3	76.7	17.5	0.5	100.0	1,185
Highest	3.2	85.2	11.3	0.2	100.0	1,168
Total	7.9	68.4	23.4	0.2	100.0	6,145

Note: The table is based on the CORE questionnaires.

ADULT AND MATERNAL MORTALITY 17

Key Findings

- Adult mortality is similar in both men and women which is 3 deaths per 1,000 population.
- Maternal deaths account for 26 percent of all deaths to women age 15-49. The maternal mortality rate for the five-year period preceding the survey is 0.779 maternal deaths per 1,000 woman-years of exposure.
- The maternal mortality ratio was 486 maternal deaths per 100,000 live births for the five-year period preceding the survey.

Adult and maternal mortality rates are key indicators of the health status of a population. Estimation of these mortality rates requires comprehensive and accurate reporting of adult deaths and maternal deaths. The EPHS 2010 gathered valuable information that allows estimation of maternal mortality and adult mortality using both direct and indirect estimation procedures. The data concern the survivorship of all live births of the respondent's natural mother (siblings). The direct method has been used in this survey to estimate adult and maternal mortality rates. The direct approach to estimating maternal and adult mortality maximizes use of the available data, using information on the age of surviving siblings, the age at death of siblings who died, and the number of years since the sibling died. This allows the data to be aggregated to determine the number of person-years of exposure to mortality risk and the number of sibling deaths occurring in defined calendar periods. Rates of maternal mortality or adult mortality are obtained by dividing maternal deaths (or adult deaths) by person-years of exposure (Rutenberg and Sullivan, 1991).

The term 'maternal mortality' used in this chapter corresponds to the term 'pregnancy-related mortality' as defined in the latest International Classification of Diseases (ICD-10). The ICD-10 definition of a pregnancy-related death is 'the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the cause of death.' In keeping with this definition, the Sibling Survival Module used in the DHS surveys measures only the timing of deaths and not the cause of death. The data collected in the EPHS questionnaire are based on information about deaths during the two months following a birth, however, rather than 42 days following a birth.

17.1 Assessment of Data Quality

Each respondent was first asked to give the total number of her/his mother's live births. Then the respondent was asked to provide a list of all of the children born to her/his mother starting with the first born, and whether or not each of these siblings was still alive at the survey date. For living siblings, current age was collected; for deceased siblings, age at death and year of death or years since death were collected. Interviewers were instructed that when a respondent could not provide precise information on

siblings' age at death or number of years since death, approximate but still quantitative answers were acceptable. For sisters who died at age 12 or older, in order to determine if the death was maternity-related the respondent was asked: "Was [NAME OF SISTER] pregnant when she died?" and if not, "Did she die during childbirth?" If death was neither during pregnancy or childbirth, two additional questions were asked: "Did she die within two months after the end of a pregnancy or childbirth?" and if yes, "Was her death due to complications of pregnancy or childbirth?" Data were collected from women only, due to the lack of tested procedures for analyzing data collected from men.

The estimation of adult and maternal mortality by either direct or indirect means requires reasonably accurate reporting of the number of sisters and brothers the respondent ever had, the number who have died, and the number of sisters who died of maternity-related causes. There is no definitive procedure for establishing the completeness or accuracy of retrospective data on sibling survivorship. Table C.9 in Appendix C shows the number of siblings reported by respondents and the completeness of the reported data on current age, age at death, and years since death. Almost all respondents reported the sex of siblings. In the EPHS2010 a total of 172,105 siblings were recorded in the sibling histories. The survival status was not reported for 184 siblings (0.1 percent). Among surviving siblings, the current age was not reported for 154 siblings (0.1 percent). For 99 percent of deceased siblings, both age at death and years since death were reported. In 0.6 percent of cases, both the age at death and years since death were missing. The sex ratio[1] of enumerated siblings (number of brothers per 100 sisters) was 108, which is higher than expected from international data (i.e., sex ratio at birth of 103-105) and may indicate an underreporting of sisters or over reporting of brothers by respondents.

A further problem in estimation is that the sibling based methods rely on the assumption that the siblings reside in the geographic area of the survey. When migration is important, the sibling methods will provide an estimate of mortality that derives from a mix of the mortality experiences of siblings both inside and outside of the geographic area. The estimates presented here represent adult mortality and maternal mortality of Eritreans, rather than only for the population inhabiting the geographic area of Eritrea.

17.2 Direct Estimates of Adult Mortality

The quality of the data used to estimate maternal mortality can also be assessed by evaluating the plausibility and stability of overall adult mortality. It is reasoned that if estimated rates of adult mortality are implausible, rates based on a subset of deaths, i.e., maternal deaths, are also likely to have serious problems.

Age-specific mortality rates for women and men age 15-49 for the seven-year period preceding the survey, calculated through direct estimation procedures is presented in Table 17-1. Since the number of deaths on which the rates are based is not small (1,023 men and 1,113 women), the estimated seven-year, age-specific rates are not subject to considerable sampling variation. The age-specific estimates of mortality and mortality adjusted by age show an increasing pattern of mortality with age but it still lacks stability. The rate for men is similar to the rate for women by age group, so that the net effect is for mortality among women to exceed mortality among men by only six percent.

Table 17-1 Adult mortality rates

Direct estimates of female and male mortality rates for the seven years preceding the survey by five-year age groups, Eritrea 2010

	Deaths	Exposure	Mortality rates[1]	Mort. Adj. by age[2]
		Male		
Age				
15-19	105	64548	1.6	0.4
20-24	163	68717	2.4	0.4
25-29	182	64038	2.8	0.5
30-34	225	53944	4.2	0.5
35-39	143	40345	3.5	0.5
40-44	118	26338	4.5	0.4
45-49	87	16054	5.4	0.5
General	1023	333985	3.1	3.1
		Female		
Age				
15-19	152	64199	2.4	0.5
20-24	193	68227	2.8	0.5
25-29	204	64325	3.2	0.5
30-34	198	55442	3.6	0.4
35-39	153	42137	3.6	0.5
40-44	129	27526	4.7	0.4
45-49	85	16900	5	0.5
General	1114	338756	3.3	3.4

[1] Expressed per 1,000 population.
[2] Age-adjusted rate.

17.3 Direct Estimates of Maternal Mortality

Direct estimates of maternal mortality rates and ratios based on the reported survivorship of sisters are presented in Table 17-2 for the period 0-4 years before the survey (1998-2002). The number of maternal deaths reported is 194. The preferred approach is to determine a single estimate for all childbearing ages (15-49 years). For the five-year period before the survey (1998-2002), the rate of mortality due to causes related to pregnancy and childbearing is 0.779 maternal deaths per 1,000 woman-years of exposure.

The maternal mortality rate among women age 15-49 is 0.78 maternal deaths per 1,000 woman-years of exposure. By five-year age groups, the maternal mortality rate is highest among women 25-29 (1.106), followed by those age 30-34 (0.875). In the EPHS2010 maternal deaths represent 26 percent of all deaths to women age 15-49. The percentage of female deaths that were maternal varies by age and ranges from two percent among women 45-49 to 36 percent of all deaths among women 25-29.

The maternal mortality rate can be converted to a maternal mortality ratio and expressed per 100,000 live births by dividing the mortality rate by the general fertility rate operating during the same time period. In this way, the obstetrical risk of pregnancy and childbearing is derived. By direct estimation procedures, the maternal mortality ratio is estimated as 486 maternal deaths per 100,000 live births during the period 1998-2002.

Table 17-2 Direct estimates of maternal mortality

Maternal Mortality Rates for 0-4 years before the survey by age, Eritrea 2010

	Deaths	Exposure	Mortality rates	Mortality adjusted by age	Proportion of maternal deaths
Age					
15-19	27	45,146	0.593	0.135	27.9
20-24	41	48,340	0.841	0.141	31.0
25-29	52	47,166	1.106	0.179	35.8
30-34	36	40,834	0.875	0.105	29.8
35-39	23	32,359	0.701	0.097	20.4
40-44	15	21,302	0.687	0.062	16.1
45-49	1	13,334	0.079	0.007	2.0
15-49	194	248,480	0.779	0.727	25.8
General Fertility rate				0.15	
Maternal Mortality Ratio				486	

REFERENCES

Arimond, M., and Marie T. Ruel. 2003. *Generating Indicators of Appropriate Feeding of Children 6 through 23 Months from the KPC 2000+*. Report of the Food and Nutrition Technical Assistance Project (FANTA). Washington, D.C.: Academy for Educational Development. *http://pdf.usaid.gov/pdf_docs/PNACW465.pdf.*

Central Bureau of Statistics (CBS) [Kenya], Ministry of Health (MOH) [Kenya], and ORC Macro. 2004. Kenya Demographic and Health Survey 2003. Calverton, Maryland: CBS, MOH and ORC Macro.

Central Statistical Agency [Ethiopia] and ICF International. 2012. Ethiopia Demographic and Health Survey 2011. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistical Agency and ICF International.

Central Statistical Office (CSO), Ministry of Health (MOH), Tropical Diseases Research Centre (TDRC), University of Zambia, and Macro International Inc. 2009. Zambia Demographic and Health Survey 2007. Calverton, Maryland, USA: CSO and Macro International Inc.

Central Statistical Office [Swaziland] and ORC Macro International Inc. 2008. Swaziland Demographic and Health Survey, 2006-07. Mbabane, Swazilandand Calverton, Maryland, USA: Central Statistical Office and ORC Macro.

FANTA. Washington, D.C.: Academy for Educational Development. http://pdf.usaid.gov/pdf_docs/PNACW465.pdf.

Gazette of Eritrean Laws Published by the Government of Eritrea: " The Female Circumcision Abolition Proclamation No. 158/2007", Asmara, March 20, 2007

Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF Macro. 2009. Ghana Demographic and Health Survey 2008. Accra, Ghana: GSS, GHS, and ICF Macro.

Growth Standards (GSS), Ghana Health Service (GHS), and ICF Marco. 2009. Ghana Demographic health Survey 2008. Accra, Ghana: GSS, GHS, and ICF Marco.

Health Survey 2011. Kampala, Uganda: UBOS and Calverton, Maryland: ICF International Inc.

HIV& Syphilis Sentinel Surveillance Survey in ANC Attendee Women in Eritrea, Report of the 2009 round, NATCoD/MOH, 2010

ICF International. 2011. Rawanda Demographic and health Survey 2010. Calverton, Maryland USA

Kenya National Bureau of Statistics (KNBS) and ICF Macro. 2010. Kenya Demographic and Health Survey 2008-09. Calverton, Maryland: KNBS and ICF Macro.

Liberia Institute of Statistics and Geo-Information Services (LISGIS) [Liberia], Ministry of Health and Social Welfare [Liberia], National AIDS Control Program [Liberia], and Macro International Inc. 2008. Liberia Demographic and Health Survey 2007. Monrovia, Liberia: Liberia Institute of Statistics and Geo-Information Services (LISGIS) and Macro International Inc.

Ministry of Health (MOH) [Eritrea]. 1998. Primary Health Care Policy and Policy Guidelines. Asmara, Eritrea: Ministry of Health

Ministry of Health (MOH) [Eritrea]. 2012. Annual Health Service Activity Report 2012. Asmara, Eritrea: Ministry of Health

Ministry of Health (MOH) [Eritrea]. 2012. Annual health service activity report 2012. Asmara, Eritrea: Ministry of Health.

Ministry of Health (MOH) [Eritrea]. 2012. Malaria Indicator and Prevalence Survey, unpublished.

Ministry of Health (MOH) [Senegal]. 2005. Senegal preliminary Report. Calverton, Maryland: MOH and ORC Macro.

Ministry of Health and Social Services (MoHSS) [Namibia] and Macro International Inc. 2008. Namibia Demographic and Health Survey 2006-07. Windhoek, Namibia and Calverton, Maryland, USA: MoHSS and Macro International Inc.

Ministry of Health and Social Welfare (MOHSW) [Lesotho] and ICF Macro. 2010. Lesotho Demographic and Health Survey 2009. Maseru, Lesotho: MOHSW and ICF Macro.

Ministry of Land, Water and Environment [Eritrea]. 1997. Environmental Information Systems Project. Asmara, Eritrea: Ministry of Land, Water and Environment.

Ministry of National Development [Eritrea]. 2010. Eritrea Population Estimate, 2010. Asmara Eritrea. Ministry of National Development.

National Bureau of Statistics (NBS) [Tanzania] and ICF Macro. 2011. Tanzania Demographic and Health Survey 2010. Dar es Salaam, Tanzania: NBS and ICF Macro.

National Directorate of Statistics (NDS) [Guinea]. 2005. Guinea preliminary Report. Calverton, Maryland: NDS and ORC Macro.

National Institute of Statistics of Rwanda (NISR) [Rwanda], Ministry of Health (MOH) [Rwanda], and ICF International. 2012. Rwanda Demographic and Health Survey 2010. Calverton, Maryland, USA: NISR, MOH, and ICF International.

National Population Commission (NPC) [Nigeria] and ICF Macro. 2009. Nigeria Demographic and Health Survey 2008. Abuja, Nigeria: National Population Commission and ICF Macro.

National Statistical Office (NSO) and ICF Macro. 2011. Malawi Demographic and Health Survey 2010. Zomba, Malawi, and Calverton, Maryland, USA: NSO and ICF Macro.

National Statistics and Evaluation Office (NSEO) [Eritrea] and ORC Macro. 2003. Eritrea Demographic and Health Survey 2002. Calverton, Maryland, USA: National Statistics and Evaluation Office and ORC Macro.

National Statistics Office (NSO) [Eritrea] and ORC Macro. 2003. Eritrea Demographic and Health Survey 2002. Asmara, Eritrea and Calverton Maryland: National Statistics Office and Macro International Inc.

National Statistics Office (NSO) [Eritrea] and ORC Macro. 2003. Eritrea Demographic and Health Survey 2002. Asmara, Eritrea and Calverton Maryland: National Statistics Office and Macro International Inc.

PAHO/WHO. 2003. Guiding Principles for Complementary Feeding of the Breastfed Child. Washington, DC/Geneva, Switzerland: PAHO/WHO.

Rutenberg, Naomi, and Jeremiah M.Sullivan. 1991. Direct and indirect estimates of maternal mortality from the sisterhood method. In Proceedings of the DHS World Conference, Washington, D.C. August 5-7, 1991, Vol. 3, 1669-1696. Colombia, Maryland: IRD/Macro International Inc.

Rutstein, S., K. Johnson, and D. Gwatkin. 2000. Poverty, Health Inequality, and Its Health and Demographic Effects. Paper presented at the 2000 Annual Meeting of the Population Association of America, Los Angeles, California.

Statistics Sierra Leone (SSL) and ICF Macro. 2009. Sierra Leone Demographic and Health Survey 2008. Calverton, Maryland, USA: Statistics Sierra Leone (SSL) and ICF Macro..

Survey 2011. Addis Ababa, Ethiopia: Central Statistical Agency and Calverton, Maryland, USA: ICF International

Uganda Bureau of Statistics (UBOS) and ICF International Inc. 2012. Uganda Demographic and Health Survey 2011. Kampala, Uganda: UBOS and Calverton, Maryland: ICF International Inc.

Uganda Bureau of Statistics (UBOS) and ICF International Inc. 2012. Uganda Demographic and Health Survey 2011. Kampala, Uganda : UBOS and Calverton, Maryland : ICF International Inc.

Uganda Bureau of Statistics (UBOS) and ICF Macro, 2010. Uganda Malaria Indicator Survey 2009. Calverton, Maryland, USA: UBOS and ICF Macro.

UNICEF and WHO. 2006. Baby Friendly Hospital Initiative : Revised, Updated, and Expanded for Integrated Care. New York : UNICEF.

WHO (World Health Organization), Guiding principles for complementary feeding of the breastfed child, PAHO, Washington, D.C., 2004.

WHO (World Health Organization). 2003. Implementing the Global Strategy for Infant and Young Child Feeding. Geneva : WHO.

WHO and UNICEF, 'Global strategy for infant and young child feeding', WHO, Geneva, 2003.

WHO and UNICEF, Joint Monitoring Program for Water Supply and Sanitation. 2010. Progress on Sanitation and Drinking Water: 2010 Update. Geneva and New York: WHO and UNICEF.

WHO, Multicentre Growth Reference Study Group. 2006. WHO Child Growth Standards: Length/ Height-for-Age, Weight-for-Length, Weight-for-Height and Body Mass Index for- Age: Methods and Development. Geneva, Switzerland: WHO.

WHO. 2004. Guiding principles for complementary feeding of the breastfed child. PAHO, Washington, D.C..

WHO. 2003. Implementing the Global Strategy for Infant and Young Child Feeding. WHO, Geneva.

WHO. 2005. Guiding Principles for Feeding Nonbreastfed Children 6 to 24 Months of Age. Geneva, Switzerland: WHO. http://www.helid.desastres.net/pdf/s13445e/s13445e.pdf.

WHO. 2008. Indicators for Assessing Infant and Young Child Feeding Practices. Part I: Definitions. Conclusions of a consensus meeting held 6-8 November 2007 in Washington, D.C., USA. http://whqlibdoc.who.int/publications/2008/9789241596664_eng.pdf.

WHO. 2011. World Malaria Report, Geneva: World Health Organization Ministry of Health (Eritrea). 2012. Malaria Indicator and Prevalence Survey, unpublished 2012

World Food Programme (WFP). 2002. Nutrition Mission Report. Asmara, Eritrea : World Food Programme

World Health Organization (WHO) and UNICEF, Joint Monitoring Program for Water Supply and Sanitation. 2010. Progress on Sanitation and Drinking Water: 2010 Update. Geneva and New York: WHO and UNICEF.

World Health Organization (WHO), Multicentre Growth Reference Study Group. 2006. WHO Child Growth Standards: Length/Height-for-Age, Weight-for-Length, Weight-for-Height and Body Mass Index for-Age: Methods and Development. Geneva, Switzerland: WHO. U.S. Centers for Disease Control and Prevention (NCHS/CDC/WHO) in 1977.

World Health Organization (WHO). 1996. Female genital mutilation: A report of a WHO Technical Working Group, Geneva, 17-19 July 1995.Geneva: WHO.

World Health Organization (WHO). 2005. Guiding principles for Feeding Non-breastfed Children 6 to 24 months of age. Geneva: WHO. http://www.helid.desastres.net/pdf/s13445e/s13445e.pdf

World Health Organization (WHO). 2006. Multicenter growth Reference Study Group. WHO Child

World Health Organization (WHO). 2008. Indicators for Assessing Infant and Young Child feeding. Geneva: WHO.

World Health Organization (WHO). 2011. World Malaria Report, Geneva: WHO.

Zimbabwe National Statistics Agency (ZIMSTAT) and ICF International. 2012. Zimbabwe Demographic and Health Survey 2010-11. Calverton, Maryland: ZIMSTAT and ICF International Inc.

Zimbabwe National Statistics agency (ZIMSTAT) and ICF International. 2012. Zimbabwe Demographic and Health Survey 2010-11. Calverton, Maryland: ZIMSTAT and ICF International Inc.

SAMPLE DESIGN

APPENDIX A

A.1 INTRODUCTION

The 2010 Eritrea Population and Health Survey (EDHS) is the third round, nationally representative Demographic and Health Survey, in a series that started in 1995. Compared with the 1995 and 2002 EDHS, this survey is expanded in scope to include HIV testing, and a maternal morbidity and mortality module, as well as information on the living standard of the population. The survey will provide up-to-date and reliable information on several important demographic and health topics of interest to planners, policymakers, program managers, and researchers that will guide the planning, implementation, monitoring, and evaluation of population and health programs in the country.

A.2 SAMPLE SIZE DETERMINATION

The sample for the 2010 EPHS survey was designed to provide reliable estimates of the core demographic and health indicators at the national level, for urban and rural areas, and for each of the six zobas in Eritrea as well as indicators on adult and maternal mortality for the country as a whole.

A.2.1 Maternal Mortality Indicator

The sample size determination was based on the maternal mortality estimate. Because maternal deaths are rare, even in settings where the level of maternal mortality is high, large sample sizes are needed to capture a sufficient number of deaths to get precise estimates of maternal mortality indicators. Taking into account the above stated objectives and requirements of the survey, the non-responses, and the nature of the sisterhood method of measuring maternal mortality, a sample size of 36,000 households was found to be adequate for the survey.

The sample size calculation was based on the following available information and assumptions at the planning stage.

- The 1995 EDHS maternal mortality rate (p) of 2.1 maternal deaths per 1,000 women-years of exposure in the reproductive age group.
- A relative error (RE) of 5%.
- A 95% confidence interval of the estimate.
- Design effect (DEFT) of 1.5.

The formula used for the sample size determination was:

Relative Error of Maternal Mortality Rate **(RE(p))=** $\frac{SE\,(p)}{p}$

RE(p) = $DEFT * \frac{\sqrt{\frac{p(1-p)}{n}}}{p}$, where

p = Maternal mortality rate

DEFT = Design effect

N = Sample size

This formula, when applied to the above given information resulted in a total of 427,621 women-years of exposure. According to the 1995 EDHS survey, a total of 73,774 women-years of exposure were obtained from an effective sample of 5,028 households. Therefore, in order to get the 427,671 women-years of exposure, the 2010 EPHS survey requires covering a sample size of almost 6 times that of the 1995 EDHS survey (5,028) or about 30,000 households. To get a reliable estimate of maternal mortality at the national level, the survey accordingly needed to have a completed interview of 30,000 households. However, with the non-responses and the nature of the sisterhood method of measuring maternal mortality, the sample size was adjusted to 36,000 households.

A.2.2 Core Demographic And Health Indicators

The sample size determination exercise revealed that a stratified national sample size of 12,176 households, generating a minimum of about 8,500 completed interviews, were considered to be adequate to produce reliable estimate of the core PHS indicators at national, urban, rural, and the six zobas of the country.

A.3 Sampling Methodology

The sample was selected using a two-stage stratified cluster design. In the first stage of the sampling, the Primary Sampling Units (PSU) - clusters (villages in rural areas and Supervision Areas [SA] in urban areas) x- was selected on the bases of Probability Proportional to Size (PPS); size being the number of households in each cluster. At the second stage of sampling, households were selected as Secondary Sampling Units (SSU) using a linear Systematic Random Sampling (SRS) methodology from each of the selected clusters. All women aged 15-49 years in the selected households were eligible for the individual interview including HIV testing. Men aged 15-59 years in the selected households were eligible for the HIV/AIDS section and HIV testing part of the interview only.

A.4 Sampling Frame

For each zoba, the sample design was based on the list of all supervisor areas (SA) in urban areas and all villages in rural areas. The 2010 list of villages and towns with their respective population size and number of households compiled by the respective zobas in 2010 was used as a sampling frame for the 2010 EPHS survey sample design.

A.5 Accuracy Of Maternal Mortality Rate (Mmr)

As mentioned earlier, with 36,000 selected households, a minimum of 30,000 households was expected to give completed interviews. Moreover, using information from the 1995 EDHS, such a sample will generate 427,671 women-years of exposure. The accuracy of the national MMR can then be estimated, using design effect, which is consistent with the one observed in 1995. In Table A-1 the relative standard error is calculated for three values of the design effect and two values of MMR.

The relative standard error of is calculated as follows:

$$\text{RE}(p) = DEFT * \frac{\sqrt{\frac{p(1-p)}{n}}}{p}$$

Where "p" is Maternal Mortality Rate, "n" is the number of women-years of exposure, "p" is the maternal mortality rate per 1, 000 women-years of exposure in the reproductive age and DEFT= $\sqrt{DEFF}$.

It is seen that the relative standard error is well below 8% even if the MMR has been reduced to half of its observed value in 1995.

A.6 Determination of the Number of Clusters

Given the size of the sample, it is important to determine the number of households to be selected from each cluster. For this purpose, we use the following relationship between the clusters intake size and the DEFT of the national figures: DEFT = $\sqrt{(1+(n-1)Rho)}$,

Where **"n"** is the number of households to be selected from a cluster and **"Rho"** is the interclass-correlation. (To be more exact, **"n"** should be the average number of women-years of exposure within a cluster. An increase in number of women-years of exposure will be proportional with an increase in **"n",** the number of households. It would therefore be more appropriate to use **"n"** instead of (n-1) in the formula. The difference is however negligible and we use the more familiar version given here.)

Based on the 1995 EDHS average cluster take of 30 households and design-effect (DEFF) of 2.25, Rho is calculated to be 0.043 **(DEFF= 2.25=1+Rho*(1+(30-1)), Rho=(2.25-1)/29=0.043)**. DEFF is defined as the ratio between the variance under the chosen design and the variance under simple random sampling.

Table A1: Accuracy of MMR

DEFT	MMR (p)	Relative standard error (RE) (%)
1.4	2.1	4.7
1.5	2.1	5.0
1.6	2.1	5.3
1.4	1.0	6.8
1.5	1.0	7.2
1.6	1.0	7.7

Table A2 Increase in relative standard error as a function of an increase in cluster average intake		
Number of clusters	**Observations per cluster**	**% Increase in RE**
900	40	9.1
800	45	13.1
720	50	17.6

Table A-2 provides the increase in relative standard error for different choices of cluster intake size.

The choice of cluster intake size is based on economic/administrative considerations. However, to select more than 40 households per cluster may lead to problems in the field. With 40 per cluster, it follows from Table A-1 and Table A-2 above that the relative standard error is below 8% for all alternatives considered in Table A-1. Consequently, 40 households were selected per cluster in each of the zoba for the maternal morbidity and mortality questionnaire, implying a total of 900 clusters all over the country. The core PHS questionnaires were administered on 20 households per cluster for zoba Debubawi Keih Bahri and 13 households per cluster from the other zobas of the country.

A.7 Allocation of the Sample by Zoba, Urban, and Rural

Allocating the sample on the zobas is a balance between the need for zoba results and the variance of country estimates. If emphasis is put on country estimates, proportional allocation is usually the best, as it contributes to getting equal weights. The extreme alternative allocation is equal allocation. None of these two allocations are feasible. The problem is that zoba Debubawi Keih Bahri is so small that proportional allocation generates a too small sample for this zoba (Table A-3), while equal allocation generates a too large sample, which would have a seriously negative effect on the variance of country estimates. The variance of most country estimates would increase approximately 26%[1] under equal allocation.

In order to find a compromise between the two allocations, the square root proportional allocation was considered. Even in this allocation, the sample size for zoba Debubawi Keih Bahri was considered too small, and an adjustment was considered necessary. The following steps were used in order to arrive at the final allocations:

- First the 36,000 households were allocated proportionally among the zobas **(Column 2)**;
- Because the share allocated for the Debubawi Keih Bahri zoba was too small and not adequate to provide us reliable estimates of early childhood and adult mortality indicators for that zoba, the overall sample was allocated using the square root proportional allocation. The square root allocation is done by first taking the square root of the proportion of households for each zoba, calculating the proportion of the square roots, and finally distributing the overall sample size proportionally using the square root proportions **(Column 3)**.
- Finally, the square root allocation results were adjusted by setting the share of zoba Debubawi Keih Bahri to 2,707 households and proportionally reducing the sample size in the other zobas **(Column 4).**

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1 *The percentage increase in variance of most country estimates using disproportional allocation compared to the proportional one is calculated using the following formula:* $[sum(n'_h)*sum(n'_h*w_h^2)]/[sum(n'_h w_h)]^2$, *where* n_h *is the proportional allocation of the zobas,* n'_h *is the disproportional allocation of the zobas,* $w_h=n_h/n'_h$.

Table A3 Allocation of the sample by zoba

Zoba	Proportional allocation	Square root proportional allocation	Adjustment
(1)	(2)	(3)	(4)
Anseba	5,004	5767	5,679
Debub	10,152	8215	8,088
Debubawi Keih Bahri	720	2188	2,707
Gash_Barka	8,352	7451	7,336
Maekel	7,560	7089	6,980
Semenawi Keyh Bahri	4,212	5291	5,210
Total	**36,000**	**36,000**	**36,000**

Table A-3 shows proportional allocation, square root proportional allocation, and adjusted allocations by zoba.

There is nothing "optimal" about this allocation. It is a compromise in order to get reliable estimates of zoba indicators without reducing the variance of the country results too much. We find that the variance of most country estimates will increase with about 6 percent[1] using the allocation in column 4 of Table A-3 as compared with proportional allocation.

In Table A-4 and Table A-5 below, the sample was allocated proportionally between urban and rural for both the core and maternal morbidity and mortality samples of 12,176 and 36,000 households, respectively.

A.8 Sample Selection (Clusters and Households)

As mentioned above, the 2010 EPHS+ sample was selected using a stratified two stage cluster sample design. In each zoba, clusters were selected at the first stage of sampling and households at the second stage of sampling. Cluster selection was based on the list of Supervision Areas (SA) in urban areas and list of

Table A4: Sample size allocation, for maternal mortality, 36,000 households

	Total		Urban		Rural	
Zoba	HH	Cluster	HH	Cluster	HH	Cluster
Anseba	5,679	141	1,539	38	4,140	103
Debub	8,088	203	1,747	44	6,341	159
DeubawiKeih Bahri	2,707	68	698	18	2,009	50
Gash_Barka	7,336	183	1,519	38	5,818	145
Maekel	6,980	175	5,716	143	1,263	32
SemenawiKeyhBahri	5,210	130	1,777	44	3,433	86
Total	**36,000**	**900**	**12,996**	**325**	**23,004**	**575**

1 See footnote "1" for the formula used to calculate the percentage increase in the variance of most country estimates.

Table A5: Sample size allocation, for Core DHS, 12,176 households

	Total		Urban		Rural	
Zoba	HH	Cluster	HH	Cluster	HH	Cluster
Anseba	1,844	141	499	38	1,345	103
Debub	2,630	203	571	44	2,059	159
DeubawiKeih Bahri	1,363	68	359	18	1,004	50
Gash-Barka	2,382	183	492	38	1,889	145
Maekel	2,266	175	1,854	143	412	32
Semenawi Keyh Bahri	1,691	130	576	44	1115	86
Total	**12,176**	**900**	**4,351**	**325**	**7,825**	**575**

villages in rural areas in each zoba. The clusters were selected using a systematic selection with sampling interval $\mathbf{I}=\frac{\sum M_i}{a}$, which is equivalent to a systematic selection of PSUs with probability proportional to the number of households in each unit/SA/Village. The urban clusters were selected independently from the list of urban areas and rural clusters from lists of villages within each zoba. The selection of clusters was done using the following formula:

$$\mathbf{P_{1i}} = \frac{aM_i}{\sum M}$$

Where

a: is the number of clusters to be selected from urban and rural areas of a given zoba

$\mathbf{M_i}$: is the number of households in the i^{th} PSU reported in the 2010 sampling frame

$\sum M_i$ is the total number of households in urban and rural areas of zoba according to the 2010 sampling frame

A complete household listing operation was carried out in the selected clusters and households were selected to achieve a self-weighted sampling fraction in each zoba. However, since the 2010 EPHS+ sample is unbalanced among zobas, a final weighting adjustment was required to provide reliable estimates in every other domain.

In a given zoba, if the overall sampling fraction (f) has been calculated, and if c_i is the number of households to be selected in the i^{th} cluster out of the total number of households (L_i) found in the 2008 listing process, then the self-weighting condition can be expressed as:

$$\mathbf{f} = P_{1i} * \left(\frac{c_i}{L_i}\right)$$

and the households selection interval for the i^{th} cluster is given as:

$$\mathbf{I_i} = \frac{L_i}{c_i}$$

$$\mathbf{I_i} = \frac{P_{1i}}{f}$$

In a given cluster, the households will be selected using a linear systematic random sampling methodology with the above calculated selection interval for that cluster.

A.9 Sample Implementation

A total of 11,665 and 22,758 households were sampled for interviewing for the Core Survey and Maternal Mortality (MMM) Survey, respectively (Table A-6 and Table A-7). The fieldwork teams successfully completed interviews in 11,408 households for the core survey and 22,280 for the maternal mortality survey. The main reasons that selected potential households were not interviewed were that the selected households were absent (5 percent for Core and 6 percent for MMM survey) or the absence of competent respondent at home (2 percent for both Core and MMM surveys). For the Core survey, a total of 10,836 households were occupied, of which 10,591 were interviewed, implying a household response rate of 98 percent. Similarly, for the MMM survey, a total of 20,618 households were occupied. of which complete interview was made for 20,186 households giving a similar household response rate of 98 percent. The household response rates were almost similar in urban and rural areas and in the six zobas (Table A-6 and Table A-7).

A total of 10,850 eligible women and 6,436 eligible men were identified for the Core Survey, implying a response rate of 95 percent and 78 percent, respectively (Table A-6). Similarly, the MMM survey identified a total of 20,896 eligible women, of whom 96 percent were successfully interviewed (Table A-7).

The individual women's response rate was similar in urban and rural areas and in the six zobas with slightly lower rate for zoba Maekel for both Core and MMM surveys.

Table A6: Sample implementation: CORE

Percent distribution of CORE households and eligible women and men by results of the household and individual interviews, and household, eligible women and men overall response rates, according to urban-rural residence and zoba, Eritrea 2010

	Residence				Zoba						
Result	Total urban	Asmara	Other Town	Rural	Debubawi Keih Bahri	Maekel	Semenawi Keih Bahri	Anseba	Gash-Barka	Debub	Total
Selected households											
Completed (C)	92.3	91.8	92.6	89.9	85.3	92.3	94.0	92.8	87.4	91.9	90.8
Household present but no competent respondent at home (HP)	2.2	2.7	1.8	1.7	1.2	2.5	1.1	0.8	2.8	2.0	1.9
Postponed (P)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Refused (R)	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Dwelling not found (DNF)	0.1	0.2	0.1	0.1	0.1	0.2	0.0	0.0	0.3	0.0	0.1
Household absent (HA)	3.9	3.0	4.4	6.3	9.8	2.6	4.2	5.3	8.1	4.0	5.4
Dwelling vacant/address not a dwelling (DV)	1.1	1.4	0.9	1.6	3.2	1.5	0.2	0.8	1.1	1.8	1.4
Dwelling destroy (DD)	0.3	0.7	0.0	0.2	0.2	0.5	0.3	0.2	0.2	0.2	0.3
Other (O)	0.1	0.1	0.1	0.1	0.3	0.1	0.2	0.0	0.0	0.0	0.1
Total	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	4,361	1,773	2,588	7,304	1,301	2,280	1,560	1,563	2,315	2,646	11,665
Household response rate (HRR)	97.5	96.8	98.0	97.9	98.6	97.0	98.8	99.1	96.5	97.7	97.8

(*Continued*)

Table A6: (*Continued*)

Percent distribution of CORE households and eligible women and men by results of the household and individual interviews, and household, eligible women and men overall response rates, according to urban-rural residence and zoba, Eritrea 2010

	Residence				Zoba						
Result	Total urban	Asmara	Other Town	Rural	Debubawi Keih Bahri	Maekel	Semenawi Keih Bahri	Anseba	Gash-Barka	Debub	Total
Eligible women											
Completed (EWC)	94.0	91.3	96.2	95.3	94.8	91.6	95.0	96.3	94.8	96.9	94.8
Not at home (EWNH)	4.1	5.9	2.8	3.2	3.4	5.8	3.8	2.9	3.2	1.9	3.6
Postponed (EWP)	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0
Refused (EWR)	0.5	1.0	0.2	0.2	0.0	0.8	0.1	0.1	0.6	0.1	0.3
Partly completed (EWPC)	0.2	0.4	0.1	0.1	0.2	0.3	0.0	0.0	0.2	0.1	0.1
Incapacitated (EWI)	1.0	1.4	0.8	1.2	1.5	1.3	1.1	0.8	1.2	1.1	1.1
Other (EWO)	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total	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	4,597	1,993	2,604	6,208	1,098	2,478	1,498	1,441	1,936	2,354	10,805
Eligible women response rate (EWRR)	94.0	91.3	96.2	95.3	94.8	91.6	95.0	96.3	94.8	96.9	94.8
Overall women response rate (ORR)	91.7	88.3	94.2	93.3	93.5	88.9	93.8	95.4	91.5	94.7	92.6
Eligible men											
Completed (EMC)	77.7	73.0	81.6	78.3	84.6	73.5	77.2	80.4	71.1	85.2	78.0
Not at home (EMNH)	18.1	21.6	15.3	18.5	12.6	21.6	19.4	16.2	26.3	11.2	18.4
Postponed (EMP)	0.1	0.2	0.0	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.1
Refused (EMR)	1.2	2.1	0.5	0.2	0.0	1.7	0.3	0.4	0.4	0.1	0.6
Partly completed (EMPC)	0.2	0.5	0.0	0.1	0.0	0.4	0.1	0.0	0.0	0.2	0.2
Incapacitated (EMI)	2.3	2.3	2.3	2.7	2.3	2.4	2.9	2.7	1.7	3.1	2.5
Other (EMO)	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.4	0.1	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
Number of men	2,816	1,275	1,541	3,620	612	1,603	912	837	1,120	1,352	6,436
Eligible men response rate (EMRR)	77.7	73.0	81.6	78.3	84.6	73.5	77.2	80.4	71.1	85.2	78.0
Overall men response rate (ORR)	75.7	70.7	79.9	76.6	83.4	71.3	76.3	79.7	68.6	83.3	76.3

[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 A7: Sample implementation: MMM

Percent distribution of MMM 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 zoba, Eritrea 2010

	Residence				Zoba						
Result	Total urban	Asmara	Other Town	Rural	Debubawi Keih Bahri	Maekel	Semenawi Keih Bahri	Anseba	Gash-Barka	Debub	Total
Selected households											
Completed (C)	92.1	93.3	91.2	89.7	82.4	93.7	91.5	91.5	87.2	91.9	90.6
Household present but no competent respondent at home (HP)	1.6	1.5	1.6	1.9	0.6	1.7	1.1	1.4	2.6	2.0	1.8
Postponed (P)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Refused (R)	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
Dwelling not found (DNF)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.1
Household absent (HA)	4.1	2.4	5.4	6.5	11.6	2.1	6.5	5.9	8.1	4.3	5.6
Dwelling vacant/address not a dwelling (DV)	1.3	1.5	1.1	1.4	4.0	1.4	0.5	0.8	1.1	1.6	1.3
Dwelling destroy (DD)	0.5	0.9	0.3	0.2	0.3	0.7	0.2	0.2	0.5	0.1	0.4
Other (O)	0.2	0.2	0.2	0.1	1.0	0.1	0.1	0.1	0.1	0.0	0.1
Total	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	8,641	3,666	4,975	14,117	1,300	4,720	3,209	3,245	4,806	5,478	22,758
Household response rate (HRR)	98.1	98.2	98.1	97.8	99.2	98.0	98.7	98.4	96.8	97.9	97.9
Eligible women											
Completed (EWC)	95.4	94.8	95.9	95.8	97.4	94.5	94.6	96.2	96.5	96.1	95.6
Not at home (EWNH)	3.5	3.8	3.1	3.0	1.8	4.0	4.2	2.8	2.7	2.6	3.2
Postponed (EWP)	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0
Refused (EWR)	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Partly completed (EWPC)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incapacitated (EWI)	0.8	0.9	0.7	1.1	0.6	1.1	0.9	0.8	0.7	1.2	1.0
Other (EWO)	0.2	0.2	0.1	0.1	0.0	0.2	0.2	0.1	0.0	0.0	0.1
Total	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	9,059	4,038	5,021	11,837	1,013	5,075	2,993	2,969	4,005	4,841	20,896
Eligible women response rate (EWRR)	95.4	94.8	95.9	95.8	97.4	94.5	94.6	96.2	96.5	96.1	95.6
Overall women response rate (ORR)	93.6	93.1	94.1	93.7	96.6	92.7	93.4	94.7	93.3	94.0	93.7

[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 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:

$$ORR = HRR * EWRR/100$$

SAMPLING ERRORS

APPENDIX B

The estimates in this report stem from a sample survey of 34,423 selected households, of which 31,214 households responded. Despite the large size of the sample, when interpreting the results from the survey, it must be kept in mind that the results are affected by both sampling and non-sampling errors.

Sampling errors are expected errors that occur because any statistic measured in sample is likely to deviate somewhat from its real value in the population, simply because the sample is a random subset of the population. Even though the sample is representative of Eritrea in a statistical sense, another subset of the population could have been drawn. Nevertheless, the way in which samples deviate from the population from which they are drawn is well understood, and the expected possible range of error can be calculated.

Non-sampling errors are errors than stem from other sources than the statistical process of sampling. They range from everything from simple clerical errors such as mislaying questionnaires, mis-keying data values, misunderstanding of questions, respondents that cannot be found, who refuse to answer questions or who give misleading answers. Such errors are difficult to quantify, but the extensive quality control routines common for all DHS surveys have also been implemented in the EPHS+ 2010 survey, and every effort has been made to avoid non-sampling error. Still, it would be foolish to assume that non-sampling errors do not affect the estimates in some cases.

The EPHS+ 2010 survey has a sampling design that is stratified with disproportionate allocation, and clustered. Sampling errors from such a complex design cannot be estimated using the sampling errors formulas given for simple random sampling in common statistical textbooks, or as estimated by the ordinary statistical procedures of common statistical packages.

In a complex sample, sampling errors are affected not only by the characteristics of the population itself and the size of the sample, but also aspects of the sampling design such as stratification, the allocation of sampling units to strata, clustering and the use of weights in the estimation.

It is important to note that the deviation between the actual sampling errors observed in a complex design and the sampling errors one would expect in simple random sampling varies between estimates in the survey. The variation is due particularly to clustering. While the use of clustered samples is necessary from a cost point of view, the clustering tends to increase sampling errors.

The increase observed in sampling errors due to clustering derives from internal homogeneity of the cluster. Thus, if a cluster is selected, and an interviewer goes to a selected household in the cluster, and that household has electricity, it is also very likely that the next household selected will have electricity. In another cluster, the first household visited does not have electricity, and the interviewer will be able to guess with great certainty that the next household in that cluster also will be without electricity. Thus, for a variable like electricity selecting more households than the first in a cluster will not add much to the information obtained. This translates into large sampling errors, because one can consider the situation as one where the effective sample drawn is less than the real one.

For estimators, say number of children or child mortality, the effect of clustering is much less, because one cannot guess from what one woman answers what the answers of the next woman in the cluster will be.

The net effect of clustering and other factors that make sampling errors deviate from a simple random design can be estimated by the design effect (DEFF). The design effect is defined as the ratio of the variance obtained with the actual complex sample employed to the variance that would have been obtained under simple random sampling.

The design effect may be interpreted as a factor that one needs to divide the sample size with in order to obtain a sample size that would yield appropriate sampling errors in a simple random sample. Thus if the design effect is two, and the actual complex sample drawn is 12,000 households, then the sampling error for the particular estimates are comparable to that of a simple random sample of 6,000 households, i.e., 12,000 divided by 2.

In DHS surveys the design effect is usually reported in the form of the square root of the design effect, usually termed DEFT. The DEFT can be interpreted as the direct effect on the standard error (and thereby confidence intervals) rather than as the effect on the effective sample size.

The design effect or its square root should not be interpreted as a quality characteristic of any estimate. Although statisticians and users will naturally prefer samples with low design effects, a real world sample is the result of a consideration of need for precision, variance, costs, and survey organization.

Some readers may wonder why design effects for Debubawi Keih Bahri are generally less than one. The reason is that the zoba has been significantly over sampled, and the design effect also takes into account the effect of disproportionate allocation to strata and oversampling.

The relevant measure for evaluating any estimate is its standard error in relation to the needed precision. Another relevant measure is the relative standard error (also called the coefficient of variation) that is the standard error divided by the estimate. If the relative standard error is larger than 0.1 (i.e., larger than 10 percent of the estimate) it is likely that the estimate is statistically unstable.

The tables below present the estimates and their standard errors. DEFT and relative standard errors are presented for selected estimates. In addition, the 95 percent confidence intervals are given. The 95 percent confidence intervals may be interpreted as the range of values within which one can be 95 percent sure that the actual value in the population value will be.

The estimates in the table have mainly been estimated by a so-called linearization procedure by means of the SPSS 21 complex sample estimation module. The term linearization stems from the fact that estimators from complex samples are non-linear in character, and therefore variance estimates cannot be directly computed. Therefore, the estimate is first linearized by means of a Taylor series approximation, and then the variance of the linearized approximation is computed.

The linearization approach works well for estimates that easily can be conceptualised as ratios, i.e., means and percentages. However, some of the estimators in this study are more complex, as for example child mortality rates. The variance estimation of such complex estimators is carried out by a Jackknife procedure, using the program CMRJack.

All estimates are produced taking account of the fact that the sample was explicitly stratified by zoba and type of residence (urban or rural). In addition, implicit stratification is exploited in the variance estimation. The implicit stratification takes advantage of the fact that the sampling frame was ordered geographically. Therefore two clusters that are drawn adjacent to each other are likely to be rather similar, since they are located close to each other geographically. The implicit stratification takes account of this, by assigning any two adjacent clusters within an explicit stratum as a stratum in a sequential fashion.

Table B.1 List of selected variables for sampling errors, EPHS 2010

Variable	Estimate	Base population
Electricity	Percentage	All households
Radio	Percentage	All households
Refrigerator	Percentage	All households
Piped water	Percentage	All households
Female headed household	Percentage	All households
Urban residence	Percentage	All women
Rural residence	Percentage	All women
No education	Percentage	All women
Literate	Percentage	All women
Secondary education or higher	Percentage	All women
Adolescent childbearing	Percentage	Women 15-19
Never married	Percentage	All women
Currently married	Percentage	All women
Married before age 20	Percentage	Women age 20-49
Had first sexual intercourse before age 18	Percentage	Women age 25-49
Currently pregnant	Percentage	All women
Total children ever born	Mean	All women
Children ever born to women age 40-49	Mean	Women 40-49
Children surviving	Mean	All women
Know any contraceptive method	Percentage	Currently married women
Know any modern method	Percentage	Currently married women
Ever used any contraceptive method	Percentage	Currently married women
Currently using any contraceptive method	Percentage	Currently married women
Current using a modern method	Percentage	Currently married women
Currently using pill	Percentage	Currently married women
Currently using IUD	Percentage	Currently married women
Currently using injectables	Percentage	Currently married women
Currently using implant	Percentage	Currently married women
Currently using condom	Percentage	Currently married women
Currently using female sterilization	Percentage	Currently married women
Currently using periodic abstinence	Percentage	Currently married women
Currently using withdrawal	Percentage	Currently married women
Used public sector source for contraceptive	Percentage	Currently married women using modern methods
Want no more children	Percentage	Currently married women
Want to delay birth at least two years	Percentage	Currently married women
Ideal number of children	Mean	All women
Primary school net attendance ratio	Percentage	Children 7-11 years
Mother received tetanus injection for last birth	Percentage	Women with at least one live birth in five years before survey
Mother received medical assistance at delivery	Percentage	Births occurring 1-59 months before survey
Weight-for-height (below –2 SD)	Percentage	Children age 0-59 months
Height-for-age (below –2 SD)	Percentage	Children age 0-59 months
Weight-for-age (below –2 SD)	Percentage	Children age 0-59 months
Child had diarrhea in the last two weeks	Percentage	Children under age five
Child treated for diarrhea with ORS solution	Percentage	Children with diarrhea in two weeks before interview
Child received medical treatment for diarrhea	Percentage	Children with diarrhea in two weeks before interview
Child's vaccination card seen	Percentage	Children age 12-23 months
Child received BCG vaccination	Percentage	Children age 12-23 months
Child received DPT vaccination (three doses)	Percentage	Children age 12-23 months
Child received polio vaccination (three doses)	Percentage	Children age 12-23 months
Child received measles vaccination	Percentage	Children age 12-23 months
Child fully immunized	Percentage	Children age 12-23 months
Neonatal mortality rate	Rate	Births in 5 (10) years before the survey
Postneonatal mortality rate	Rate	Births in 5 (10) years before the survey
Infant mortality rate	Rate	Births in 5 (10) years before the survey
Child mortality rate	Rate	Births in 5 (10) years before the survey surviving to age one
Under-five mortality rate	Rate	Births in 5 (10) years before the survey

Table B.2 Eritrea

	Estimate	Standard Error	95% Confidence Interval		Coefficient of Variation	Square Root Design Effect	Population Size	Unweighted Count
			Lower	Upper				
Household has electricity	37.2	0.93	35.4	39.0	0.03	3.41	31,212	31,211
Household has radio	29.8	0.54	28.8	30.9	0.02	2.10	31,194	31,196
Household has refrigerator	8.8	0.41	8.0	9.6	0.05	2.53	31,209	31,209
Household has piped water	47.7	1.46	44.8	50.5	0.03	5.17	31,207	31,207
Female headed household	47.2	0.46	46.3	48.1	0.01	1.61	31,214	31,214
Urban residence	40.3	0.64	39.0	41.5	0.02	1.32	10,238	10,238
Rural residence	59.7	0.64	58.5	61.0	0.01	1.32	10,238	10,238
No education	37.9	0.82	36.3	39.5	0.02	1.70	10,237	10,237
Secondary education or higher	21.9	0.61	20.8	23.1	0.03	1.48	10,237	10,237
Literate	61.7	0.82	60.0	63.3	0.01	1.71	10,225	10,226
Adolescent childbearing	8.6	0.70	7.3	10.0	0.08	1.16	2,301	2,179
Never married	28.1	0.54	27.1	29.2	0.02	1.21	10,238	10,238
Currently married	60.4	0.61	59.2	61.6	0.01	1.26	10,238	10,238
Married before 20	73.1	0.66	71.8	74.4	0.01	1.28	7,360	7,421
Had first intercourse before age 18	52.9	0.79	51.4	54.5	0.01	1.23	5,853	5,994
Currently pregnant	7.4	0.29	6.8	8.0	0.04	1.14	10,238	10,238
Total children ever born	2.6	0.03	2.5	2.7	0.01	1.06	10,238	10,238
Children ever born to women age 40-49	5.6	0.08	5.4	5.7	0.01	1.22	1,891	1,955
Children surviving	2.4	0.03	2.3	2.4	0.01	1.04	10,238	10,238
Know any contraceptive method	85.5	0.81	84.0	87.1	0.01	1.82	6,183	6,286
Know any modern contraceptive method	85.5	0.81	83.9	87.1	0.01	1.81	6,183	6,286
Ever used any contraceptive method	20.5	0.68	19.1	21.8	0.03	1.34	6,183	6,286
Currently using any contraceptive method	8.4	0.40	7.6	9.2	0.05	1.15	6,183	6,286
Currently using a modern method	7.1	0.37	6.4	7.8	0.05	1.14	6,183	6,286
Currently using pill	2.3	0.21	1.9	2.7	0.09	1.11	6,183	6,286
Currently using IUD	0.3	0.08	0.2	0.5	0.24	1.10	6,183	6,286
Currently using injectables	1.8	0.18	1.5	2.2	0.10	1.09	6,183	6,286
Currently using implant	0.0	0.02	-0.0	0.0	1.00	1.02	6,183	6,286
Currently using condom	0.8	0.13	0.6	1.1	0.16	1.11	6,183	6,286
Currently using female sterilization	0.2	0.07	0.1	0.4	0.30	1.12	6,183	6,286
Currently using periodic abstinence	-	-	-	-			6,183	6,286
Currently using withdrawal	0.2	0.05	0.1	0.3	0.32	1.00	6,183	6,286
Used public sector for contraceptive	0.7	0.03	0.7	0.8	0.04	1.13	389	385
Want no more children	21.5	0.63	20.3	22.7	0.03	1.21	6,183	6,285
Want to delay birth by at least two years	36.8	0.74	35.3	38.2	0.02	1.22	6,183	6,285
Ideal number of children	6.3	0.04	6.2	6.3	0.01	1.24	5,323	5,372
Primary school net attendance ratio	56.6	1.03	54.5	58.6	0.02	1.78	7,353	7,318
Weight for height (below -2SD)	15.3	0.52	14.3	16.3	0.03	1.17	6,645	6,551
Height for age (below -2SD)	50.3	0.82	48.7	51.9	0.02	1.32	6,645	6,551
Weight for age (below -2SD)	38.6	0.82	37.0	40.3	0.02	1.37	6,645	6,551
Mother received tetanus injection for last birth	38.1	0.88	36.4	39.8	0.02	1.25	4,706	4,689
Mother received medical assistance at delivery	36.6	0.80	35.1	38.2	0.02	2.09	16,080	16,011
Child had diarrhea in the last two weeks	9.1	0.43	8.3	10.0	0.05	1.21	6,656	6,633
Child treated for diarrhea with ORS solution"	43.4	2.42	38.7	48.2	0.06	1.18	608	589
Child's health vaccination card seen	84.6	1.15	82.3	86.9	0.01	1.16	1,343	1,325
Child received BCG vaccination	94.6	0.76	93.1	96.1	0.01	1.23	1,345	1,327
Child received polio vaccination (3 doses)	92.6	0.93	90.7	94.4	0.01	1.29	1,345	1,327
Child received polio vaccination (3 doses)	89.9	0.99	88.0	91.9	0.01	1.20	1,345	1,327
Child received measles vaccination	78.5	0.64	77.3	79.8	0.01	1.26	6,658	6,632
Child fully immunized	82.5	1.28	79.9	85.0	0.02	1.23	1,345	1,326
Neonatal mortality rate (five years before the survey)	23.5	1.28	20.94	25.96	0.05			
Postneonatal mortality rate (five years before the survey)	18.8	1.07	16.65	20.85	0.06			
Infant mortality rate (five years before the survey)	42.2	1.66	38.95	45.45	0.04			
Child mortality rate (five years before the survey)	22.2	1.25	19.70	24.60	0.06			
Under-five mortality rate (five years before the survey)	63.4	2.05	59.40	67.44	0.03			

Table B.3 Debubawi Keih Bahri

	Estimate	Standard Error	95% Confidence Interval Lower	95% Confidence Interval Upper	Coefficient of Variation	Square Root Design Effect	Population Size	Unweighted Count
Household has electricity	28.9	2.59	23.8	34.0	0.09	1.29	512	2,181
Household has radio	15.8	1.47	12.9	18.7	0.09	0.91	512	2,181
Household has refrigerator	10.0	1.72	6.7	13.4	0.17	1.30	512	2,181
Household has piped water	32.1	3.52	25.2	39.0	0.11	1.71	512	2,181
Female headed household	49.1	1.91	45.4	52.9	0.04	0.86	512	2,181
Urban residence	33.3	2.57	28.2	38.3	0.08	0.70	163	1,041
Rural residence	66.7	2.57	61.7	71.8	0.04	0.70	163	1,041
No education	68.6	2.44	63.8	73.4	0.04	0.67	163	1,041
Secondary education or higher	9.4	1.87	5.7	13.0	0.20	0.82	163	1,041
Literate	28.7	2.46	23.9	33.6	0.09	0.69	163	1,040
Adolescent childbearing	5.6	1.97	1.7	9.5	0.35	0.43	26	166
Never married	25.1	2.30	20.6	29.6	0.09	0.68	163	1,041
Currently married	67.8	2.19	63.5	72.1	0.03	0.60	163	1,041
Married before 20	59.4	2.18	55.2	63.7	0.04	0.49	122	791
Had first intercourse before age 18	32.0	2.18	27.7	36.3	0.07	0.48	105	680
Currently pregnant	7.6	0.94	5.7	9.4	0.12	0.45	163	1,041
Total children ever born	2.7	0.09	2.5	2.9	0.03	0.42	163	1,041
Children ever born to women age 40-49	5.6	0.27	5.1	6.1	0.05	0.49	31	209
Children surviving	2.3	0.08	2.1	2.5	0.03	0.41	163	1,041
Know any contraceptive method	87.6	2.58	82.6	92.7	0.03	0.83	111	715
Know any modern contraceptive method	87.6	2.58	82.6	92.7	0.03	0.83	111	715
Ever used any contraceptive method	10.6	1.68	7.3	13.9	0.16	0.58	111	715
Currently using any contraceptive method	5.0	1.03	3.0	7.1	0.21	0.50	111	715
Currently using a modern method	4.7	0.93	2.9	6.5	0.20	0.46	111	715
Currently using pill	0.5	0.25	0.0	1.0	0.48	0.36	111	715
Currently using IUD	-	-	-	-			111	715
Currently using injectables	2.5	0.58	1.3	3.6	0.23	0.40	111	715
Currently using implant	-	-	-	-			111	715
Currently using condom	0.7	0.40	-0.1	1.4	0.60	0.52	111	715
Currently using female sterilization	-	-	-	-			111	715
Currently using periodic abstinence	-	-	-	-			111	715
Currently using withdrawal	-	-	-	-			111	715
Used public sector for contraceptive	0.9	0.05	0.8	1.0	0.06	0.35	4	32
Want no more children	9.1	1.18	6.8	11.5	0.13	0.44	110	714
Want to delay birth by at least two years	19.3	1.87	15.6	22.9	0.10	0.50	110	714
Ideal number of children	6.4	0.19	6.1	6.8	0.03	0.48	79	511
Primary school net attendance ratio	39.2	2.69	33.9	44.5	0.07	0.60	121	775
Weight for height (below -2SD)	23.4	1.99	19.5	27.3	0.08	0.47	104	662
Height for age (below -2SD)	56.9	2.45	52.1	61.8	0.04	0.50	104	662
Weight for age (below -2SD)	51.3	2.21	46.9	55.6	0.04	0.45	104	662
Mother received tetanus injection for last birth	57.2	3.23	50.9	63.6	0.06	0.57	76	489
Mother received medical assistance at delivery	39.6	3.67	32.4	46.8	0.09	1.18	248	1,155
Child had diarrhea in the last two weeks	4.9	1.07	2.8	7.0	0.22	0.51	105	678
Child treated for diarrhea with ORS solution"	60.0	9.32	41.7	78.3	0.16	0.43	5	35
Child's health vaccination card seen	74.6	4.13	66.5	82.7	0.06	0.41	19	119
Child received BCG vaccination	79.2	4.50	70.4	88.0	0.06	0.48	19	119
Child received polio vaccination (3 doses)	89.7	3.13	83.5	95.8	0.03	0.44	19	119
Child received polio vaccination (3 doses)	82.8	3.73	75.5	90.1	0.05	0.43	19	119
Child received measles vaccination	70.2	2.86	64.6	75.8	0.04	0.64	105	677
Child fully immunized	65.6	5.11	55.6	75.6	0.08	0.46	19	119
Neonatal mortality rate (ten years before the survey)	40.46	5.29	30.08	50.83	0.13			
Postneonatal mortality rate (ten years before the survey)	35.	4.49	26.19	43.80	0.13			
Infant mortality rate (ten years before the survey)	75.45	8.23	59.33	91.57	0.11			
Child mortality rate (ten years before the survey)	27.91	3.7	20.67	35.15	0.13			
Under-ten mortality rate (ten years before the survey)	101.25	9.07	83.48	119.03	0.09			

Table B.4 Maekel

	Estimate	Standard Error	95% Confidence Interval		Coefficient of Variation	Square Root Design Effect	Population Size	Unweighted Count
			Lower	Upper				
Household has electricity	93.4	2.00	89.4	97.3	0.02	6.70	6,968	6,527
Household has radio	38.3	1.25	35.9	40.8	0.03	2.15	6,957	6,518
Household has refrigerator	28.3	1.57	25.3	31.4	0.06	2.90	6,967	6,526
Household has piped water	69.0	3.08	63.0	75.1	0.04	5.57	6,968	6,527
Female headed household	52.6	0.82	51.0	54.2	0.02	1.38	6,969	6,528
Urban residence	76.9	1.11	74.8	79.1	0.01	1.33	2,535	2,271
Rural residence	23.1	1.11	20.9	25.2	0.05	1.33	2,535	2,271
No education	7.1	0.66	5.8	8.4	0.09	1.30	2,535	2,271
Secondary education or higher	54.1	1.53	51.1	57.1	0.03	1.54	2,535	2,271
Literate	92.9	0.67	91.6	94.2	0.01	1.31	2,535	2,271
Adolescent childbearing	2.4	0.72	1.0	3.8	0.30	1.08	544	474
Never married	43.4	1.09	41.2	45.5	0.03	1.10	2,535	2,271
Currently married	45.5	1.03	43.5	47.5	0.02	1.04	2,535	2,271
Married before 20	53.4	1.77	49.9	56.8	0.03	1.35	1,435	1,273
Had first intercourse before age 18	34.4	1.68	31.1	37.7	0.05	1.28	1,272	1,141
Currently pregnant	5.5	0.49	4.5	6.4	0.09	1.08	2,535	2,271
Total children ever born	1.7	0.05	1.6	1.8	0.03	1.06	2,535	2,271
Children ever born to women age 40-49	4.1	0.17	3.8	4.5	0.04	1.24	402	368
Children surviving	1.6	0.04	1.5	1.7	0.03	1.04	2,535	2,271
Know any contraceptive method	99.4	0.26	98.8	99.9	0.00	1.10	1,153	1,024
Know any modern contraceptive method	99.3	0.27	98.7	99.8	0.00	1.09	1,153	1,024
Ever used any contraceptive method	54.1	1.84	50.5	57.7	0.03	1.26	1,153	1,024
Currently using any contraceptive method	24.2	1.32	21.6	26.8	0.05	1.06	1,153	1,024
Currently using a modern method	20.0	1.25	17.5	22.4	0.06	1.07	1,153	1,024
Currently using pill	5.7	0.76	4.2	7.2	0.13	1.12	1,153	1,024
Currently using IUD	1.8	0.43	1.0	2.7	0.24	1.11	1,153	1,024
Currently using injectables	4.3	0.63	3.1	5.5	0.15	1.07	1,153	1,024
Currently using implant	0.1	0.09	- 0.1	0.3	1.00	1.02	1,153	1,024
Currently using condom	3.3	0.60	2.1	4.5	0.18	1.15	1,153	1,024
Currently using female sterilization	0.8	0.31	0.2	1.4	0.38	1.19	1,153	1,024
Currently using periodic abstinence	-	-	-	-			1,153	1,024
Currently using withdrawal	0.6	0.23	0.2	1.1	0.37	1.01	1,153	1,024
Used public sector for contraceptive	0.8	0.03	0.8	0.9	0.04	1.18	192	173
Want no more children	24.4	1.39	21.7	27.1	0.06	1.11	1,153	1,024
Want to delay birth by at least two years	37.3	1.72	33.9	40.7	0.05	1.22	1,153	1,024
Ideal number of children	5.4	0.08	5.2	5.5	0.01	1.19	1,095	973
Primary school net attendance ratio	81.5	1.32	78.9	84.1	0.02	1.13	1,101	970
Weight for height (below -2SD)	7.0	0.80	5.4	8.5	0.12	1.07	1,161	995
Height for age (below -2SD)	34.5	2.03	30.5	38.4	0.06	1.44	1,161	995
Weight for age (below -2SD)	18.0	1.43	15.2	20.8	0.08	1.26	1,161	995
Mother received tetanus injection for last birth	54.6	1.93	50.8	58.4	0.04	1.12	838	717
Mother received medical assistance at delivery	74.9	2.04	70.9	78.9	0.03	2.52	2,892	2,613
Child had diarrhea in the last two weeks	7.6	0.79	6.0	9.1	0.10	1.01	1,142	979
Child treated for diarrhea with ORS solution"	40.7	6.22	28.5	53.0	0.15	1.16	87	71
Child's health vaccination card seen	90.5	2.13	86.3	94.7	0.02	1.12	243	209
Child received BCG vaccination	99.3	0.70	97.9	100.7	0.01	1.29	243	209
Child received polio vaccination (3 doses)	97.1	1.08	95.0	99.2	0.01	0.99	243	209
Child received polio vaccination (3 doses)	92.2	1.85	88.6	95.9	0.02	1.07	243	209
Child received measles vaccination	84.3	1.09	82.2	86.5	0.01	1.02	1,142	979
Child fully immunized	91.3	1.98	87.4	95.2	0.02	1.09	243	209
Neonatal mortality rate (ten years before the survey)	19.9	2.1	15.8	24.1	0.1			
Postneonatal mortality rate (ten years before the survey)	13.9	1.6	10.7	17.1	0.1			
Infant mortality rate (ten years before the survey)	33.8	2.9	28.1	39.6	0.1			
Child mortality rate (ten years before the survey)	13.4	1.8	9.9	16.9	0.1			
Under-ten mortality rate (ten years before the survey)	46.8	3.7	39.5	54.1	0.1			

Table B.5 Semenawi Keih Bahri

	Estimate	Standard Error	95% Confidence Interval		Coefficient of Variation	Square Root Design Effect	Population Size	Unweighted Count
			Lower	Upper				
Household has electricity	25.0	2.39	20.3	29.7	0.10	3.19	3,339	4,403
Household has radio	22.1	1.03	20.1	24.1	0.05	1.43	3,336	4,400
Household has refrigerator	8.1	1.66	4.8	11.3	0.21	3.53	3,338	4,402
Household has piped water	49.7	4.27	41.4	58.1	0.09	4.93	3,339	4,404
Female headed household	37.7	1.22	35.3	40.1	0.03	1.45	3,339	4,404
Urban residence	36.7	2.25	32.3	41.1	0.06	1.56	1,122	1,423
Rural residence	63.3	2.25	58.9	67.7	0.04	1.56	1,122	1,423
No education	60.9	2.39	56.2	65.5	0.04	1.64	1,122	1,423
Secondary education or higher	8.9	1.42	6.1	11.7	0.16	1.68	1,122	1,423
Literate	40.4	2.34	35.8	45.0	0.06	1.60	1,121	1,422
Adolescent childbearing	8.7	2.09	4.6	12.8	0.24	1.03	203	248
Never married	19.6	1.38	16.8	22.3	0.07	1.16	1,122	1,423
Currently married	70.3	1.64	67.1	73.5	0.02	1.21	1,122	1,423
Married before 20	77.5	1.73	74.1	80.9	0.02	1.25	902	1,160
Had first intercourse before age 18	55.5	1.71	52.2	58.9	0.03	0.92	692	903
Currently pregnant	8.1	0.76	6.6	9.6	0.09	0.94	1,122	1,423
Total children ever born	3.0	0.09	2.8	3.2	0.03	1.02	1,122	1,423
Children ever born to women age 40-49	5.9	0.19	5.5	6.3	0.03	1.07	235	313
Children surviving	2.6	0.07	2.5	2.7	0.03	0.94	1,122	1,423
Know any contraceptive method	87.2	1.77	83.7	90.7	0.02	1.50	789	1,017
Know any modern contraceptive method	86.9	1.77	83.4	90.4	0.02	1.49	789	1,017
Ever used any contraceptive method	12.6	1.43	9.8	15.4	0.11	1.22	789	1,017
Currently using any contraceptive method	3.9	0.71	2.5	5.3	0.18	1.05	789	1,017
Currently using a modern method	3.6	0.70	2.2	5.0	0.19	1.06	789	1,017
Currently using pill	1.1	0.34	0.5	1.8	0.29	0.89	789	1,017
Currently using IUD	-	-	-	-			789	1,017
Currently using injectables	1.3	0.41	0.4	2.1	0.33	1.06	789	1,017
Currently using implant	-	-	-	-			789	1,017
Currently using condom	0.2	0.12	-0.0	0.4	0.58	0.76	789	1,017
Currently using female sterilization	-	-	-	-			789	1,017
Currently using periodic abstinence	-	-	-	-			789	1,017
Currently using withdrawal	-	-	-	-			789	1,017
Used public sector for contraceptive	0.8	0.07	0.6	0.9	0.09	0.89	27	35
Want no more children	17.3	1.21	15.0	19.7	0.07	0.90	789	1,017
Want to delay birth by at least two years	37.2	2.11	33.1	41.4	0.06	1.24	789	1,017
Ideal number of children	7.4	0.14	7.1	7.6	0.02	1.27	750	967
Primary school net attendance ratio	52.8	2.81	47.3	58.3	0.05	1.68	893	1,130
Weight for height (below -2SD)	21.1	1.63	17.9	24.3	0.08	1.11	787	997
Height for age (below -2SD)	58.0	1.88	54.3	61.7	0.03	1.06	787	997
Weight for age (below -2SD)	47.9	2.45	43.1	52.8	0.05	1.37	787	997
Mother received tetanus injection for last birth	42.5	2.39	37.8	47.2	0.06	1.13	554	709
Mother received medical assistance at delivery	33.2	2.13	29.0	37.4	0.06	1.98	1,937	2,530
Child had diarrhea in the last two weeks	11.0	1.19	8.6	13.3	0.11	1.08	819	1,042
Child treated for diarrhea with ORS solution"	53.7	5.28	43.3	64.1	0.10	0.99	90	113
Child's health vaccination card seen	84.2	3.14	78.0	90.4	0.04	1.11	167	212
Child received BCG vaccination	88.6	3.29	82.1	95.1	0.04	1.33	169	213
Child received polio vaccination (3 doses)	87.4	3.43	80.7	94.2	0.04	1.33	169	213
Child received polio vaccination (3 doses)	85.0	3.43	78.2	91.7	0.04	1.24	169	213
Child received measles vaccination	74.7	1.88	71.0	78.3	0.03	1.23	818	1,040
Child fully immunized	75.2	3.89	67.5	82.8	0.05	1.16	168	212
Neonatal mortality rate (ten years before the survey)	28.7	2.7	23.5	34.0	0.09			
Postneonatal mortality rate (ten years before the survey)	27.4	2.2	23.0	31.8	0.08			
Infant mortality rate (ten years before the survey)	56.1	3.5	49.3	63.0	0.06			
Child mortality rate (ten years before the survey)	38.0	3.2	31.8	44.3	0.08			
Under-ten mortality rate (ten years before the survey)	92.0	4.5	83.2	100.9	0.05			

Table B.6 Anseba

	Estimate	Standard Error	95% Confidence Interval		Coefficient of Variation	Square Root Design Effect	Population Size	Unweighted Count
			Lower	Upper				
Household has electricity	21.2	1.76	17.8	24.7	0.08	2.89	4,486	4,420
Household has radio	27.5	1.03	25.5	29.5	0.04	1.55	4,486	4,420
Household has refrigerator	3.4	0.42	2.6	4.2	0.12	1.55	4,487	4,421
Household has piped water	45.8	3.80	38.4	53.3	0.08	5.11	4,486	4,420
Female headed household	42.6	1.10	40.4	44.7	0.03	1.48	4,487	4,421
Urban residence	30.8	1.36	28.1	33.4	0.04	1.12	1,436	1,387
Rural residence	69.2	1.36	66.6	71.9	0.02	1.12	1,436	1,387
No education	39.8	2.13	35.7	44.0	0.05	1.65	1,436	1,387
Secondary education or higher	11.5	1.03	9.5	13.5	0.09	1.22	1,436	1,387
Literate	59.6	2.12	55.4	63.7	0.04	1.63	1,435	1,385
Adolescent childbearing	3.9	1.08	1.8	6.0	0.27	0.99	336	329
Never married	27.3	1.34	24.7	29.9	0.05	1.14	1,436	1,387
Currently married	64.7	1.42	61.9	67.5	0.02	1.12	1,436	1,387
Married before 20	73.5	1.64	70.3	76.7	0.02	1.20	1,044	997
Had first intercourse before age 18	48.6	2.18	44.3	52.9	0.04	1.27	831	804
Currently pregnant	8.2	0.93	6.4	10.1	0.11	1.28	1,436	1,387
Total children ever born	2.9	0.08	2.8	3.1	0.03	0.98	1,436	1,387
Children ever born to women age 40-49	6.5	0.20	6.1	6.8	0.03	1.19	266	262
Children surviving	2.6	0.07	2.5	2.8	0.02	0.93	1,436	1,387
Know any contraceptive method	90.2	1.41	87.5	93.0	0.02	1.46	930	880
Know any modern contraceptive method	90.2	1.41	87.5	93.0	0.02	1.46	930	880
Ever used any contraceptive method	14.5	1.47	11.6	17.4	0.10	1.28	930	880
Currently using any contraceptive method	7.5	1.04	5.4	9.5	0.14	1.22	930	880
Currently using a modern method	5.9	1.00	3.9	7.8	0.17	1.30	930	880
Currently using pill	1.3	0.34	0.6	2.0	0.27	0.93	930	880
Currently using IUD	-	-	-	-			930	880
Currently using injectables	1.5	0.47	0.5	2.4	0.33	1.22	930	880
Currently using implant	-	-	-	-			930	880
Currently using condom	0.5	0.25	-0.0	1.0	0.52	1.12	930	880
Currently using female sterilization	0.3	0.17	0.0	0.7	0.50	0.89	930	880
Currently using periodic abstinence	-	-	-	-			930	880
Currently using withdrawal	0.2	0.11	-0.1	0.4	0.71	0.87	930	880
Used public sector for contraceptive	0.5	0.09	0.3	0.7	0.17	1.21	50	50
Want no more children	18.2	1.54	15.2	21.3	0.08	1.23	930	880
Want to delay birth by at least two years	41.4	1.85	37.8	45.1	0.04	1.16	930	880
Ideal number of children	6.9	0.12	6.7	7.2	0.02	1.15	793	754
Primary school net attendance ratio	59.7	2.38	55.1	64.4	0.04	1.61	1,116	1,056
Weight for height (below -2SD)	17.4	1.35	14.8	20.1	0.08	1.16	1,070	986
Height for age (below -2SD)	56.5	2.15	52.3	60.7	0.04	1.41	1,070	986
Weight for age (below -2SD)	46.4	2.03	42.4	50.4	0.04	1.32	1,070	986
Mother received tetanus injection for last birth	28.8	2.11	24.7	33.0	0.07	1.26	730	689
Mother received medical assistance at delivery	28.2	1.78	24.7	31.7	0.06	1.98	2,519	2,437
Child had diarrhea in the last two weeks	9.7	1.19	7.4	12.1	0.12	1.30	1,060	993
Child treated for diarrhea with ORS solution"	61.3	5.38	50.7	71.9	0.09	1.10	103	96
Child's health vaccination card seen	88.9	3.06	82.9	94.9	0.03	1.39	208	196
Child received BCG vaccination	95.8	1.57	92.7	98.9	0.02	1.12	208	196
Child received polio vaccination (3 doses)	94.6	2.36	89.9	99.2	0.03	1.49	208	196
Child received polio vaccination (3 doses)	93.9	1.94	90.1	97.7	0.02	1.16	208	196
Child received measles vaccination	84.2	1.31	81.7	86.8	0.02	1.17	1,060	992
Child fully immunized	83.1	3.40	76.4	89.7	0.04	1.30	208	196
Neonatal mortality rate (ten years before the survey)	27.69	2.67	22.46	32.92	0.10			
Postneonatal mortality rate (ten years before the survey)	18.82	2.26	14.40	23.25	0.12			
Infant mortality rate (ten years before the survey)	46.51	3.51	39.63	53.39	0.08			
Child mortality rate (ten years before the survey)	21.08	2.2	16.77	25.40	0.10			
Under-ten mortality rate (ten years before the survey)	66.61	4.68	57.44	75.79	0.07			

Table B.7 Gash-Barka

	Estimate	Standard Error	95% Confidence Interval		Coefficient of Variation	Square Root Design Effect	Population Size	Unweighted Count
			Lower	Upper				
Household has electricity	9.8	1.43	7.0	12.6	0.15	4.12	7,350	6,215
Household has radio	19.5	1.05	17.4	21.5	0.05	2.27	7,348	6,213
Household has refrigerator	1.3	0.24	0.8	1.8	0.18	1.80	7,349	6,214
Household has piped water	38.8	3.16	32.6	45.0	0.08	5.56	7,349	6,213
Female headed household	38.0	1.19	35.7	40.4	0.03	2.11	7,350	6,215
Urban residence	22.1	1.17	19.8	24.4	0.05	1.34	2,255	1,836
Rural residence	77.9	1.17	75.6	80.2	0.02	1.34	2,255	1,836
No education	63.5	2.02	59.5	67.5	0.03	2.00	2,255	1,836
Secondary education or higher	5.1	0.70	3.7	6.5	0.14	1.50	2,255	1,836
Literate	33.7	2.02	29.8	37.7	0.06	2.02	2,251	1,832
Adolescent childbearing	12.1	1.94	8.3	16.0	0.16	1.23	456	370
Never married	19.1	1.07	17.0	21.2	0.06	1.30	2,255	1,836
Currently married	68.3	1.38	65.6	71.0	0.02	1.40	2,255	1,836
Married before 20	74.5	1.36	71.8	77.1	0.02	1.34	1,825	1,482
Had first intercourse before age 18	56.7	1.75	53.3	60.2	0.03	1.36	1,449	1,183
Currently pregnant	8.0	0.67	6.7	9.3	0.08	1.16	2,255	1,836
Total children ever born	3.0	0.07	2.9	3.1	0.02	1.12	2,255	1,836
Children ever born to women age 40-49	5.7	0.16	5.4	6.0	0.03	1.24	451	369
Children surviving	2.7	0.06	2.6	2.8	0.02	1.11	2,255	1,836
Know any contraceptive method	62.7	2.58	57.7	67.8	0.04	2.11	1,541	1,251
Know any modern contraceptive method	62.7	2.58	57.7	67.8	0.04	2.11	1,541	1,251
Ever used any contraceptive method	8.8	0.93	7.0	10.6	0.11	1.29	1,541	1,251
Currently using any contraceptive method	3.0	0.47	2.1	3.9	0.16	1.10	1,541	1,251
Currently using a modern method	2.7	0.46	1.8	3.6	0.17	1.14	1,541	1,251
Currently using pill	1.2	0.31	0.5	1.8	0.27	1.15	1,541	1,251
Currently using IUD	-	-	-	-			1,541	1,251
Currently using injectables	0.9	0.27	0.3	1.4	0.31	1.14	1,541	1,251
Currently using implant	-	-	-	-			1,541	1,251
Currently using condom	0.1	0.10	-0.1	0.3	0.71	1.04	1,541	1,251
Currently using female sterilization	0.1	0.08	-0.1	0.2	1.00	1.13	1,541	1,251
Currently using periodic abstinence	-	-	-	-			1,541	1,251
Currently using withdrawal	-	-	-	-			1,541	1,251
Used public sector for contraceptive	0.6	0.09	0.4	0.8	0.14	1.11	38	33
Want no more children	19.8	1.43	17.0	22.6	0.07	1.42	1,541	1,251
Want to delay birth by at least two years	32.0	1.57	28.9	35.1	0.05	1.33	1,541	1,251
Ideal number of children	6.2	0.09	6.0	6.4	0.02	1.38	1,120	915
Primary school net attendance ratio	33.1	2.17	28.9	37.4	0.07	2.06	2,010	1,615
Weight for height (below -2SD)	22.7	1.38	20.0	25.4	0.06	1.33	1,643	1,329
Height for age (below -2SD)	52.8	1.65	49.6	56.0	0.03	1.33	1,643	1,329
Weight for age (below -2SD)	47.7	1.84	44.1	51.3	0.04	1.48	1,643	1,329
Mother received tetanus injection for last birth	38.7	1.93	35.0	42.5	0.05	1.36	1,185	970
Mother received medical assistance at delivery	19.7	1.39	17.0	22.5	0.07	2.21	4,049	3,415
Child had diarrhea in the last two weeks	9.2	0.91	7.4	11.0	0.10	1.30	1,702	1,391
Child treated for diarrhea with ORS solution"	35.8	4.73	26.5	45.1	0.13	1.22	157	137
Child's health vaccination card seen	79.8	2.72	74.5	85.1	0.03	1.21	323	267
Child received BCG vaccination	92.6	1.87	88.9	96.3	0.02	1.28	323	268
Child received polio vaccination (3 doses)	86.8	2.49	81.9	91.7	0.03	1.32	323	268
Child received polio vaccination (3 doses)	86.6	2.41	81.9	91.3	0.03	1.26	323	268
Child received measles vaccination	69.4	1.61	66.2	72.5	0.02	1.44	1,706	1,394
Child fully immunized	76.0	3.27	69.6	82.5	0.04	1.37	323	268
Neonatal mortality rate (ten years before the survey)	26.5	2.2	22.10	30.88	0.08			
Postneonatal mortality rate (ten years before the survey)	18.2	1.6	15.06	21.27	0.09			
Infant mortality rate (ten years before the survey)	44.7	2.9	38.99	50.31	0.06			
Child mortality rate (ten years before the survey)	30.1	2.2	25.79	34.35	0.07			
Under-ten mortality rate (ten years before the survey)	73.4	3.7	66.12	80.64	0.05			

Table B.8 Debub

	Estimate	Standard Error	95% Confidence Interval		Coefficient of Variation	Square Root Design Effect	Population Size	Unweighted Count
			Lower	Upper				
Household has electricity	28.7	2.07	24.6	32.7	0.07	4.23	8,556	7,465
Household has radio	36.9	1.19	34.6	39.3	0.03	2.28	8,555	7,464
Household has refrigerator	2.2	0.31	1.6	2.8	0.14	1.98	8,556	7,465
Household has piped water	39.0	2.85	33.4	44.6	0.07	5.40	8,553	7,462
Female headed household	56.8	0.74	55.3	58.2	0.01	1.38	8,556	7,465
Urban residence	28.2	1.04	26.2	30.3	0.04	1.21	2,727	2,280
Rural residence	71.8	1.04	69.7	73.8	0.01	1.21	2,727	2,280
No education	33.2	1.63	30.0	36.4	0.05	1.81	2,726	2,279
Secondary education or higher	17.6	1.07	15.5	19.7	0.06	1.47	2,726	2,279
Literate	67.5	1.67	64.2	70.8	0.02	1.86	2,722	2,276
Adolescent childbearing	13.3	1.53	10.3	16.3	0.12	1.19	736	592
Never married	25.5	1.07	23.4	27.6	0.04	1.28	2,727	2,280
Currently married	60.9	1.32	58.3	63.5	0.02	1.41	2,727	2,280
Married before 20	84.5	1.00	82.5	86.5	0.01	1.25	2,031	1,718
Had first intercourse before age 18	67.6	1.49	64.7	70.5	0.02	1.25	1,505	1,283
Currently pregnant	7.9	0.60	6.7	9.1	0.08	1.17	2,727	2,280
Total children ever born	2.8	0.06	2.6	2.9	0.02	1.04	2,727	2,280
Children ever born to women age 40-49	6.0	0.16	5.7	6.3	0.03	1.31	506	434
Children surviving	2.5	0.05	2.4	2.6	0.02	1.06	2,727	2,280
Know any contraceptive method	93.6	0.82	92.0	95.2	0.01	1.37	1,660	1,399
Know any modern contraceptive method	93.6	0.82	92.0	95.2	0.01	1.37	1,660	1,399
Ever used any contraceptive method	15.7	1.39	13.0	18.4	0.09	1.57	1,660	1,399
Currently using any contraceptive method	5.4	0.72	4.0	6.8	0.13	1.31	1,660	1,399
Currently using a modern method	4.8	0.63	3.6	6.0	0.13	1.21	1,660	1,399
Currently using pill	2.1	0.42	1.3	2.9	0.20	1.19	1,660	1,399
Currently using IUD	-	-	-	-			1,660	1,399
Currently using injectables	1.4	0.31	0.8	2.0	0.22	1.09	1,660	1,399
Currently using implant	-	-	-	-			1,660	1,399
Currently using condom	0.2	0.11	-0.0	0.4	0.58	1.05	1,660	1,399
Currently using female sterilization	-	-	-	-			1,660	1,399
Currently using periodic abstinence	-	-	-	-			1,660	1,399
Currently using withdrawal	0.1	0.07	- 0.1	0.2	1.00	1.11	1,660	1,399
Used public sector for contraceptive	0.7	0.06	0.5	0.8	0.09	1.15	77	62
Want no more children	25.7	1.26	23.2	28.2	0.05	1.18	1,660	1,399
Want to delay birth by at least two years	39.1	1.35	36.4	41.8	0.03	1.14	1,660	1,399
Ideal number of children	6.0	0.06	5.8	6.1	0.01	1.21	1,485	1,252
Primary school net attendance ratio	66.8	1.92	63.0	70.5	0.03	1.87	2,111	1,772
Weight for height (below -2SD)	9.9	0.76	8.4	11.4	0.08	1.10	1,881	1,582
Height for age (below -2SD)	50.9	1.57	47.8	54.0	0.03	1.35	1,881	1,582
Weight for age (below -2SD)	34.5	1.54	31.5	37.5	0.04	1.40	1,881	1,582
Mother received tetanus injection for last birth	29.3	1.62	26.1	32.5	0.06	1.29	1,323	1,115
Mother received medical assistance at delivery	33.2	1.36	30.6	35.9	0.04	1.92	4,435	3,861
Child had diarrhea in the last two weeks	9.1	0.84	7.5	10.7	0.09	1.24	1,827	1,550
Child treated for diarrhea with ORS solution"	34.9	4.66	25.7	44.0	0.13	1.24	166	137
Child's health vaccination card seen	83.2	2.10	79.1	87.4	0.03	1.09	383	322
Child received BCG vaccination	96.0	1.24	93.5	98.4	0.01	1.22	383	322
Child received polio vaccination (3 doses)	95.9	1.19	93.5	98.2	0.01	1.16	383	322
Child received polio vaccination (3 doses)	91.6	1.74	88.2	95.1	0.02	1.22	383	322
Child received measles vaccination	82.4	1.05	80.4	84.5	0.01	1.18	1,827	1,550
Child fully immunized	86.0	1.96	82.1	89.8	0.02	1.10	383	322
Neonatal mortality rate (ten years before the survey)	20.5	1.6	17.2	23.7	0.1			
Postneonatal mortality rate (ten years before the survey)	19.2	1.6	16.1	22.4	0.1			
Infant mortality rate (ten years before the survey)	39.7	2.3	35.1	44.3	0.1			
Child mortality rate (ten years before the survey)	24.4	1.9	20.7	28.0	0.1			
Under-ten mortality rate (ten years before the survey)	63.1	3.1	57.0	69.2	0.0			

DATA QUALITY TABLES

APPENDIX C

Table C1 Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Eritrea 2010

	Women		Men	
Age	Number	Percent	Number	Percent
0	1,764	2.4	1,859	3.1
1	1,812	2.5	1,947	3.2
2	2,047	2.8	2,146	3.6
3	2,071	2.8	2,096	3.5
4	2,264	3.1	2,434	4.0
5	1,951	2.7	2,056	3.4
6	2,378	3.3	2,451	4.1
7	2,167	3.0	2,412	4.0
8	2,134	2.9	2,305	3.8
9	1,819	2.5	1,861	3.1
10	2,399	3.3	2,461	4.1
11	1,610	2.2	1,707	2.8
12	2,427	3.3	2,535	4.2
13	2,352	3.2	2,186	3.6
14	1,555	2.1	1,886	3.1
15	1,798	2.5	1,772	2.9
16	1,608	2.2	1,720	2.9
17	1,147	1.6	1,169	1.9
18	1,583	2.2	1,361	2.3
19	1,098	1.5	736	1.2
20	1,622	2.2	991	1.6
21	774	1.1	406	0.7
22	1,165	1.6	558	0.9
23	812	1.1	362	0.6
24	887	1.2	385	0.6
25	1,391	1.9	548	0.9
26	905	1.2	345	0.6
27	949	1.3	361	0.6
28	1,232	1.7	441	0.7
29	683	0.9	256	0.4
30	1,561	2.1	681	1.1
31	483	0.7	223	0.4
32	808	1.1	365	0.6
33	490	0.7	242	0.4
34	517	0.7	207	0.3
35	1,376	1.9	579	1.0

(*Continued*)

Table C1 (*Continued*)

Single-year age distribution of the de facto household population by sex (weighted), Eritrea 2010

	Women		Men	
Age	Number	Percent	Number	Percent
36	808	1.1	322	0.5
37	767	1.1	332	0.5
38	933	1.3	395	0.7
39	464	0.6	227	0.4
40	1,173	1.6	737	1.2
41	294	0.4	199	0.3
42	566	0.8	342	0.6
43	521	0.7	258	0.4
44	292	0.4	149	0.2
45	893	1.2	554	0.9
46	409	0.6	281	0.5
47	537	0.7	275	0.5
48	697	1.0	412	0.7
49	375	0.5	225	0.4
50	450	0.6	646	1.1
51	267	0.4	170	0.3
52	573	0.8	340	0.6
53	492	0.7	226	0.4
54	384	0.5	206	0.3
55	718	1.0	463	0.8
56	438	0.6	293	0.5
57	443	0.6	274	0.5
58	570	0.8	367	0.6
59	192	0.3	195	0.3
60	777	1.1	677	1.1
61	206	0.3	168	0.3
62	335	0.5	322	0.5
63	296	0.4	308	0.5
64	179	0.2	186	0.3
65	502	0.7	530	0.9
66	191	0.3	225	0.4
67	290	0.4	309	0.5
68	361	0.5	364	0.6
69	138	0.2	143	0.2
70+	2,880	3.9	3,137	5.2
Don't know/ missing	10	0.0	16	0.0
Total	73,065	100.0	60,320	100.0

Note: The table is based on both CORE and MMM questionnaires.
The de facto population includes all residents and nonresidents who stayed in the household the night before the interview.

Table C2: Age distribution of eligible and interviewed women

De facto household population of women age 10-54, interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted), by five-year age groups, Eritrea 2010

	CORE				MMM			
Age group	Household population of women age 10-54	Number of interviewed	Percent	Percent of women interviewed	Household population of women age 10-54	Number of interviewed	Percent	Percent of women interviewed
10-14	3,449	na	na	na	10,343	na	na	na
15-19	2,425	2,319	22.6	95.6	7,235	6,934	22.9	95.8
20-24	1,815	1,723	16.8	94.9	5,261	5,024	16.6	95.5
25-29	1,755	1,669	16.3	95.1	5,160	4,938	16.3	95.7
30-34	1,334	1,264	12.3	94.7	3,859	3,677	12.2	95.3
25-39	1,485	1,403	13.7	94.5	4,349	4,152	13.7	95.5
40-44	978	923	9.0	94.4	2,847	2,719	9.0	95.5
45-49	988	938	9.2	95.0	2,911	2,781	9.2	95.5
50-54	723	0	0.0	0.0	2,166	0	0.0	0.0
15-49	10,779	10,238	100.0	95.0	31,620	30,224	100.0	95.6

Note: The table is based on both CORE and MMM questionnaires.
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 C3: Age distribution of eligible and interviewed men

De facto household population of men aged 10-64, interviewed men aged 15-59 and percent of eligible men who were interviewed (weighted), Eritrea 2010

		Interviewed men age 15-59		
Age group	Household population of men age 10-64	Number	Percent	Percentage of eligible men interviewed
10-14	3,895	na	na	na
15-19	1,988	1,587	31.6	79.9
20-24	784	608	12.1	77.5
25-29	559	425	8.5	76.1
30-34	542	428	8.5	78.9
25-39	595	454	9.0	76.3
40-44	481	362	7.2	75.2
45-49	546	414	8.3	75.9
50-54	454	361	7.2	79.5
55-59	494	382	7.6	77.2
60-64	561	0	0.0	0.0
15-59	6,443	5,021	100.0	77.9

Note: The table is based on both CORE and MMM questionnaires.
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 C4: Completeness of reporting

Percentage of observations missing information for selected demographic and health questions (weighted), Eritrea 2010

Subject	Percentage with missing information	Number of cases
Month Only (births in last 15 years)	1.96	57,533
Month and Year (births in last 15 years)	0.13	57,533
Age at Death (deceased children born in the last 15 years)	0.00	4,033
Age/date at first union (ever married women)[1]	0.32	27,346
Age/date at first union (ever married men)[1]	4.73	2,512
Respondent's education (all women)	0.12	30,224
Respondent's education (all men)	0.19	5,021
Diarrhea in last 2 weeks (living children 0-59)	0.31	6,664
Height (living children 0-59 from Household Questionnaire)	3.37	7,048
Weight (living children 0-59 from Household Questionnaire)	2.98	7,048
Height or weight (living children 0-59 from Household Questionnaire)	3.39	7,048

[1] Both year and age missing

Table C5: Births by calendar years

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio by calendar year, according to living (L), dead (D), and total (T) children (weighted), Eritrea 2010

	Number of births			Percentage with complete birth date[1]			Sex ratio at birth[2]			Calendar year ratio[3]		
Calendar year	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total
0	3,810	185	3,995	99.6	97.6	99.5	103.7	142.1	105.2	na	na	na
1	4,046	268	4,314	99.5	97.0	99.4	108.1	160.0	110.7	na	na	na
2	4,026	265	4,291	99.1	95.7	98.9	104.1	97.7	103.7	100.1	105.4	100.4
3	3,999	234	4,232	99.0	94.0	98.7	100.3	141.9	102.2	98.6	98.0	98.5
4	4,087	212	4,299	98.8	98.2	98.8	114.1	145.4	115.4	101.2	78.8	99.8
5	4,080	305	4,386	98.5	96.3	98.3	98.3	133.4	100.4	102.3	132.4	104.0
6	3,889	249	4,138	97.5	95.1	97.4	105.0	142.6	106.9	97.3	81.9	96.2
7	3,918	303	4,220	97.8	94.1	97.5	115.9	130.2	116.8	112.2	127.2	113.2
8	3,091	227	3,318	97.3	97.1	97.3	108.0	165.8	111.1	80.7	71.6	80.0
9	3,746	332	4,079	97.5	93.9	97.2	92.3	112.7	93.8	126.2	126.9	126.3
0-4	19,968	1,164	21,132	99.2	96.4	99.1	106.0	134.4	107.4	na	na	na
5-9	18,725	1,416	20,141	97.8	95.2	97.6	103.4	133.5	105.3	na	na	na
10-14	14,766	1,503	16,269	97.1	92.8	96.7	107.3	136.6	109.7	na	na	na
15-19	9,316	1,471	10,787	96.2	91.9	95.6	106.4	143.7	110.8	na	na	na
20+	6,651	1,788	8,438	95.4	90.1	94.3	98.2	125.1	103.3	na	na	na
All	69,426	7,341	76,767	97.6	93.0	97.2	104.8	134.1	107.3	na	na	na

Note: The table is based on both CORE and MMM questionnaires.
NA = Not applicable
[1] Both year and month of birth given
[2] $(B_m/B_f)x100$, where B_m and B_f are the numbers of male and female births, respectively
[3] $[2B_x/(B_x-1+B_x+1)]x100$, where B_x is the number of births in calendar year x

Table C6: Reporting of age at death in days

Distribution of reported deaths under one month of age by age at death in days and the percentage of neonatal deaths reported to occur at ages 0-6 days, for five-year periods of birth preceding the survey (weighted), Eritrea 2010

	Number of years preceding the survey				
Age at death (days)	0-4	5-9	10-14	15-19	Total 0-19
<1	109	100	77	47	333
1	134	128	102	72	436
2	26	45	36	31	138
3	45	59	39	41	184
4	15	22	10	10	57
5	15	15	15	17	62
6	6	6	12	12	36
7	41	49	47	30	168
8	9	10	15	6	41
9	9	8	13	4	35
10	12	5	11	9	37
11	1	1	1	1	4
12	7	4	7	4	22
13	0	2	1	0	3
14	15	14	9	13	51
15	7	8	8	14	37
16	2	2	4	1	9
17	1	0	2	3	6
18	0	0	1	0	1
19	0	2	0	0	2
20	8	8	7	6	30
21	6	6	12	9	32
22	4	1	0	0	5
23	0	1	5	1	7
24	0	1	1	0	1
25	0	4	1	5	10
26	0	2	1	0	3
27	1	1	0	0	2
28	5	3	2	0	10
29	3	2	2	1	9
30	5	6	5	1	18
31+	3	3	1	2	9
Total 0-30	489	513	444	340	1,785
Percent early neonatal[1]	71.7	73.0	65.4	68.0	69.8

Note: The table is based on both CORE and MMM questionnaires.
[1] 0-6 days / 0-30 days

Table C7: Reporting of age at death in months

Distribution of reported deaths under two years of age by age at death in months and the percentage of infant deaths reported to occur at age under one month, for five-year periods of birth preceding the survey, Eritrea 2010

	Number of years preceding the survey				
Age at death (months)	0-4	5-9	10-14	15-19	Total 0-19
<1[1]	489	513	444	340	1,785
1	41	53	52	57	203
2	41	50	62	37	191
3	37	41	54	35	167
4	25	21	25	30	100
5	16	19	24	16	75
6	62	49	58	55	224
7	20	40	38	25	124
8	35	32	36	28	131
9	35	38	38	31	142
10	17	14	14	20	65
11	19	19	31	23	92
12	40	49	58	56	203
13	10	14	11	12	48
14	7	17	18	14	55
15	15	3	10	11	39
16	5	8	6	11	30
17	3	9	4	3	18
18	17	34	45	40	136
19	12	6	3	14	34
20	4	5	2	4	16
21	4	7	5	7	22
22	4	9	10	9	32
23	10	5	13	8	35
24+	4	3	11	7	25
1 Year	30	30	39	30	129
Total 0-11	837	889	875	698	3,299
Percent neonatal[2]	58.4	57.7	50.7	48.7	54.1

Note: The table is based on both CORE and MMM questionnaires.
[1] Includes deaths under one month reported in days
[2] Under one month / under one year

Table C8: 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, Eritrea 2010

	Height-for-age			Weight-for-height				Weight-for-age				
Background characteristic	Percentage below -3 SD	Percentage below -2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD	Percentage above +2 SD	Mean Z-score (SD)	Number of children
Age in months												
<6	2.4	8.4	(0.2)	1.5	5.9	3.9	(0.1)	0.6	5.3	4.5	(0.1)	532
6-8	3.6	13.0	(0.7)	1.1	16.7	2.4	(0.8)	5.3	24.1	1.0	(1.2)	313
9-11	8.6	22.3	(1.1)	3.9	21.0	1.0	(1.0)	12.9	45.4	1.6	(1.7)	328
12-17	18.8	47.1	(1.9)	2.6	20.7	1.8	(1.1)	19.4	57.6	0.7	(2.1)	635
18-23	30.8	64.5	(2.3)	2.6	20.7	1.4	(1.1)	17.1	59.3	0.8	(2.1)	669
24-35	27.6	56.7	(2.2)	1.2	12.0	0.3	(1.0)	21.0	54.8	0.2	(2.1)	1,302
36-47	24.6	49.7	(2.0)	1.0	9.9	0.9	(0.9)	12.8	45.7	0.3	(1.9)	1,374
48-59	20.5	49.9	(2.0)	0.8	11.0	0.6	(0.9)	9.8	45.6	0.1	(1.9)	1,418
Sex												
Male	20.1	45.9	(1.8)	2.2	13.7	0.8	(0.9)	12.8	44.9	0.6	(1.8)	3,252
Female	21.5	46.0	(1.8)	0.9	12.9	1.6	(0.9)	14.2	46.5	0.9	(1.8)	3,318
Birth interval in months												
First birth	15.3	39.6	(1.6)	0.8	12.5	1.7	(0.8)	9.2	37.9	1.3	(1.6)	1,248
<24	27.4	53.0	(2.0)	2.6	13.7	0.6	(1.0)	17.9	51.0	0.1	(2.0)	855
24-47	22.2	48.5	(1.9)	1.7	13.5	1.2	(0.9)	14.6	49.7	0.7	(1.9)	3,226
48+	17.6	40.6	(1.6)	1.1	13.8	0.9	(0.9)	12.0	39.7	0.9	(1.6)	979
Size at birth												
Very small	27.2	51.4	(2.0)	2.2	21.0	0.5	(1.1)	19.8	58.4	0.4	(2.1)	683
Small	26.0	52.1	(2.0)	1.0	19.2	0.5	(1.2)	21.9	58.1	0.0	(2.1)	417
Average or larger	19.5	45.1	(1.8)	1.5	11.8	1.3	(0.8)	12.0	43.2	0.9	(1.7)	5,043
Missing	21.3	41.2	(1.7)	2.3	16.0	1.7	(1.0)	14.7	49.5	1.2	(1.8)	164
Mother's interview status												
Interviewed	20.8	46.1	(1.8)	1.5	13.4	1.2	(0.9)	13.6	46.0	0.8	(1.8)	6,308
Not interviewed but in household	20.5	46.3	(1.8)	1.1	8.9	2.0	(0.9)	15.7	40.6	0.4	(1.8)	149
Not interviewed, and not in the household	17.4	34.8	(1.4)	1.1	10.7	0.0	(0.9)	5.2	36.2	0.0	(1.5)	114

(*Continued*)

Table C8: (*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, Eritrea 2010

	Height-for-age			Weight-for-height				Weight-for-age				
Background characteristic	Percentage below -3 SD	Percentage below -2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD	Percentage above +2 SD	Mean Z-score (SD)	Number of children
Mother's nutritional status												
Thin (BMI<18.5)	23.2	50.5	(1.9)	2.0	19.7	1.0	(1.1)	18.1	54.8	0.5	(2.0)	2,455
Normal (BMI 18.5-24.9)	20.4	45.3	(1.8)	1.3	9.7	1.4	(0.8)	11.3	41.8	0.9	(1.7)	3,529
Overweight/ obese (BMI >= 25)	9.2	25.6	(1.2)	0.7	6.6	1.2	(0.6)	5.5	25.0	1.2	(1.2)	373
Missing	24.8	46.7	(2.0)	0.0	10.6	0.0	(1.0)	18.0	49.1	0.0	(2.0)	80
Region												
Debubawi Keih Bahri	27.7	51.5	(2.1)	3.3	18.8	1.4	(1.1)	20.4	57.9	0.5	(2.1)	103
Maekel	9.6	28.8	(1.3)	0.4	6.0	1.6	(0.5)	3.8	24.7	1.0	(1.2)	1,141
Semenawi Keih Bahri	28.0	54.4	(2.1)	1.7	16.4	0.4	(1.1)	21.3	53.8	0.3	(2.1)	785
Anseba	23.1	51.6	(2.0)	2.0	15.3	0.9	(1.0)	16.2	53.3	0.7	(2.0)	1,063
Gash-Barka	24.7	49.6	(1.9)	2.6	20.4	1.0	(1.1)	19.6	54.3	0.6	(2.0)	1,644
Debub	19.3	46.2	(1.8)	0.8	8.6	1.6	(0.8)	8.7	42.5	1.0	(1.7)	1,835
Mother's education												
No education	27.8	55.0	(2.1)	2.3	17.8	1.0	(1.1)	19.7	56.1	0.5	(2.1)	3,022
Primary	18.6	47.1	(1.8)	1.2	10.5	1.2	(0.9)	11.8	46.6	1.0	(1.8)	1,559
Middle	15.1	37.4	(1.6)	0.3	8.3	1.7	(0.6)	6.8	33.1	1.0	(1.4)	1,023
Secondary or above	7.4	23.6	(1.2)	0.9	9.0	1.6	(0.6)	4.3	23.4	0.7	(1.2)	780
Wealth quintile												
Lowest	25.2	51.8	(2.0)	2.6	19.1	1.1	(1.1)	19.2	55.0	0.5	(2.0)	1,352
Second	27.4	54.5	(2.0)	2.3	17.0	0.8	(1.1)	20.0	55.3	0.2	(2.1)	1,360
Middle	25.6	54.7	(2.0)	0.9	13.6	1.1	(0.9)	14.7	52.7	0.9	(1.9)	1,432
Fourth	16.6	41.5	(1.7)	1.2	8.8	1.5	(0.8)	8.6	39.0	1.2	(1.6)	1,362
Highest	5.6	21.5	(1.1)	0.5	6.4	1.6	(0.5)	2.6	20.7	1.1	(1.1)	1,064
Total	20.8	45.9	(1.8)	1.5	13.3	1.2	(0.9)	13.5	45.7	0.7	(1.8)	6,570

Note: The table is based on children in the CORE questionnaire, who slept in the household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the NCHS/CDC/WHO Child Growth Standards.
Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.
[1] Includes children who are below -3 standard deviations (SD) from the International Reference Population median. [2] Excludes children whose mothers were not interviewed. [3] First born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval. [4] Includes children whose mothers are . [5] Excludes children whose mothers were not weighed and measured. Mother's nutritional status in terms of BMI (Body Mass Index) is presented in Table 11.10. [6] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire

Table C9: Completeness of Information on Siblings (Weighted Data), Country 2010

	Sisters		Brothers		All Siblings	
	Number	Percent	Number	Percent	Number	Percent
Total Siblings Reported	82,774	100.0	89,330	100.0	172,104	100.0
Surviving	67,565	81.6	67,787	75.9	135,352	78.6
Deceased	15,139	18.3	21,429	24.0	36,568	21.2
Missing information	711	0.1	113	0.1	184	0.1
Surviving Siblings	67,565	100.0	67,787	100.0	135,352	100.0
Age reported	67,480	99.9	67,719	99.9	135,198	99.9
Age missing	85	0.1	69	0.1	154	0.1
Deceased Siblings	15,139	100.0	21,429	100.0	36,568	100.0
AD and YSD reported	14,964	98.8	21,218	99.0	36,181	98.9
Missing only AD	42	0.3	50	0.2	92	0.3
Missing only YSD	36	0.2	46	0.2	82	0.2
Missing both	97	0.6	116	0.5	214	0.6

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APPENDIX E

THE STATE OF ERITREA
MINISTRY OF NATIONAL DEVELOPMENT
NATIONAL STATISTICS OFFICE

ERITREA POPULATION AND HEALTH SURVEY
CORE EPHS+: HOUSEHOLD QUESTIONNARIE

ALL INFORMATION COLLECTED IS CONFIDENTIAL AND IS ONLY FOR STATISTICAL USE

IDENTIFICATION

ZOBA .....

SUB-ZOBA .....

VILLAGE/TOWN NAME _____
[ASMARA=1, OTHER TOWN =2, RURAL = 3].....

CLUSTER NUMBER.....

HOUSEHOLD NUMBER.....

NAME OF HOUSEHOLD HEAD _____
TYPE OF QUESTIONNAIRE (1=CORE 2=MATERNAL MORBIDITY AND MORTALITY)

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	____/_____/_____ DD MM YYYY	____/_____/_____ DD MM YYYY	____/_____/_____ DD MM YYYY	DAY..... MONTH..... YEAR .....
TEAM				TEAM.....
INTERVIEWER'S NAME	_____	_____	_____	NAME.....
RESULT **SEE * BELOW**				RESULT .....
NEXT VISIT: DATE	____/_____/_____ DD MM YYYY	____/_____/_____ DD MM YYYY		TOTAL NO. OF VISITS
TIME	_____	_____.		

* RESULT CODES
1=COMPLETED
2=NO HOUSEHOLD MEMBER/COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3=ENTIRE HOUSEHOLD ABSENT FOR EXT. PERIOD
4=POSTPONED/PARTIALLY COMPLETED
5=REFUSED
6=DWELLING VACANT OR ADDRESS NOT A DWELLING
7=DWELLING DESTROYED
8=DWELLING NOT FOUND
9=OTHER_____ (SPECIFY)

LANGUAGE:**SEE ** BELOW**

QUESTIONNAIRE | LANGUAGE OF INTERVIEW | NATIVE LANGUAGE OF THE RESPONDENT

** LANGUAGE CODES:
01=AFAR 02= BILEN 03= HEDARIB (Bedawit) 04= KUNAMA 05= NARA
06= ARABIC 07= SAHO 08= TIGRE 09= TIGRIGNA 10= OTHER____ (SPECIFY)

TRANSLATOR USED (1= NOT AT ALL, 2= SOMETIMES, 3= ALL THE TIME)……..…….

TOTAL PERSONS IN THE HOUSEHOLD
TOTAL ELIGIBLE WOMEN
TOTAL ELIGIBLE MEN
LINE NUMBER OF RESPONDENT TO HOUSEHOLD SCHEDULE

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME_____	NAME_____		
DATE____/_____/_____ DD MM YYYY	DATE____/_____/_____ DD MM YYYY		

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 VISTORS	SEX	RELATION TO HEAD OF HOUSE-HOLD*	RESIDENCE		AGE	DISABILITY	EDUCATION				
								IF AGE 4 YEARS OR OLDER				
	Please give me the name 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.	Is (NAME) male or female?	What is the relation-ship of (NAME) to the head of the household? SEE * BELOW	Does (NAME) usually live here?	Did (NAME) Stay here last night?	How old is (NAME)?	Is (NAME) physically or mentally disabled If "YES, state the type. **CODES AT THE END**	Can (NAME) read and write in any language without difficulty?	Has (NAME) ever been to school? IF NO GO TO 12	IF ATTENDED SCHOOL: What is the highest level of school (NAME) attended? What is the highest grade (NAME) completed at that level? **SEE **BELOW**	IF AGE LESS THAN 30 YEARS: Is (NAME) still in school? IF "YES" SKIP TO 12	What is the main reason (NAME) is not attending school? CODES AT END
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(7A)	(8)	(9)	(10)	(11)	(11A)
01		**M F** **1 2**		YES NO 1 2	YES NO 1 2	IN YEARS		YES NO 1 2	YES NO 1 2	LEVEL GRADE	YES NO 1 2	
02		**1 2**		1 2	1 2			1 2	1 2		1 2	
03		**1 2**		1 2	1 2			1 2	1 2		1 2	
04		**1 2**		1 2	1 2			1 2	1 2		1 2	
05		**1 2**		1 2	1 2			1 2	1 2		1 2	
06		**1 2**		1 2	1 2			1 2	1 2		1 2	
07		**1 2**		1 2	1 2			1 2	1 2		1 2	
08		**1 2**		1 2	1 2			1 2	1 2		1 2	
09		**1 2**		1 2	1 2			1 2	1 2		1 2	
10		**1 2**		1 2	1 2			1 2	1 2		1 2	
11		**1 2**		1 2	1 2			1 2	1 2		1 2	
12		**1 2**		1 2	1 2			1 2	1 2		1 2	
13		**1 2**		1 2	1 2			1 2	1 2		1 2	
14		**1 2**		1 2	1 2			1 2	1 2		1 2	

TICK HERE IF CONTINUATION SHEET USED ☐

Just to make sure that I have a complete listing:

1. Are there any other persons such as small children or infants that we have not listed?……YES ☐ → ENTER EACH IN TABLE NO ☐
2. In addition, are there any other people who may not be members of your family such as domestic servants , lodgers or friends who usually live here?……YES ☐ → ENTER EACH IN TABLE NO ☐
3. Are there any guests or temporary visitors staying here, or any one else who slept here last night that have not been listed?……YES ☐ → ENTER EACH IN TABLE NO ☐

PARENTAL SURVIVORSHIP AND RESIDENCE FOR PERSONS LESS THAN 15 YEARS OLD These questions refer to the biological parents of the child. Record "00" if parent not member of the household.				AGE 15 OR OLDER	ASK FOR THOSE AGED 10 YEARS OR MORE				ELEGIBILITY		
Is (NAME)'s natural mother alive? IF "NO" OR "DON'T KNOW" GO TO 14	IF ALIVE Does (NAME)'s natural mother live in this household? If YES, what is her name? RECORD MOTHER'S LINE NUMBER if NO, RECORD "00"	Is (NAME)'s natural father alive? IF "NO" OR "DON'T KNOW" GO TO 15A	IF ALIVE Does (NAME)'s natural father live in this household? If YES, what is his name? RECORD FATHER'S LINE NUMBER if NO, RECORD "00"	What is (NAME)'s Current marital status? **SEE ***** BELOW	Did (NAME) work during last month? IF "NO" GO TO 16	Is (NAME) paid in cash or kind for the work he/she does? 1=CASH 2=KIND 3=BOTH 4=NOT PAID	What is the main work that (NAME) does?	OCCUPA-TION CODE	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF ALL MEN AGE 15-59	CIRCLE LINE NUMBER OF ALL CHILDREN UNDER AGE 6
(12)	(13)	(14)	(15)	(15A)	(15B)	(15C)	(15D)	(15E)	(16)	(16A)	(17)
YES NO DK 1 2 8		YES NO DK 1 2 8			YES NO 1 2	1 2 3 4			01	01	01
1 2 8		1 2 8			1 2				02	02	02
1 2 8		1 2 8			1 2				03	03	03
1 2 8		1 2 8			1 2				04	04	04
1 2 8		1 2 8			1 2				05	05	05
1 2 8		1 2 8			1 2				06	06	06
1 2 8		1 2 8			1 2				07	07	07
1 2 8		1 2 8			1 2				08	08	08
1 2 8		1 2 8			1 2				09	09	09
1 2 8		1 2 8			1 2				10	10	10
1 2 8		1 2 8			1 2				11	11	11
1 2 8		1 2 8			1 2				12	12	12
1 2 8		1 2 8			1 2				13	13	13
1 2 8		1 2 8			1 2				14	14	14

*** CODES FOR Q.4: RELATIONSHIP TO HEAD OF HOUSEHOLD**

01=Head
02=Wife or husband
03=Son or daughter
04=Son in-law or daughter in-law
05=Grand child
06=Parent
07=Parent-in-law
08=Brother or sister
09=Co-wife
10=Other relatives
11=Adopted/foster/step child
12=Not related
98=Don't know

****CODES FOR Q10: LEVEL**

0=Pre-primary
1= Primary/elementary
2=Middle
3=Secondary
4= Higher
8= Don't know

**** CODE FOR Q10: GRADE**

00=Less than one year completed
98=Don't know

*****CODES FOR Q15A**

MARITAL STATUS
1=Married
2=Living together
3=Widowed
4=Divorced
5=Separated
6=Single /never married

THE QUESTIONNAIRE HAS SPACES TO RECORD UP TO 14 HOUSEHOLD MEMBERS, IF MORE ADD ANOTHER QUESTIONNAIRE.

17A During the past two years, that is 24 months, has any of the usual members of this household died?

YES ☐ NO ☐ → 19

Now we would like to have some information about all of the deaths that occurred in this household to usual residents during the past 24 months.

IF MORE THAN FIVE DEATHS ADD NEW HOUSEHOLD QUESTIONNAIRE

ASK IF THE PERSON DIED IS FEMALE AND AGE AT DEATH 12 AND ABOVE

Sr. No.	NAME OF PERSON	SEX	AGE AT DEATH	DATE OF DEATH		
				MONTH	YEAR	
	Please give me the names of all the persons who were usual residents of this household and died during the past 24 months, that is, since JANUARY 2008 to the month of interview.	Was (NAME) Male or Female?	How old was (NAME) when he/she died? RECORD IN COMPLETED YEARS	In what month did (NAME) die? PROBE: During what season?	In what year did (NAME) die? PROBE: This year or last year?	Did (NAME) die during pregnancy, delivery, or two months after delivery?
	(17B)	(17C)	(17D)	(17E)	(17F)	(17G)
1		M F 1 2	AGE	MONTH	YEAR	YES NO DK 1 2 8
2		1 2				1 2 8
3		1 2				1 2 8
4		1 2				1 2 8
5		1 2				1 2 8
TOTAL NUMBER OF DEATHS IN HOUSEHOLD						☐

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES		SKIP
19	What is the main source of drinking water for members of your household?	**PIPED WATER**		
		PIPED IN TO		
		RESIDENCE /YARD /PLOT	11	→ 21
		PUBLIC TAP	12	
		PRIVATE TAP	13	
		PROTECTED WELL WATER		
		WELL IN RESIDENCE/YARD/PLOT	21	→ 21
		PUBLIC WELL	22	
		UN PROTECTED WELL WATER		
		WELL IN RESIDENCE/YARD/PLOT	31	→ 21
		PUBLIC WELL	32	
		SURFACE WATER		
		SPRING	41	
		RIVER/STREAM	42	
		POND/LAKE	43	
		DAM	44	
		TANKER TRUCK	51	→
		CART WITH SMALL TANK	52	→ 21
		RAIN WATER	53	→ 21
		BOTTLED WATER	54	→ 21
		OTHER _____ (SPECIFY)	96	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
20	How long does it take to go there, get water, and come back? IF LESS THAN ONE MINUTE CIRCLE '996'.	MINUTES ..... ☐☐☐ ON PREMISES ..... 996 → 21 DON'T KNOW 998	
20A	How long is the normal wait to take your turn to get water at the (NAME OF THE WATER SOURCE)?	MINUTES ..... ☐☐☐ NO WAIT 996	
20B	Who mainly fetch water for the household?	ADULT WOMAN ..... 1 ADULT MAN ..... 2 FEMALE CHILD UNDER 15 YEAR OLD ..... 3 MALE CHILD UNDER 15 YEAR OLD ..... 4 OTHER _____ 6 (SPECIFY)	
21	What kind of toilet facility do members of your household usually use?	FLUSH TO PIPED SEWER SYSTEM ..... 01 FLUSH TO SEPTIC TANK ..... 02 FLUSH TO PIT LATRINE ..... 03 TRADITIONAL PIT TOILET ..... 04 VENTILATED IMPROVED PIT (VIP) LATRINE ..... 05 NO FACILITY /BUSH/FIELD ..... 06 → 22 OTHER ..... 9 6 (SPECIFY)	
21A	Do you share this toilet facility with other households?	Yes ..... 1 No ..... 2 → 22	
21B	How many households use this toilet facilty?	NUMBER OF HOUSEHOLDS ..... ☐☐ DON'T KNOW 98	
22	Does your household have: Electricity? A radio? A television? A mobile telephone? A fixed telephone A refrigerator? A cassette player? Receiver? Personal computer A washing Basin? Washing machine? A sofa? Yoke beam?	YES NO ELECTRICITY ..... 1 2 RADIO ..... 1 2 TELEVISION ..... 1 2 MOBILE TELEPHONE ..... 1 2 FIXED TELEPHONE ..... 1 2 REFRIGERATOR ..... 1 2 CASSETTE PLAYER ..... 1 2 RECIEVER ..... 1 2 PERSONAL COMPUTER ..... 1 2 WASHING BASIN ..... 1 2 WASHING MACHINE ..... 1 2 SOFA ..... 1 2 YOKE BEAM 1 2	
22A1	Does this household own any livestock, herds, other farm animals, or poultry?	YES ----- 1 NO ----- 2 → 22B	
22A	How many of the following animals does this household own? IF NONE, WRITE "000''. IF MORE THAN 995 WRITE "995". IF UNKNOWN, WRITRE "998". Local cattle (indigenous)? Exotic/Cross Cattle? Camels? Horse, donkeys, or mules? Goats? Sheep? Chicken?	CATTLE(INDIGENOUS) ..... ☐☐☐ EXOTIC/CROSS CATTLE ..... ☐☐☐ CAMELS ☐☐☐ HORSES/DONKEYS/MULES ..... ☐☐☐ GOATS ..... ☐☐☐ SHEEP ..... ☐☐☐ CHICKEN ..... ☐☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
22B	Over the last week, how many meals have your household eaten per day on average?	ONE MEAL ---------- 1 TWO MEALS ---------- 2 THREE MEALS OR MORE ---------- 3	
22C	Did members of the household consume any of the following items during the last 7 days? 1.Sorghum/Millet 2.Barely 3. Rice 4. Milk (include: pasteurised, un-pasteurised, powdered) 5. Wheat bread, bakery 6. Sugar 7. Cooking oil 8. Taff 9. Egg 10. Meat 11. Fish 12. Vegetables 13. Fruits	YES NO SORGHUM/MILLET ---------- 1 2 BARELY ---------- 1 2 RICE ---------- 1 2 MILK (INCLUDE: PASTEURISED, UN-PASTEURISED, POWDERED) ---------- 1 2 WHEAT BREAD, BAKERY ---------- 1 2 SUGAR ---------- 1 2 COOKING OIL ---------- 1 2 TAFF ---------- 1 2 EGG ---------- 1 2 MEAT ---------- 1 2 FISH ---------- 1 2 VEGETABLES ---------- 1 2 FRUITS ---------- 1 2	
22D	How does the household dispose of solid waste and garbage?	COLLECTED BY PUBLIC VEHICLE ---------- 1 PUBLIC CONTAINER(CLOSED) ---------- 2 PUBLIC CONTAINER(OPEN) ---------- 3 DUMPED ANYWHERE ---------- 4	
23A	How many rooms excluding kitchen, toilet, and bath rooms but including closed in verands this dwelling are for the exclusive use for the members of this household ?	NUMBER OF ROOMS..... ☐☐	
23B	How many rooms in your household are used for sleeping?	NUMBER OF ROOMS..... ☐☐	
23C	Are any farm animals kept within the living area of the household?	YES ..... 1 NO 2	
24	PRINCIPAL MATERIALS OF WHICH THE FLOOR OF THE LIVING QUARTERS IS MADE RECORD OBESERVATION.	**NATURAL FLOOR** EARTH /SAND ..... 11 DUNG ..... 12 **RUDIMENTARY FLOOR** WOOD PLANKS ..... 21 PALM /BAMBOO/REEDS ..... 22 **FINISHED FLOOR** PARQUET OR POLISHED WOOD ..... 31 VINIL OR ASPHALT STRIPS ..... 32 CERAMIC TILES ..... 33 CONCRETE/CEMENT ..... 34 CARPET/PLASTIC ..... 35 OTHER _____ 96 (SPECIFY)	
24A	PRINCIPAL MATERIALS OF WHICH THE ROOF OF THE LIVING QUARTERS IS MADE RECORD OBESERVATION.	**NATURAL ROOFING** GRASS/THATCH ..... 11 WOOD,DUNG, MUD ..... 12 PALM LEAVES AND TREES ..... 13 TENT/GARMENT ..... 14 **RUDIMENTARY ROOFING** TIN CANS ..... 21 **FINISHED ROOFING** CORRUGATED IRON ..... 31 ASBESTOS SHEET ..... 32 VINIL OR ASPHALT STRIPS ..... 33 CEMENT /STEEL/CONCRETE ..... 34 ROOF TILES ..... 35 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
24B	PRINCIPAL MATERIALS OF WHICH THE WALLS OF THE LIVING QUARTERS IS MADE RECORD OBESERVATION.	**NATURAL WALLS** NO WALLS ..... 11 CANE/PALM/TRUNCKS ..... 12 TENT/GARMENT ..... 13 **RUDIMENTARY WALLS** BAMBOO WITH MUD ..... 21 STONE WITH MUD ..... 22 PLAYWOOD ..... 23 WOOD PLANKS/SHINGLES ..... 24 **FINISHED WALLS** CEMENT ..... 31 STONE WITH LIME/CEMENT ..... 32 BRICKS ..... 33 CEMENT BLOCKS ..... 34 OTHER _____ 96 (SPECIFY)	
25	Does any member of your household own: An animal drawn cart? A bicycle? A motorcycle? A car or truck? A motor Boat?	YES NO ANIMAL DRAWN CART ..... 1 2 BICYCLE ..... 1 2 MOTORCYCLE ..... 1 2 CAR\TRUCK ..... 1 2 A MOTOR BOAT 1 2	
25A	What type of fuel does your household mainly use for cooking?	ELECTRICITY ..... 01 LPG/NATURAL GAS ..... 02 BIOGAS ..... 03 KEROSINE ..... 04 COAL, LIGINITE ..... 05 CHARCOAL ..... 06 FIREWOOD, STRAW,SAWDUST ..... 07 ANIMAL DUNG, MANURE ..... 08 AGRICULTURAL CROP ---------- 09 NO FOOD COOKED IN HOUSEHOLD ---------- 95 OTHER _____ 96 (SPECIFY)	
25B	Does your household have a separate room which is used as a kitchen?	YES ..... 1 NO 2	
25C	Does your household own this structure (house, flat, shack), do you rent it, or do you live here without pay?	OWNS ---------- 1 PAYS RENT /LEASE ---------- 2 FREE ---------- 3	
25D	Does any member of your household own any agricultural land?	YES ---------- 1 NO ---------- 2	→ 26
25E	What is the size of the agricultural land (altogether) owned by the members of this household? IF MORE THAN 95 WRITE "95.0" IF UNKNOWN CIRCLE "999.8"	NUMBER OF HECTARES ---------- 1 ☐☐.☐ TSMDI ---------- 2 ☐☐.☐ GEMEL ---------- 3 ☐☐.☐ TRACTOR HOURS ---------- 4 ☐☐.☐ DON'T KNOW 999.8	
26	ASK RESPONDENT FOR A TEASPOONFUL OF SALT THEY USUALLY USE. TEST 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 THE HH ..... 5 SALT NOT TESTED _____ 6 (SPECIFY REASONS)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
27	Does your household have any mosquito nets that can be used while sleeping?	YES ..... 1 NO ..... 2 →	28B
28	How many mosquito nets are there in this household?	MOSQUITO NETS ..... ☐☐ DON'T KNOW 98	
28A	Who usually uses mosquito nets in your household? Who else? CIRCLE ALL THAT APPLY	0-11 MONTHS ---------- A 12-59 MONTHS ---------- B 5-14 YEARS ---------- C WOMEN 15-49 ---------- D MEN 15-49 ---------- E ABOVE 49 ---------- F NO ONE ---------- Y	
28B	Were any environmental management activities conducted in your village/town during the malaria season in 2009?	YES ..... 1 NO ..... 2 → DON'T KNOW ..... 8 →	28C 28C
28B1	Have you or any member of your household participated in any one of the activities conducted during the malaria season in 2009?	YES ..... 1 NO ..... 2 DON'T KNOW 8	

WEIGHT AND HEIGHT MEASUREMENTS FOR CHILDREN AGE 0-5

28C	CHECK COLUMN 17. RECORD LINE NUMBER AND DATE OF BIRTH FOR ALL ELIGIBLE CHILDREN 0-5 IN Q29C-32C. IF MORE THAN SIX CHILDREN, USE ADDITIONAL QUESTIONNARIE. A FINAL OUTCOME MUST BE RECORDED FOR THE WEIGHT AND HEIGHT MEASUREMENTS IN 36C.			IF NO ELIGIBLE CHILREN MARK "X" HERE AND SKIP TO 28W ☐
		CHILD 1	CHILD 2	CHILD 3
29C	LINE NUMBER FROM COLUMN 17 NAME FROM COLUMN 2	LINE NUMBER ☐☐ NAME_____	LINE NUMBER ☐☐ NAME_____	LINE NUMBER ☐☐ NAME_____
32C	What is (NAME'S) birth date? IF MOTHER INTERVIEWED, COPY MONTHS AND YEAR OF BIRTH FROM BIRTH HISTORY AND ASK DAY; IF MOTHER NOT INTERVIEWED, ASK: What is (NAME'S) birth date?	DAY ☐☐ MONTH ☐☐ YEAR ☐☐☐☐	DAY ☐☐ MONTH ☐☐ YEAR ☐☐☐☐	DAY ☐☐ MONTH ☐☐ YEAR ☐☐☐☐
32CA	CHECK 32C: CHILD BORN IN JANUARY 2005 OR LATER?	YES ----------1 NO ----------2 (IF NO GO TO 32C FOR NEXT CHILD OR , IF NO MORE GO TO 28W)	YES ----------1 NO----------2 (IF NO GO TO 32C FOR NEXT CHILD OR , IF NO MORE GO TO 28W)	YES----------1 NO ----------2 (IF NO GO TO 32C FOR NEXT CHILD OR , IF NO MORE GO TO 28W)
33C	WIGHT IN KILOGRAMS	KG.-------- ☐☐.☐	KG.------- ☐☐.☐	KG. ------- ☐☐.☐
34C	HEIGHT IN CENTIMETERS	CM. ---☐☐☐.☐	CM. ---☐☐☐.☐	CM. ---☐☐☐.☐
35C	MEASURED LYING DOWN OR STANDING UP?	LAYING DOWN --------1 STANDING UP----------2	LAYING DOWN --------1 STANDING UP----------2	LAYING DOWN--------1 STANDING UP ---------2
36C	RESULTS OF WEIGHT AND HEIGHT MEASUREMENTS	MEASURED ---------- 1 NOT MEASURED ----- 2 REFUSED ---------- 3 OTHER _____ 6 (SPECIFY)	MEASURED ---------- 1 NOT MEASURED ----- 2 REFUSED---------- 3 OTHER _____ 6 (SPECIFY)	MEASURED---------- 1 NOT MEASURED----- 2 REFUSED ---------- 3 OTHER _____ 6 (SPECIFY)
		GO BACK TO 32C IN NEXT COLUMN IN THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF THE ADDITIONAL QUESTIONNARIE(S); IF NO MORE CHILDREN GO TO 28W .		

		CHILD 4	CHILD 5	CHILD 6
29C	LINE NUMBER FROM COLUMN 17 NAME FROM COLUMN 2	LINE NUMBER ☐☐ NAME_____	LINE NUMBER ☐☐ NAME_____	LINE NUMBER ☐☐ NAME_____
32C	IF MOTHER INTERVIEWED, COPY MONTHS AND YEAR OF BIRTH FROM BIRTH HISTORY AND ASK DAY; IF MOTHER NOT INTERVIEWED, ASK: What is (NAME'S) birth date?	DAY ☐☐ MONTH ☐☐ YEAR ☐☐☐☐	DAY ☐☐ MONTH ☐☐ YEAR ☐☐☐☐	DAY ☐☐ MONTH ☐☐ YEAR ☐☐☐☐
32CA	CHECK 32C: CHILD BORN IN JANUARY 2005 OR LATER?	YES ----------1 NO ----------2 (IF NO GO TO 32C FOR NEXT CHILD OR , IF NO MORE GO TO 28W)	YES ----------1 NO----------2 (IF NO GO TO 32C FOR NEXT CHILD OR , IF NO MORE GO TO 28W)	YES----------1 NO ----------2 (IF NO GO TO 32C FOR NEXT CHILD OR , IF NO MORE GO TO 28W)
33C	WIGHT IN KILOGRAMS	KG.-------- ☐☐.☐	KG.------- ☐☐.☐	KG. ------- ☐☐.☐
34C	HEIGHT IN CENTIMETERS	CM. ---☐☐☐.☐	CM. ---☐☐☐.☐	CM. ---☐☐☐.☐
35C	MEASURED LAYING DOWN OR STANDING UP?	LAYING DOWN --------1 STANDING UP----------2	LAYING DOWN --------1 STANDING UP----------2	LAYING DOWN--------1 STANDING UP ---------2
36C	RESULTS OF WEIGHT AND HEIGHT MEASUREMENTS	MEASURED ---------- 1 NOT MEASURED ----- 2 REFUSED ---------- 3 OTHER _____ 6 (SPECIFY)	MEASURED ---------- 1 NOT MEASURED ----- 2 REFUSED---------- 3 OTHER _____ 6 (SPECIFY)	MEASURED---------- 1 NOT MEASURED----- 2 REFUSED ---------- 3 OTHER _____ 6 (SPECIFY)
		GO BACK TO 32C IN NEXT COLUMN IN THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF THE ADDITIONAL QUESTIONNARIE(S); IF NO MORE CHILDREN GO TO 28W.		

WEIGHT, HEIGHT, AND HIV AND OTHER DISEASES TESTING FOR WOMEN AGE 15-49

28W	CHECK COLUMN 16. RECORD LINE NUMBER AND NAME FOR ALL ELIGIBLE WOMEN AGE 15-49 IN Q29W. IF THERE ARE MORE THAN THREE WOMEN, USE ADDITIONAL QUESTIONNARIE. A FINAL OUTCOME MUST BE RECORDED FOR THE WEIGHT AND HEIGHT MEASUREMENTS IN 36W AND FOR THE HIV AND OTHER DISEASES TEST PROCEDURE IN 43W.			IF NO ELIGIBLE WOMEN MARK "X" HERE AND SKIP TO 28M ☐
		WOMAN 1	WOMAN 2	WOMAN 3
29W	LINE NUMBER (COLUMN 16) NAME (COLUMN 2)	LINE NUMBER ☐☐ NAME_____	LINE NUMBER ☐☐ NAME_____	LINE NUMBER ☐☐ NAME_____
33W	WIGHT IN KILOGRAMS	KG. ☐☐☐.☐	KG. ☐☐☐.☐	KG. ☐☐☐.☐
34W	HEIGHT IN CENTEMETERS	CM. ☐☐☐.☐	CM. ☐☐☐.☐	CM. ☐☐☐.☐
36W	RESULTS OF WEIGHT AND HEIGHT MEASUREMENTS	MEASURED ---------- 1 NOT MEASURED ----- 2 REFUSED ---------- 3 OTHER _____ 6 (SPECIFY)	MEASURED ---------- 1 NOT MEASURED ---- 2 REFUSED---------- 3 OTHER _____ 6 (SPECIFY)	MEASURED---------- 1 NOT MEASURED----- 2 REFUSED---------- 3 OTHER _____6 (SPECIFY)
37W	AGE: CHECK COLUMN 7.	15-17 YEARS---------- 1 18-49 YEARS---------- 2 (IF "2" GO TO Q40W)	15-17 YEARS ---------- 1 18-49 YEARS ---------- 2 (IF "2" GO TO Q40W)	15-17 YEARS---------- 1 18-49 YEARS---------- 2 (IF "2" GO TO Q40W)
38W	MARITAL STATUS: CHECK COLUMN 15A.	CODE 6 (SINGLE OR NEVER MARRIED) - 1 OTHER---------- 2 (IF "2" GO TO Q40W)	CODE 6 (SINGLE OR NEVER MARRIED) -- 1 OTHER---------- 2 (IF "2" GO TO Q40W)	CODE 6 (SINGLE OR NEVER MARRIED)-- 1 OTHER ---------- 2 (IF "2" GO TO Q40W)
39W	RECORD LINE NUMBER OF PARENT/OTHER ADULTS RESPONSIBLE PERSON FOR ADOLESCENT. RECORD "00" IF NOT LISTED	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT ----------☐☐	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT----------☐☐	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT ----------☐☐
40W	READ HIV ADN OTHER DISEASES TEST CONSENT STATEMENT. FOR NEVER MARRIED WOMEN AGE 15-17 ASK CONSENT FROM PARENT/OTHER ADULT IDENTIFIED IN 39W BEFORE ASKING RESPONDENTS CONSENT.	GRANTED ---------- 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED --- 2 RESPONDENT REFUSED ---------- 3 OTHER _____ 6 (SPECIFY) (SIGN)	GRANTED ---------- 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED ---- 2 RESPONDENT REFUSED---------- 3 OTHER _____ 6 (SPECIFY) (SIGN)	GRANTED ---------- 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED ----2 RESPONDENT REFUSED---------- 3 OTHER _____ 6 (SPECIFY) (SIGN)

CONSENT STATEMENT FOR HIV OTHER DISEASES TEST

READ CONSENT STATEMENT TO EACH RESPONDENT. CIRCLE CODE "1" IN 40W IF RESPONDENT CONSENT TO THE HIV TEST AND CODE "3" IF SHE REFUSED.

FOR NEVER MARRIED WOMEN AGE 15-17, ASK CONSENT FROM THE PARENT OR OTHER ADULT IDENTIFIED AS RESPONSIBLE FOR THE ADOLESCENT (SEE 39W) BEFORE ASKING THE ADOLESCENT FOR THE CONSENT. CIRCLE CODE "2" IN 39W IF THE PARENT (OTEHR ADULT) REFUSES. CONDUCT THE TEST ONLY IF BOTH THE PARENT (OTHE ADULTS) AND THE ADOLESCENT CONSENT.

As part of the survey we also are asking people all over the country to provide blood for testing different type of diseases including HIV. These tests are being done to know the status of the different type of diseases in country.

For the test, we need a few drops of blood from a finger. The equipment used in taking the blood is clean and completely safe. It has never been used before and will be thrown away after each test.

No names will be attached so we will not be able to tell you the test results. No one else will be able to know (your/NAME OF ADOLESCENT) test results either.

Do you have any questions?

You can say "YES" to the test, or you can say "NO". It is up to you to decide.

Will you (allow NAME OF ADOLESCENT) to take the tests?

WEIGHT, HEIGHT, AND HIV AND OTHER DISEASES TESTING FOR WOMEN AGE 15-49

		WOMAN 1	WOMAN 2	WOMAN 3
	LINE NUMBER (COLUMN 16) NAME (COLUMN 2)	LINE NUMBER ☐☐ NAME_____	LINE NUMBER ☐☐ NAME_____	LINE NUMBER ☐☐ NAME_____
41W	CHECK 40W AND PREPARE EQUIPMENT AND SUPPLIES FOR THE HIV TEST IF CONSENT HAS BEEN OBTAINED AND PROCEED WITH TEST. A FINAL OUTCOME FOR THE HIV TEST PROCEDURE MUST BE RECORDED IN 43W FOR EACH ELIGIBLE WOMEN EVEN IF SHE WAS NOT PRESENT, REFUSED, OR COULD NOT BE TESTED FOR SOME OTHER REASON.			
42W	BAR CODE LABEL	PUT THE FIRST BAR CODE LABEL PUT THE SECOND BAR CODE LABEL ON THE RESPONDENT'S FILTER PAPER AND THE THIRD ON THE TRANSMITAL FORM	PUT THE FIRST BAR CODE LABEL PUT THE SECOND BAR CODE LABEL ON THE RESPONDENT'S FILTER PAPER AND THE THIRD ON THE TRANSMITAL FORM	PUT THE FIRST BAR CODE LABEL PUT THE SECOND BAR CODE LABEL ON THE RESPONDENT'S FILTER PAPER AND THE THIRD ON THE TRANSMITAL FORM
43W	OUTCOME OF HIV AND OTHER DISEASES TEST PROCEDURE	BLOOD TAKEN ---------- 1 NOT PRESENT---------- 2 REFUSED ---------- 3 OTHER _____ 6 (SPECIFY)	BLOOD TAKEN --------- 1 NOT PRESENT ---------- 2 REFUSED ----------3 OTHER _____ 6 (SPECIFY)	BLOOD TAKEN --------- 1 NOT PRESENT---------- 2 REFUSED ---------- 3 OTHER _____ 6 (SPECIFY)
44W	GO BACK TO 29W IN NEXT COLUMN IN THIS QUESTIONNNARIE OR IN THE FIRST COLUMN OF ADDTIONAL QUESTIONNAIRE (S); IF NO MORE WOMEN, GO TO 28M.			

WEIGHT, HEIGHT, AND HIV AND OTHER DISEASES TESTING FOR MEN AGE 15-59

28M	CHECK COLUMN16A. RECORD LINE NUMBER AND NAME FOR ALL ELIGIBLE MEN AGE 15-59 IN Q29M. IF THERE ARE MORE THAN THREE MEN, USE ADDITIONAL QUESTIONNARIE. A FINAL OUTCOME MUST BE RECORDED FOR THE WEIGHT AND HEIGHT MEASUREMENTS IN 36M AND FOR THE HIV AND OTHER DISEASES TEST PROCEDURE IN 43M.			IF NO ELIGIBLE MEN TICK IN THE BOX BELOW AND END ☐
		MAN 1	MAN 2	MAN 3
29M	LINE NUMBER (COLUMN 16A) NAME (COLUMN 2)	LINE NUMBER ☐☐ NAME_____	LINE NUMBER ☐☐ NAME_____	LINE NUMBER ☐☐ NAME_____
33M	WEIGHT IN KILOGRAMS	KG. ☐☐☐.☐	KG. ☐☐☐.☐	KG. ☐☐☐.☐
34M	HEIGHT IN CENTEMETERS	CM. ☐☐☐.☐	CM. ☐☐☐.☐	CM. ☐☐☐.☐
36M	RESULTS OF WEIGHT AND HEIGHT MEASUREMENTS	MEASURED ---------- 1 NOT MEASURED ----- 2 REFUSED ---------- 3 OTHER _____ 6 (SPECIFY)	MEASURED ---------- 1 NOT MEASURED ---- 2 REFUSED---------- 3 OTHER _____ 6 (SPECIFY)	MEASURED---------- 1 NOT MEASURED----- 2 REFUSED---------- 3 OTHER _____ 6 (SPECIFY)
37M	AGE: CHECK COLUMN 7.	15-17 YEARS---------- 1 18-59 YEARS---------- 2 (IF "2" GO TO Q40M)	15-17 YEARS---------- 1 18-59 YEARS---------- 2 (IF "2" GO TO Q40M)	15-17 YEARS---------- 1 18-59 YEARS---------- 2 (IF "2" GO TO Q40M)
38M	MARITAL STATUS: CHECK COLUMN 15A	CODE 6 (SINGLE OR NEVER MARRIED) - 1 OTHER---------- 2 (IF "2" GO TO Q40M)	CODE 6 (SINGLE OR NEVER MARRIED) -- 1 OTHER---------- 2 (IF "2" GO TO Q40M)	CODE 6 (SINGLE OR NEVER MARRIED)-- 1 OTHER ---------- 2 (IF "2" GO TO Q40M)
39M	RECORD LINE NUMBER OF PARENT/OTHER ADULTS RESPONSIBLE PERSON FOR ADOLESCENT. RECORD "00" IF NOT LISTED	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT ----------☐☐	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT----------☐☐	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT ----------☐☐
40M	READ HIV AND OTHER DISEASES TEST CONSENT STATEMENT. FOR NEVER MARRIED WOMEN AGE 15-17 ASK CONSENT FROM PARENT/OTHER ADULT IDENTIFIED IN 39M BEFORE ASKING RESPONDENTS CONSENT.	GRANTED ---------- 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED --- 2 RESPONDENT REFUSED ---------- 3 OTHER _____ 6 (SPECIFY) (SIGN)	GRANTED ---------- 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED ---- 2 RESPONDENT REFUSED---------- 3 OTHER _____ 6 (SPECIFY) (SIGN)	GRANTED ---------- 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED ----2 RESPONDENT REFUSED---------- 3 OTHER _____ 6 (SPECIFY) (SIGN)

CONSENT STATEMENT FOR HIV TEST

READ CONSENT STATEMENT TO EACH RESPONDENT. CIRCLE CODE "1" IN 40M IF RESPONDENT CONSENT TO THE HIV TEST AND CODE "3" IF HE REFUSED.

FOR NEVER MARRIED MEN AGE 15-17, ASK CONSENT FROM THE PARENT OR OTHER ADULT IDENTIFIED AS RESPONSIBLE FOR THE ADOLESCENT (SEE 39M) BEFORE ASKING THE ADOLESCENT FOR THE CONSENT. CIRCLE CODE "2" IN 40M IF THE PARENTS (OTEHR ADULT) REFUSES. CONDUCT THE TEST ONLY IF BOTH THE PARENT (OTHE ADULTS) AND THE ADOLESCENT CONSENT.

As part of the survey we also are asking people all over the country to provide blood for testing different type of diseases including HIV. These tests are being done to know the status of the different type of diseases in the country.

For the test, we need a few drops of blood from a finger. The equipment used in taking the blood is clean and completely safe. It has never been used before and will be thrown away after each test.

No names will be attached so we will not be able to tell you the test results. No one else will be able to know (your/NAME OF ADOLESCENT) test results either.

Do you have any questions?

You can say "YES" to the test, or you can say "NO". It is up to you to decide.

Will you (allow NAME OF ADOLESCENT) to take the tests?

WEIGHT, HEIGHT, AND HIV AND OTHER DISEASES TESTING FOR MEN AGE 15-59

		MAN 1	MAN 2	MAN 3
	LINE NUMBER (COLUMN 16A) NAME (COLUMN 2)	LINE NUMBER ☐☐ NAME_____	LINE NUMBER ☐☐ NAME_____	LINE NUMBER ☐☐ NAME_____
41M	CHECK 40M AND PREPARE EQUIPMENT AND SUPPLIES FOR THE HIV TEST IF CONSENT HAS BEEN OBTAINED AND PROCEED WITH TEST. A FINAL OUTCOME FOR THE HIV TEST PROCEDURE MUST BE RECORDED IN 43M FOR EACH ELIGIBLE MAN EVEN IF HE WAS NOT PRESENT, REFUSED, OR COULD NOT BE TESTED FOR SOME OTHER REASON.			
42M	BAR CODE LABEL	PUT THE FIRST BAR CODE LABEL PUT THE SECOND BAR CODE LABEL ON THE RESPONDENT'S FILTER PAPER AND THE THIRD ON THE TRANSMITAL FORM	PUT THE FIRST BAR CODE LABEL PUT THE SECOND BAR CODE LABEL ON THE RESPONDENT'S FILTER PAPER AND THE THIRD ON THE TRANSMITAL FORM	PUT THE FIRST BAR CODE LABEL PUT THE SECOND BAR CODE LABEL ON THE RESPONDENT'S FILTER PAPER AND THE THIRD ON THE TRANSMITAL FORM
43M	OUTCOME OF HIV AND OTHER DISEASES TEST PROCEDURE	BLOOD TAKEN ---------- 1 NOT PRESENT---------- 2 REFUSED ----------3 OTHER _____ 6 (SPECIFY)	BLOOD TAKEN --------- 1 NOT PRESENT ---------- 2 REFUSED ----------3 OTHER ---------- 6 (SPECIFY)	BLOOD TAKEN ------- 1 NOT PRESENT--------- 2 REFUSED ----------3 OTHER ---------- 6 (SPECIFY)
44M	GO BACK TO 29M IN NEXT COLUMN IN THIS QUESTIONNNARIE OR IN THE FIRST COLUMNS OF ADDTIONAL QUESTIONNAIRE (S); IF NO MORE MAN, END.			

CODES FOR Q7A (HH ROSTER)

00=None

01= Blindness of both eyes

02 = Blindness of one eye

10 = Total deafness

11 = Partial deafness one/two ears

20 = Dumbness(can not speak)

30 = One or both legs amputed

31 = One or both legs paralysis

32 = Short leg

33 = Leg deformity

34 = Elephantiasis

35= Other related motion impairments

40 = One or both hands amputed

41 = One or both hands paralysed

42 = Hand deformities/ paralysis of any kind

43 = Other hand impairments

50 = Insanity

51 = Mental retardation

52 = Epilepsy

53 = Other mental impairments

60 = Leprosy

70 = Multiple disabilities (Specify)

80 = Other disability (Specify)

CODES FOR Q11A (REASON FOR NOT ATTENDING SCHOOL)

01= No school in the area
02=School very far from the area
03=Disability/health problem
04=Help family at home
05=Help family on farm/business
06=Needed to earn money (employment)
07=Dismissed for academic reason
08=Did not pass entrance exam
09=Graduated/had enough schooling
10=Disliked going to school
11=Not accepted by school because of age
12=Because of marriage
13=Other

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

NAME OF THE INTERVIEWER:_____DATE: ____/_____/_____SIGNATURE_____

SUPERVISOR'S OBSERVATIONS

NAME OF THE SUPERVISOR:_____DATE: ____/_____/_____SIGNATURE_____

EDITOR'S OBSERVATIONS

NAME OF THE EDITOR:_____DATE: _____/_____/_____SIGNATURE_____

THE STATE OF ERITREA

MINISTRY OF NATIONAL DEVELOPMENT
NATIONAL STATISTICS OFFICE

ERITREA POPULATION AND HEALTH SURVEY
CORE EPHS+: WOMEN'S QUESTIONNAIRE
ALL INFORMATION COLLECTED IS CONFIDENTIAL AND IS ONLY FOR STATISTICAL USE

IDENTIFICATION

ZOBA .....

SUB-ZOBA .....

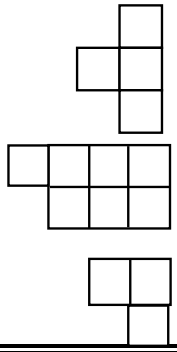
VILLAGE/TOWN NAME _____
[ASMARA=1, OTHER TOWN =2, RURAL = 3]----------

CLUSTER NUMBER .....

HOUSEHOLD NUMBER.....

NAME OF HOUSEHOLD HEAD _____
NAME AND LINE NUMBER OF WOMAN _____

TYPE OF QUESTIONNAIRE (1=CORE 2=MATERNAL MORBIDITY AND MORTALITY)



INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	____/____/____ DD MM YYYY	____/____/____ DD MM YYYY	____/____/____ DD MM YYYY	DAY MONTH YEAR
TEAM				TEAM
INTERVIEWER'S NAME	_____	_____	_____	NAME
RESULT **SEE* BELOW**				RESULT
NEXT VISIT: DATE TIME	____/____/____ DD MM YYYY _____	____/____/____ DD MM YYYY _____		TOTAL NO. OF VISITS

*** RESULT CODES**
1=COMPLETED
2=NOT AT HOME
3=POSTPONED
4= REFUSED
5=PARTIALLY COMPLETED
6=INCAPACITATED
7=OTHER_____ (SPECIFY)

LANGUAGE: **SEE ** BELOW**

QUESTIONNAIRE | LANGUAGE OF INTERVIEW | NATIVE LANGUAGE OF RESPONDENT

** LANGUAGE CODES:
01=AFAR 02= BILEN 03= HEDARIB (Bedawit) 04= KUNAMA 05= NARA
06= Arabic 07= SAHO 08= TIGRE 09= TIGRIGNA 10= OTHER _____ (SPECIFY)

TRANSLATOR USED (1= NOT AT ALL, 2= SOMETIMES, 3= ALL THE TIME)…….

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME_____	NAME_____		
DATE____/_____/_____ DD MM YYYY	DATE____/_____/_____ DD MM YYYY		

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION

Hello. My name is _____ and I am working with the National Statistics Office. 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 questionnaire usually takes between 60-90 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shown to other persons.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR ..... ☐☐ MINUTES ..... ☐☐	
102	First I would like to ask some questions about you and your household. For most of the time until you were 12 years old, did you live in a city, in a town, or in a village?	CITY ..... 1 TOWN ..... 2 VILLAGE 3	
102A	What was the name of the village/town/city in which you lived as child? RECORD NAME OF VILLAGE/TOWN AND ZOBA. IF PLACE WAS OUTSIDE OF ERITREA, RECORD NAME OF THE COUNTRY.	NAME OF VILLAGE/ TOWN/CITY _____ ZOBA NAME_____ ☐ COUNTRY _____ 8	
103	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS ..... ☐☐ ALWAYS ..... 95 VISITOR 96	→ 105 → 105
104	Just before you moved here, did you live in a city, in a town, or in a village?	CITY ..... 1 TOWN ..... 2 VILLAGE 3	
105	In what month and year were you born?	MONTH ..... ☐☐ DON'T KNOW MONTH ..... 98 YEAR ..... ☐☐☐☐ DON'T KNOW YEAR 9998	
106	How old were you at your last birthday? COMPARE AND CORRECT 105 AND/OR 106 IF INCONSISTENT.	AGE IN COMPLETED YEARS ..... ☐☐	
107	Have you ever attended school?	YES ..... 1 NO 2	→ 113A
108	What is the highest level of school you attended: Primary, middle, secondary, or higher?	PRIMARY ..... 1 MIDDLE ..... 2 SECONDARY ..... 3 HIGHER 4	
109	What is the highest grade /year you completed at that level?	GRADE/YEAR ..... ☐☐	
110	CHECK 106:. AGE 29 OR BELOW ☐ ↓ AGE 30 OR ABOVE ☐ →		→ 113

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
111	Are you currently attending school?	YES ..... 1 NO 2	→ 113
112	What was the main reason you stopped attending school?	GOT PREGNANT ..... 01 GOT MARRIED ..... 02 TO CARE FOR YOUNGER CHIDREN ..... 03 FAMILY NEEDED HELP ON FARM OR IN BUSINESS ..... 04 COULD NOT PAY SCHOOL FEES ..... 05 NEEDED TO EARN MONEY ..... 06 GRADUATED/HAD ENOUGH SCHOOLING ..... 07 DID NOT PASS ENTRANCE EXAM ..... 08 DID NOT LIKE SCHOOL ..... 09 SCHOOL NOT ACCESSABLE/TOO FAR ..... 10 ILLNESS ..... 11 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
113	CHECK 108: PRIMARY ☐ MIDDLE SCHOOL OR ABOVE ☐ →		114
113A	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT IF RESPONDENT CAN NOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CAN NOT READ AT ALL ---------- 1 ABLE TO READ ONLY PART OF SENTENCE ---------- 2 ABLE TO READ WHOLE SENTENCE ----- 3 NO CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED ---------- 5	→ 115 → 115
114	Do you usually read a newspaper or magazine almost once every day, at least once a week, less than once a week or not at all?	ALMOST EVERYDAY ..... 1 AT LEAST ONCE A WEEK ..... 2 LESS THAN ONCE A WEEK ..... 3 NOT AT ALL 4	
115	Do you usually listen to the radio almost once every day, at least once a week, less than once a week or not at all?	ALMOST EVERYDAY ..... 1 AT LEAST ONCE A WEEK ..... 2 LESS THAN ONCE A WEEK ..... 3 NOT AT ALL 4	
116	Do you usually watch television almost once every day, at least once a week, less than once a week or not at all?	ALMOST EVERYDAY ..... 1 AT LEAST ONCE A WEEK ..... 2 LESS THAN ONCE A WEEK ..... 3 NOT AT ALL 4	
117	What is your religion?	ORTHODOX ..... 1 CATHOLIC ..... 2 PROTESTANT ..... 3 MUSLIM ..... 4 TRADITIONAL BELIEVER ..... 5 OTHER _____ 6 (SPECIFY)	
118	To which ethnic group do you belong?	AFAR ..... 01 BILEN ..... 02 HEDARIB ..... 03 KUNAMA ..... 04 NARA ..... 05 RASHAIDA ..... 06 SAHO ..... 07 TIGRE ..... 08 TIGRIGNA ..... 09 OTHER _____ 96 (SPECIFY)	

SECTION 2: REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES ..... 1 NO ..... 2 → 206	
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES ..... 1 NO ..... 2 → 204	
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME ..... ☐☐ DAUGHTERS AT HOME ..... ☐☐	
204	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES ..... 1 NO ..... 2 → 206	
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE ..... ☐☐ DAUGHTERS ELSEWHERE ..... ☐☐	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES ..... 1 NO ..... 2 → 208	
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD ..... ☐☐ GIRLS DEAD ..... ☐☐	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL ..... ☐☐	
209	CHECK 208: Just to make sure that I have this right: you have had in TOTAL _____ births during your life. Is that correct? YES ☐ ↓ NO ☐ → PROBE AND CORRECT 201-208 AS NECESSARY.		
210	CHECK 208: ONE OR MORE BIRTHS ☐ ↓ NO BIRTHS ☐ → 225		

211 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had.

RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.

212 What name was given to your (first/next) baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COM-PLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR.', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between [NAME OF PREVIOUS BIRTH] AND [NAME]?
01	SING.. 1 MULT 2	BOY. 1 GIRL 2	MONTH ☐☐ YEAR ☐☐☐☐	YES.... 1 NO ..... 2 → 220	AGE IN YEARS ☐☐	YES..... 1 NO 2	LINE NUMBER ☐☐ → (NEXT BIRTH)	DAYS ..... 1 ☐☐ MONTHS 2 YEARS 3	IF YES, ADD THAT BIRTH TO THE END OF THE BIRTH HISTORY (212)
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 COM-PLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR.', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between [NAME OF PREVIOUS BIRTH] AND [NAME]?
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 (GOTO 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 (GOTO 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 (GOTO 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 (GOTO 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 (GOTO 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, ADD THAT BIRTH TO THE END OF THE BIRTH HISTORY (212)	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..... FOR EACH LIVING CHILD: CURRENT AGE IS RECORDED ..... FOR EACH DEAD CHILD: AGE AT DEATH IS RECORDED..... FOR AGE AT DEATH 12 MONTHS OR 1 YEAR: PROBED TO DETERMINE EXACT NUMBER OF MONTHS.....
224	CHECK 215 AND ENTER THE NUMBER OF BIRTHS IN JANUARY 2005 OR LATER. IF NONE, RECORD "0".

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
225	Have you ever had a pregnancy that was aborted/miscarried?	YES ..... 1 NO ..... 2 → 225F	
225A	In what month and year did the last miscarriage/abortion occur?	MONTH..... ☐☐ YEAR ..... ☐☐☐☐	
225B	CHECK 225A: LAST ABORTION/ MISCARRIAGE OCCURRED IN JANUARY 2005 OR LATER ☐ ↓ LAST ABORTION/ MISSCARRIAGE OCCURRED BEFORE JANUARY 2005 ☐ →		225F
225C	How many months pregnant were you when the last miscarriage/abortion occurred? RECORD NUMBER OF COMPLETED MONTHS	MONTHS..... ☐☐	
225D	Where was the abortion/miscarriage occurred?	HEALTH FACILITY ---------- 1 TRADITIONAL HEALER ---------- 2 MY HOME ---------- 3 OTHER HOME ---------- 4 OTHER_____ 6 (SPECIFY)	
225E	Who mainly decided on the abortion/miscarriage? IF THE LAST PREGNANCY ENDED IN MISSCARIRAGE CIRCLE CODE "7" FOR NOT APPLICABLE	HEALTH PERSONEL ---------- 1 HUSBAND/PARTNER ---------- 2 MY SELF ---------- 3 OTHER_____ 6 (SPECIFY) NOT APPLICABLE ---------- 7	
225F	Have you ever had a pregnancy that terminated in still birth?	YES ..... 1 NO ..... 2 →	226
225G	In what month and year did the last still birth occur?	MONTH..... ☐☐ YEAR ..... ☐☐☐☐	
225H	CHECK 225G: LAST STILL BIRTH OCCURRED IN JANUARY 2005 OR LATER ☐ ↓ LAST STILL BIRTH OCCURRED BEFORE JANUARY 2005 ☐ →		226
225I	How many months pregnant were you when the last still birth occurred? RECORD NUMBER OF COMPLETED MONTHS	MONTHS..... ☐☐	
225J	Since JANUARY 2005, have you had any other pregnancies that did not result in a live birth?	YES..... 1 NO..... 2	
226	Are you pregnant now?	YES..... 1 NO..... 2 UNSURE..... 8 →	237
227	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS.	NUMBER OF MONTHS ☐☐	
228	At the time you became pregnant did you want to become pregnant then, did you want to wait until later, or did you not want to have any (more) children at all?	THEN..... 1 LATER..... 2 NOT AT ALL 3	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
237	When did your last menstrual period start? _____ (DATE, IF GIVEN)	DAYS AGO ..... 1 [ ][ ] WEEKS AGO ..... 2 [ ][ ] MONTHS AGO ..... 3 [ ][ ] YEARS AGO ..... 4 [ ][ ] IN MENOPAUSE/ HAS HAD HYSTERECTOMY ..... 994 BEFORE LAST BIRTH ..... 995 NEVER MENSTRUATED 996	
238	From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant if she has sexual relations?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→ 301
239	Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods?	JUST BEFORE HER PERIOD BEGINS ..... 1 DURING HER PERIOD ..... 2 RIGHT AFTER HER PERIOD HAS ENDED ..... 3 HALFWAY BETWEEN TWO PERIODS ..... 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	

SECTION 3. CONTRACEPTION

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 them by a doctor or a nurse.	YES ..... 1 NO 2	YES ..... 1 NO 2
05	INJECTIONS 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 Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES ..... 1 NO 2	YES ..... 1 NO 2
07	MALE CONDOM Men can put a rubber sheath on their penis before sexual intercourse.	YES ..... 1 NO 2	YES ..... 1 NO 2
08	FEMALE CONDOM Women can place a sheath in their vagina before sexual intercourse.	YES ..... 1 NO 2	YES ..... 1 NO 2
09	DIAPHRAGM Women can place a thin flexible disk in their vagina before intercourse.	YES ..... 1 NO 2	YES ..... 1 NO 2
10	FOAM OR JELLY Women can place a suppository, jelly, or cream in their vagina before intercourse.	YES ..... 1 NO 2	YES ..... 1 NO 2
11	LACTATIONAL AMENORRHEA METHOD (LAM) Up to 6 months after childbirth, a woman can use a method that requires that she breastfeeds frequently, day and night, and that her menstrual period has not returned.	YES ..... 1 NO 2	YES ..... 1 NO 2
12	RHYTHM OR PERIODIC ABSTINENCE Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant.	YES ..... 1 NO 2	YES ..... 1 NO 2
13	WITHDRAWAL Men can be careful and pull out before climax.	YES ..... 1 NO 2	YES ..... 1 NO 2
14	EMERGENCY CONTRACEPTION Women can take pills up to three days after sexual intercourse to avoid becoming pregnant.	YES ..... 1 NO 2	YES ..... 1 NO 2
15	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES ..... 1 _____ (SPECIFY) _____ (SPECIFY) NO 2	YES ..... 1 NO ..... 2 YES ..... 1 NO 2
303	CHECK 302: NOT A SINGLE 'YES' (NEVER USED) →	AT LEAST ONE 'YES' (EVER USED) →	307

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
304	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES ..... 1 NO 2	→ 329
306	What have you used or done? CORRECT 302 (AND 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 ..... ☐☐	
307A	When you first began to use family planning, did you want to have a (another) child but at a later time, or did you not want to have a (another) child at all?	WANTED A (ANOTHER) CHILD LATER ..... 1 DID NOT WANT A (ANOTHER) CHILD AT ALL ..... 2 OTHER_____ 6 (SPECIFY)	
308	CHECK 302 (01): WOMAN NOT STERILIZED ☐ WOMAN STERILIZED ☐ →		311A
309	CHECK 226: NOT PREGNANT OR UNSURE ☐ PREGNANT ☐ →		329A
310	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES..... 1 NO 2	→ 329
311 311A	Which method are you using? Any other method? 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 FEMALE CONDOM..... H DIAPHRAGM ..... I FOAM/JELLY ..... J LACTATIONAL AMEN. METHOD..... K PERIODIC ABSTINENCE ..... L WITHDRAWAL ..... M OTHER _____ X (SPECIFY)	→ 313 → 316A
311B	The last time you obtained (HIGHEST METHOD ON LIST IN 311), how much did you pay in total, including the cost of the method and any consultation you may have had?	COST..... ☐☐☐☐ FREE ..... 9995 DON'T KNOW..... 9998	→ 316A

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
313	In what facility did the sterilization take place? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL ..... 11 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PRIVATE DOCTOR ..... 23 OTHER PRIVATE MEDICAL _____ 26 (SPECIFY) OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
314	CHECK 311/311A: CODE 'A' CIRCLED → Before your sterilization operation, were you told that you would not be able to have any (more) children because of the operation? CODE 'A' NOT CIRCLED → Before the sterilization operation, was your husband/partner told that he would not be able to have any (more) children because of the operation?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
315	How much did you (your husband/partner) pay in total for the Sterilization, including any consultation you (he) may have had?	COST ☐☐☐☐ FREE ..... 9995 DON'T KNOW 9998	
316	In what month and year was the sterilization performed?	MONTH ..... ☐☐ YEAR ..... ☐☐☐☐	→ 327
316A	Since what month and year have you been using (CURRENT METHOD) without stopping? PROBE: For how long have you using (CURRENT METHOD) now without stopping?	MONTH ..... ☐☐ YEAR ..... ☐☐☐☐	
327	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 FEMALE CONDOM ..... 08 DIAPHRAGM ..... 09 FOAM/JELLY ..... 10 LACTATIONAL AMEN. METHOD ..... 11 RHYTHM METHOD ..... 12 WITHDRAWAL ..... 13 OTHER METHOD 96	→ 327C → 332 → 327D → 327B → 327B → 332 → 332

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
327A	Where did you obtain (CURRENT METHOD) when you started using it? IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL ..... 11 GOVT. HEALTH CENTER ..... 12 FAMILY PLANNING CLINIC ..... 13 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PHARMACY ..... 22 PRIVATE DOCTOR ..... 23 OTHER PRIVATE MEDICAL _____ 26 (SPECIFY) OTHER SOURCE SHOP ..... 31 FRIEND/RELATIVE ..... 32 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
327B	Where did you learn to use the lactational amenorrhea/rhythm method?		
327C	You obtained (CURRENT METHOD FROM 327) from (SOURCE OF METHOD FROM 313 OR 327A) in (DATE FROM 316/316A). At that time, were you told about other methods of family planning that you could use?	YES ..... 1 NO 2	→ 327E
327D	Were you ever told by a health or family planning worker about other methods of family planning that you could use?	YES ..... 1 NO 2	
327E	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 FEMALE CONDOM ..... 08 DIAPHRAGM ..... 09 FOAM/JELLY ..... 10 LACTATIONAL AMEN. METHOD ..... 11 RHYTHM METHOD ..... 12 WITHDRAWAL ..... 13 OTHER METHOD 96	332 332

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
328	Where did you obtain (CURRENT METHOD) the last time? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL ... 11 GOVT. HEALTH CENTER ... 12 FAMILY PLANNING CLINIC ... 13 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ... 21 PHARMACY ... 22 PRIVATE DOCTOR ... 23 OTHER PRIVATE MEDICAL _____ 26 (SPECIFY) OTHER SOURCE SHOP ... 31 FRIEND/RELATIVE ... 32 OTHER _____ 96 (SPECIFY) DON'T KNOW ... 98	→ 332
329	What is the main reason you are not using a method of contraception to delay or avoid pregnancy?	NOT MARRIED ... 11 FERTIILITY RELATED REASONS NOT HAVING SEX ... 21 INFREQUENT SEX ... 22 MENOPOSAL/HYSTERECTOMY ... 23 SUBFECUND/INFECUND ... 24 POSTPARTUM/BREASTFEEDING ... 25 WANTS MORE CHILDREN ... 26 OPPOSITION TO USE RESPONDENT OPPOSED ... 31 HUSBAND OPPOSED ... 32 OTHERS OPPOSED ... 33 RELIGIOUS PROHIBITION ... 34 LACK OF KNOWLEDGE KNOWS NO METHODS ... 41 KNOWS NO SOURCE ... 42 METHOD RELATED REASONS HEALTH CONCERNS ... 51 FEAR OF SIDE EFFECTS ... 52 LACK OF ACCESS/TOO FAR ... 53 COST TOO MUCH ... 54 INCONVINIENT TO USE ... 55 INTERFEARS WITH BODY'S NORMAL PROCESSES ... 56 OTHER _____ 96 (SPECIFY) DON'T KNOW ... 98	
329A	Do you know of a place where you can obtain a method of family planning?	YES ... 1 NO ... 2	→ 332

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
33O	Where is that? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S)) 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 ..... A GOVT. HEALTH CENTER ..... B FAMILY PLANNING CLINIC ..... C OTHER PUBLIC _____ D (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... E PHARMACY ..... F PRIVATE DOCTOR ..... G OTHER PRIVATE MEDICAL _____ H (SPECIFY) OTHER SOURCE SHOP ..... I FRIEND/RELATIVE ..... J OTHER _____ X (SPECIFY)	
332	In the last 12 months, have you visited a health facility for care for yourself (or your children)?	YES ..... 1 NO 2	→ 333A
333	Did any health worker member at the health facility speak to you about family planning methods?	YES ..... 1 NO 2	
333A	In the last 12 months, were you visited by a health/field worker who talked to you about family planning?	YES ..... 1 NO 2	

SECTION 4A: PREGNANCY, POSTNATAL CARE, MATERNAL MORBIDITY AND BREASTFEEDING

401	CHECK 224: ONE OR MORE BIRTHS IN JANUARY 2005 OR LATER ☐	NO BIRTH IN JANUARY 2005 OR LATER ☐ →	483A
402	ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN JANUARY 2005 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 2 BIRTHS, USE LAST COLUMN OF ADDITIONAL QUESTIONNAIRES). Now I would like to ask you some questions about your health and the health of all your children born in the last five years. (We will talk about each separately)		
403	LINE NUMBER FROM 212	LAST BIRTH LINE NUMBER ☐☐	NEXT-TO-LAST BIRTH LINE NUMBER ☐☐
404	NAME FROM 212 AND SURVIVAL STATUS FROM 216	NAME _____ ALIVE ☐ DEAD ☐	NAME _____ ALIVE ☐ DEAD ☐
404A	During this pregnancy, did you make preparations for the following: 1)Delivery in a health facility by skilled birth attendant 2)Knowing the telephone no. of health facility or service provider 3)Arranging means of transport to health facility when labor starts 4) keeping some money aside for transport or other expenses 5) Baby clothes 6) Extra food for after delivery 7) other preparation	YES NO DELIVERY IN A HEALTH FACILITY BY SKILLED BIRTH ATTENDANT……..1 2 KNOWING THE TELEPHONE NO. OF HEALTH FACILITY OR SERVICE PROVIDER…….1 2 ARRANGING MEANS OF TRANSPORT TO HEALTH FACILITY WHEN LABOR STARTS……1 2 KEEPING SOME MONEY ASIDE FOR TRANSPORT OR OTHER EXPENSES……..1 2 BABY CLOTHES……..1 2 EXTRA FOOD FOR AFTER DELIVERY……..1 2 OTHER_____1 2 (SPECIFY)	YES NO DELIVERY IN A HEALTH FACILITY BY SKILLED BIRTH ATTENDANT……..1 2 KNOWING THE TELEPHONE NO. OF HEALTH FACILITY OR SERVICE PROVIDER…….1 2 ARRANGING MEANS OF TRANSPORT TO HEALTH FACILITY WHEN LABOR STARTS……1 2 KEEPING SOME MONEY ASIDE FOR TRANSPORT OR OTHER EXPENSES……..1 2 BABY CLOTHES……..1 2 EXTRA FOOD FOR AFTER DELIVERY……..1 2 OTHER_____1 2 (SPECIFY)
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 406A) ← LATER ..... 2 NOT AT ALL ..... 3 (SKIP TO 406A) ←	THEN..... 1 (SKIP TO 423) ← LATER ..... 2 NOT AT ALL ..... 3 (SKIP TO 423) ←
406	How much longer would you like to have waited?	MONTHS ..... 1 ☐☐ YEARS ..... 2 ☐☐ DON'T KNOW 998	MONTHS ..... 1 ☐☐ YEARS ..... 2 ☐☐ DON'T KNOW..... 998
406A	When you were pregnant with (NAME), did you see anyone for antenatal care?	YES ..... 1 NO ..... 2 (SKIP TO 414A) ←	
407	Whom did you see for antenatal care for this pregnancy? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS SEEN.	**HEALTH PERSONNEL** DOCTOR..... A NURSE/MIDWIFE..... B ASSOCIATE NURSE .....C **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT ..... D COMMUNITY HEALTH WORKER ..... E OTHER_____ X (SPECIFY)	

NO	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
407A	Where did you receive antenatal care for this pregnancy? Anywhere else? PROBE TO IDENTIFY TYPE(S) OF SOURCE(S) AND CIRCLE THE APPROPRATE CODE(S). IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	**HOME** YOUR HOME ..... A TBA'S HOME ..... B OTHER HOME ..... C **PUBLIC MEDICAL SECTOR** GOV. HOSPITAL ..... D GOV. HEALTH CENTER ..... E GOV. HEALTH STATION ..... F GOV. DISPENSARY ..... G OTHER PUBLIC MED. ..... H _____ (SPECIFY) **PRIVATE MEDICAL SECTOR** FAITH-BASED, CHURCH HOSPITAL/CLINIC ..... I PRIVATE HOSPITAL/ CLINIC ..... J NURSING/MATERNITY HOME ..... K OTHER PRIVATE MED ..... L _____ (SPECIFY) OTHER _____ X (SPECIFY)	
408	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS ..... ☐☐ DON'T KNOW 98	
409	How many times did you receive antenatal care during this pregnancy?	NO. OF TIMES ..... ☐☐ DON'T KNOW 98	
410	CHECK 409: NUMBER OF TIMES RECEIVED ANTENATAL CARE	ONCE ☐ → (SKIP TO 412) MORE THAN ONCE OR DON'T KNOW ☐ ↓	
411	How many months pregnant were you the last time you received antenatal care?	MONTHS ..... ☐☐ DON'T KNOW 98	
412	As part of your antenatal care during this pregnancy, were any of the following done at least once? Were you weighed? Was your height measured? Was your blood pressure measured? Did you give a urine sample? Did you give a blood sample? Given any information or counseled about breastfeeding? Prevention of Mother to Child Transmission of HIV (PMTCT)	YES NO WEIGHT ..... 1 2 HEIGHT ..... 1 2 BLOOD PRESSURE ..... 1 2 URINE SAMPLE ..... 1 2 BLOOD SAMPLE ..... 1 2 COUNCELED ABOUT BREAST FEEDING ..... 1 2 PMTCT 1 2	

NO	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
413	During (any of) your antenatal care visit(s), were you told about the signs of pregnancy complications?	YES ..... 1 NO ..... 2 (SKIP TO 414A) ← DON'T KNOW 8	
414	Were you told where to go if you had any of these complications?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
414A	At any time during this pregnancy, did you experience any of the following: Bleeding Excessive vomiting Convulsions Swelling Fever Pain/urine Jaundice High blood pressure Anemia Other IF THE RESPONDENT DID NOT EXPERIENCE ANY OF THE PROBLEMS SKIP TO 415	YES NO DK BLEEDING 1 2 8 EXCESSIVE VOMITING 1 2 8 CONVULSIONS 1 2 8 SWELLING 1 2 8 FEVER…… 1 2 8 PAIN/URINE…… 1 2 8 JAUNDICE…. 1 2 8 HIGH BP 1 2 8 ANEMIA 1 2 8 OTHER 1 2 8	
414B	Were you admitted to hospital during this pregnancy for any of these problems?	YES ..... 1 NO ..... 2 (SKIP TO 415) ←	
414C	What was the reason(s) for admission? Any other reason? CIRCLE ALL MENTIONED	BLEEDING ..... A EXCESSIVE VOMITING ..... B CONVULSIONS ..... C SWELLING ..... D FEVER ..... E PAIN/URINE ..... F JAUNDICE ..... G HIGH BP ..... H ANEMIA ..... I OTHER _____ X (SPECIFY)	
414D	CHECK 414C	CODE "A" CIRCLED ☐ ↓ CODE "A" NOT CIRCLED ☐ ↓ (SKIP TO 415)	
414E	When did the bleeding occur? PROBE: Any other time? CIRCLE ALL THAT APPLY	FIRST 3 MONTHS ..... A MIDDLE 3 MONTHS ..... B LAST 3 MONTHS C	
415	During this pregnancy, were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth?	YES ..... 1 NO ..... 2 (SKIP TO 416B) ← DON'T KNOW 8	
416	During this pregnancy, how many times did you get this tetanus injection?	TIMES ..... ☐ DON'T KNOW 8	
416A	CHECK 416	2 OR MORE TIMES ☐ ↓ OTHER ☐ ↓ (SKIP TO 417)	
416B	At any time before this pregnancy, did you take any tetanus injections, either to protect yourself or another baby?	YES ..... 1 NO ..... 2 (SKIP TO 417) ← DON'T KNOW 8	

NO	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
416C	Before this pregnancy, how many other times did you receive a tetanus injection? IF 7 OR MORE TIMES RECORD '7'	TIMES..... ☐☐ DON'T KNOW..... 8	
417	During this pregnancy, were you given or did you buy any iron tablets/syrup? SHOW TABLETS/SYRUP	YES..... 1 NO..... 2 (SKIP TO 418A) ← DON'T KNOW..... 8	
418	During the whole pregnancy, for how many days did you take the tablets or syrup? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS. RECORD "000" IF NONE.	NUMBER OF DAYS..... ☐☐☐ DON'T KNOW..... 998	
418A	During this pregnancy, did you receive multiple vitamin tablets or syrup? SHOW TABLET AND SYRUP	YES..... 1 NO..... 2 DON'T KNOW..... 8	
419	During this pregnancy did you have difficulty with your vision during the daylight?	YES..... 1 NO..... 2 DON'T KNOW..... 8	
420	During this pregnancy, did you suffer from night blindness?	YES..... 1 NO..... 2 DON'T KNOW..... 8	
420A	During this pregnancy did you usually sleep under an ITN mosquito net?	YES..... 1 NO..... 2	
423	When (NAME) was born, was he/she very large, larger than average, average, smaller than average, or very small?	VERY LARGE..... 1 LARGER THAN AVERAGE..... 2 AVERAGE..... 3 SMALLER THAN AVERAGE..... 4 VERY SMALL..... 5 DON'T KNOW..... 8	VERY LARGE..... 1 LARGER THAN AVERAGE..... 2 AVERAGE..... 3 SMALLER THAN AVERAGE..... 4 VERY SMALL..... 5 DON'T KNOW..... 8
424	Was (NAME) weighed at birth ?	YES..... 1 NO..... 2 (SKIP TO 426) ← DON'T KNOW..... 8	YES..... 1 NO..... 2 (SKIP TO 426) ← DON'T KNOW..... 8
425	How much did (NAME) weigh? RECORD WEIGHT FROM HEALTH CARD, IF AVAILABLE.	GRAMS FROM CARD..... 1 ☐☐☐☐ GRAMS FROM RECALL..... 2 ☐☐☐☐ DON'T KNOW..... 99998	GRAMS FROM CARD..... 1 ☐☐☐☐ GRAMS FROM RECALL..... 2 ☐☐☐☐ DON'T KNOW..... 99998

NO	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
426	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS ASSISTING. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY	**HEALTH PERSONNEL** DOCTOR ..... A NURSE/MIDWIFE ..... B ASSOCIATE NURSE ..... C **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT ..... D COMMUNITY HEALTH WORKER ..... E RELATIVE/FRIEND ..... F OTHER _____ X (SPECIFY) NO ONE ..... Y	**HEALTH PERSONNEL** DOCTOR ..... A NURSE/MIDWIFE ..... B ASSOCIATE NURSE ..... C **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT ..... D COMMUNITY HEALTH WORKER ..... E RELATIVE/FRIEND ..... F OTHER _____ X (SPECIFY) NO ONE ..... Y
426A	How long were you in labor during this pregnancy?	LESS THAN 12 HOURS ..... 1 12 – 24 HOURS ..... 2 MORE THAN 24 HOURS 3	
426B	Was there difficulty in removing the placenta?	YES ..... 1 NO 2	
426C	How long was the placenta retained?	LESS THAN 6 HOURS ..... 1 6-12 HOURS ..... 2 MORE THAN 12 HOURS 3	
426D	During labor and/or delivery, were you sick with a high fever?	YES ..... 1 NO ..... 2 (SKIP TO 426G) DON'T KNOW ..... 8 (SKIP TO 426G)	
426E	Did you seek treatment for the fever?	YES ..... 1 NO ..... 2 (SKIP TO 426G)	
426F	Where did you seek treatment for the fever?	IN SAME HEALTH FACILITY WHERE DELIVERY TOOK PLACE ..... 1 REFERED TO A HIGHER LEVEL OF SERVICE ..... 2 OTHER _____ 6 (SPECIFY)	
426G	During labor and/or delivery, did you have any convulsions not caused by fever - that is eclampsia?	YES ..... 1 NO ..... 2 (SKIP TO 426J) DON'T KNOW ..... 8 (SKIP TO 426J)	
426H	Did you seek treatment for the convulsions?	YES ..... 1 NO ..... 2 (SKIP TO 426J)	
426I	Where did you seek treatment for the convulsions?	IN SAME HEALTH FACILITY WHERE DELIVERY TOOK PLACE ..... 1 REFERED TO A HIGHER LEVEL OF SERVICE ..... 2 OTHER _____ 6 (SPECIFY)	
426J	During labor and/or delivery, did you lose a lot of blood? PROBE: Did you bleed so much that you were afraid of dying?	YES ..... 1 NO ..... 2 DON'T KNOW 8	

NO	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
427	Where did you give birth to (NAME)? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**HOME** YOUR HOME ..... 11 (SKIP TO 428D) ← OTHER HOME ..... 12 **PUBLIC SECTOR** GOVT.HOSPITAL ..... 21 GOVT. HEALTH CENTER ..... 22 GOVT. HEALTH STATION ..... 23 OTHER PUBLIC _____ 26 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC ..... 31 MISSION HOSPITAL/ CLINIC ..... 32 NURSING/MATERNITY HOME ..... 33 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 428D) ←	**HOME** YOUR HOME ..... 11 (SKIP TO 428D) ← OTHER HOME ..... 12 **PUBLIC SECTOR** GOVT.HOSPITAL ..... 21 GOVT. HEALTH CENTER ..... 22 GOVT. HEALTH STATION ..... 23 OTHER PUBLIC_____ 26 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC ..... 31 MISSION HOSPITAL/ CLINIC ..... 32 NURSING/MATERNITY HOME ..... 33 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER_____ 96 (SPECIFY) (SKIP TO 428D) ←
427A	How did you reach that facility? IF MORE THAN ONE MEANS OF TRANSPORTATION WAS USED, RECORD THE MEANS BY WHICH THE LONGEST DISTANCE IS COVERED	ON FOOT ..... 1 CARRIED ON A STRETCHER ..... 2 ON ANIMAL (DONKEY, HORSE, CAMEL) ..... 3 AMBULANCE ..... 4 PRIVATE VEHICLES ..... 5 PUBLIC VEHICLE ..... 6 OTHER _____ 8 (SEPCIFY)	
427B	How long did it take you to reach that facility?	LESS THAN 2 HOURS ..... 1 2-4 HOURS ..... 2 5 HOURS OR MORE 3	
427C	After delivery, how long did you stay in a health facility?	LESS THAN ONE DAY ..... 1 1-2 DAYS ..... 2 3 DAYS OR MORE ..... 3 DON'T KNOW 8	
428	Was (NAME) delivered by caesarian section?	YES ..... 1 NO ..... 2 (SKIP TO 428B) ←	YES..... 1 NO..... 2

NO	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
428A	What was the reason for Caesarian section? CIRCLE ALL THAT ARE MENTIONED	ABNORMAL PRESENTATION (ABDOMINAL) ..... A ABNORMAL PRESENTATION (VAGINAL) ..... B PELVIS TOO SMALL ..... C BABY TOO BIG ..... D FETAL DISTRESS ..... E PLACENTA PRAEVIA ..... F ABRUPTION PLACENTA ..... G REPEAT CAESARIAN SECTION ..... H NO PROGRESS IN LABOR ..... I OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	
428B	On discharge from health facility, were you counseled on the following: 1.Exclusive breast feeding 2.Maternal nutrition 3.Immunization of the child 4.Contraceptives 5.Other	YES NO EXCLUSIVE BREAST FEEDING..1 2 MATERNAL NUTRITION……1 2 IMMUNIZATION OF THE CHILD..1 2 CONTRACEPTIVES……..1 2 OTHER _____1 2 (SPECIFY)	
428C	After you were discharged, did any health care provider or a traditional birth attendant check on your health?	YES ..... 1 (SKIP TO 430) ← NO ..... 2 (SKIP TO 432B) ←	YES ..... 1 (SKIP TO 435) ← NO ..... 2 (SKIP TO 435) ←
428D	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 DIDN'T ALLOW ..... F NOT NECESSARY ..... G NOT CUSTOMARY ..... H RE-INFUBULATION ..... I OTHER _____ X (SPECIFY)	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 DIDN'T ALLOW ..... F NOT NECESSARY ..... G NOT CUSTOMARY ..... H RE-INFUBULATION ..... I OTHER _____ X (SPECIFY)
429	After (NAME) was born, did any health provider or a traditional birth attendant check on your health?	YES ..... 1 NO ..... 2 (SKIP TO 432B) ←	YES ..... 1 NO 2
430	How long after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS. RECORD "00" DAYS IF SAME DAY.	HOURS .....1 ☐☐ DAYS .....2 ☐☐ WEEKS .....3 ☐☐ DON'T KNOW 998	

NO	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
431	Who checked on your health at that time? PROBE AND CIRCLE FOR MOST QUALIFIED IF MORE THAN ONE PERSON.	**HEALTH PERSONNEL** DOCTOR ..... 11 NURSE/MIDWIFE ..... 12 ASSOCIATE NURSE ..... 13 **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT ..... 21 COMMUNITY HEALTH WORKER ---------- 22 OTHER _____ 96 (SPECIFY)	
432	Where did this first check take place? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	**HOME** YOUR HOME..... 11 OTHER HOME..... 12 **PUBLIC SECTOR** GOVT. HOSPITAL ..... 21 GOVT. HEALTH CENTER..... 22 GOVT. HEALTH STATION ..... 23 OTHER PUBLIC_____ 26 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC..... 31 MISSION HOSPITAL/ CLINIC……. ……..…… 32 NURSING/MATERNITY HOME ……..…….. 33 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	
432A	CHECK 428C:	YES ☐ NOT ASKED ☐ (SKIP TO 432F)	
432B	In the two months after (NAME) was born, did any health care provider or a traditional birth attendant check on his/her health?	YES ..... 1 NO ..... 2 (SKIP TO 432F) DON'T KNOW……..8	
432C	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. RECORD "00" DAYS IF SAME DAY.	HOURS .....1 DAYS ..... 2 WEEKS .....3 DON'T KNOW 998	

NO	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
432D	Who checked on (NAME)'s health at that time? PROBE FOR MOST QUALIFIED PERSON.	**HEALTH PERSONNEL** DOCTOR ..... 11 NURSE/MIDWIFE ..... 12 ASSOCIATE NURSE ..... 13 **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT ..... 21 COMMUNITY HEALTH WORKER ---------- 22 OTHER _____ 96 (SPECIFY)	
432E	Where did this first check of (NAME) take place? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**HOME** YOUR HOME..... 11 OTHER HOME..... 12 **PUBLIC SECTOR** GOVT. HOSPITAL ..... 21 GOVT. HEALTH CENTER..... 22 GOVT. HEALTH STATION ..... 23 OTHER PUBLIC_____ 26 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC ..... 31 MISSION HOSPITAL/ CLINIC……. ……..…… 32 NURSING/MATERNITY HOME ……..…….. 33 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	
432F	Did you lose a lot of blood after delivery of this pregnancy (Postpartum hemorrhage)?	YES ..... 1 NO ..... 2 (SKIP TO 432H) ←	
432G	When did it happen?	FIRST DAY (24 HOURS) ..... 1 FIRST WEEK..... 2 2-6 WEEKS AFTER DELIVERY 3	
432H	Did you experience any of these complications during the postpartum period (from delivery up to 6 weeks)? 1.Postpartum sepsis 2.Postpartum eclampsia 3.Postpartum psychosis 4.Breast abscess 5.Others	YES NO POSTPARTUM SEPSIS .....1 2 POSTPARTUM ECLAMPSIA.....1 2 POSTPARTUM PSYCHOSIS …..1 2 BREAST ABSECESS ……1 2 OTHERS_____1 2 (SPECIFY)	
433	In the first two months after delivery, did you receive a vitamin A dose (like this/any of these)? SHOW COMMON TYPES OF AMPULES/ CAPSULES/ SYRUPS.	YES ..... 1 NO ..... 2 DON'T KNOW 8	

NO	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
434	Has your period returned since the birth of (NAME)?	YES ..... 1 (SKIP TO 436) ← NO ..... 2 (SKIP TO 437) ← DON'T KNOW 8	
435	Did your period return between the birth of (NAME) and your next pregnancy?		YES ..... 1 NO ..... 2 (SKIP TO 439) ←
436	For how many months after the birth of (NAME) did you not have a period?	MONTHS ..... ☐☐ DON'T KNOW 98	MONTHS ..... ☐☐ DON'T KNOW 98
437	CHECK 226: IS RESPONDENT PREGNANT?	NOT PREG-NANT ☐ → PREGNANT OR UNSURE ☐ → (SKIP TO 439)	
438	Have you begun to have sexual intercourse again since the birth of (NAME)?	YES ..... 1 NO ..... 2 (SKIP TO 440) ←	
39	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
40	Did you ever breastfeed (NAME)?	YES ..... 1 NO ..... 2 (SKIP TO 447) ← CHILD DIED RIGHT AFTER BIRTH OR LESS THAN ONE DAY ..... 3 (SKIP TO 447) ←	YES ..... 1 NO ..... 2 (SKIP TO 447) ← CHILD DIED RIGHT AFTER BIRTH OR LESS THAN ONE DAY ..... 3 (SKIP TO 447) ←
41	How long after birth did you first put (NAME) to the breast? IF LESS THAN 1 HOUR, RECORD '00' HOURS. IF LESS THAN 24 HOURS, RECORD HOURS. OTHERWISE, RECORD DAYS.	IMMEDIATELY ..... 000 HOURS ..... 1 ☐☐ DAYS ..... 2 ☐☐	IMMEDIATELY ..... 000 HOURS ..... 1 ☐☐ DAYS ..... 2 ☐☐
42	In the first three days after delivery, was (NAME) given anything to drink other than breast milk?	YES ..... 1 NO ..... 2 (SKIP TO 444) ←	YES ..... 1 NO ..... 2 (SKIP TO 444) ←

	NO	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
443		What was (NAME) given to drink? Anything else? RECORD ALL LIQUIDS MENTIONED.	FRESH MILK (OTHER THAN BREAST MILK)..... A TINNED /POWDERED MILK..... B PLAIN WATER..... C SUGAR OR GLUCOSE WATER..... D GRIPE WATER..... E SUGAR-SALT-WATER SOLUTION..... F FRUIT JUICE..... G INFANT FORMULA..... H TEA/INFUSIONS/ABAKE OR KERKEDE..... I HONEY..... J BUTTER..... K OTHER_____X (SPECIFY)	FRESH MILK (OTHER THAN BREAST MILK)..... A TINNED /POWDERED MILK ..... B PLAIN WATER ..... C SUGAR OR GLUCOSE WATER..... D GRIPE WATER..... E SUGAR-SALT-WATER SOLUTION..... F FRUIT JUICE..... G INFANT FORMULA..... H TEA/INFUSIONS/ABAKE OR KERKEDE..... I HONEY..... J BUTTER..... K OTHER_____X (SPECIFY)
444		CHECK 404: CHILD ALIVE?	ALIVE ☐ DEAD ☐ (SKIP TO 446)	ALIVE ☐ DEAD ☐ (SKIP TO 446)
445		Are you still breastfeeding (NAME)?	YES ..... 1 (SKIP TO 448) NO 2	YES ..... 1 (SKIP TO 448) NO 2
446		For how many months did you breastfeed (NAME)? IF LESS THAN A MONTH RECORD "00"	MONTHS ..... ☐☐ DON'T KNOW 98	MONTHS ..... ☐☐ DON'T KNOW 98
446A		What was the main reason you stopped breastfeeding (NAME)?	MOTHER ILL/ WEAK ..... 01 CHILD ILL/ WEAK ..... 02 CHILD DIED ..... 03 NIPPLE/BREAST PROBLEM ..... 04 NOT ENOUGH MILK ..... 05 MOTHER WORKING ..... 06 CHILD REFUSED ..... 07 WEANING AGE/ AGE TO STOP ..... 08 BECAME PREGNANT ..... 09 STARTED USING CONTRACEPTION ..... 10 OTHER_____ 96 (SPECIFY)	MOTHER ILL/ WEAK ..... 01 CHILD ILL/ WEAK ..... 02 CHILD DIED ..... 03 NIPPLE/BREAST PROBLEM ..... 04 NOT ENOUGH MILK ..... 05 MOTHER WORKING ..... 06 CHILD REFUSED ..... 07 WEANING AGE/ AGE TO STOP ..... 08 BECAME PREGNANT ..... 09 STARTED USING CONTRACEPTION ..... 10 OTHER_____ 96 (SPECIFY)
447		CHECK 404: CHILD ALIVE?	ALIVE ☐ DEAD ☐ (SKIP TO 450) (GO BACK TO 403/404 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 452)	ALIVE ☐ DEAD ☐ (SKIP TO 450) (GO BACK TO 403/404 IN LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 452)

448	How many times did you breastfeed last night between sunset and sunrise? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF NIGHT TIME FEEDINGS ☐☐	NUMBER OF NIGHT TIME FEEDINGS ☐☐
449	How many times did you breastfeed yesterday during the daylight hours? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF DAYLIGHT FEEDINGS ..... ☐☐	NUMBER OF DAYLIGHT FEEDINGS ... ☐☐
450	Did (NAME) drink anything from a bottle with a nipple yesterday or last night?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
451	Was sugar added to any of the foods or liquids (NAME) ate yesterday?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
451A	(Aside from breastfeeding and other liquids), how many times did (NAME) eat solid, semi-solid or soft foods yesterday or at night, including both meals and snacks? IF 7 OR MORE TIMES, RECORD '7'.	NUMBER OF TIMES ..... ☐ DON'T KNOW 8	NUMBER OF TIMES ..... ☐ DON'T KNOW 8
451B		GO BACK TO 403/404 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 452.	GO BACK TO 403/404 IN LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 452.

NO.	QUESTIONS AND FILTERS		SKIP
452	CHECK 215 AND 218 HAS AT LEAST ONE CHILD BORN IN JANUARY 2007 OR LATER AND LIVING WITH HER ☐ DOES NOT HAVE ANY CHILDREN BORN IN JANUARY 2007 OR LATER AND LIVING WITH HER ☐ → 454 RECORD NAME AND LINE NUMBER OF YOUNGEST CHILD (FROM 212) LIVING WITH HER AND CONTINUE WITH Q452A) _____ LINE NUMBER ☐☐ (NAME)		
452A	Now I would like to ask you about liquids (NAME FROM Q452) drank over the last seven days, including yesterday. How many days during the last 7 days did (NAME FROM Q452) drink each of the following? FOR EACH ITEM GIVEN AT LEAST ONCE IN LAST SEVEN DAYS, BEFORE PROCEEDING TO THE NEXT ITEM, ASK: In total, how <u>many</u> times yesterday during the day or at night did (NAME FROM Q452) drink (ITEM)?	LAST 7 DAYS NUMBER OF DAYS	YESTERDAY/ LAST NIGHT NUMBER OF TIMES
a	Plain water?	a ☐	a ☐
b	Sugar water?	b ☐	b ☐
c	Fruit juice?	c ☐	c ☐
d	Tea, kerkede,abake, coffee, soft drinks?	d ☐	d ☐
e	Baby formula?	e ☐	e ☐
f	Tinned or powdered milk?	f ☐	f ☐
g	Fresh milk?	g ☐	g ☐
h	Any other liquids?	h ☐	h ☐
	FOR EACH ITEM NOT GIVEN IN THE LAST SEVEN DAYS RECORD '0' IN THE CORROSPONDING NUMBER OF DAYS BOX AND LEAVE THE NUMBER OF TIMES BOX BLANK. IF 7 OR MORE TIMES, RECORD '7'. IF DON'T KNOW RECORD '8'.		

NO.	QUESTIONS AND FILTERS		SKIP
452B	Now I would like to ask you about type of foods (NAME FROM Q452) ate over the last seven days, including yesterday. How many days during the last 7 days did (NAME FROM Q452) eat each of the following foods either separately or combined with other food? FOR EACH ITEM GIVEN AT LEAST ONCE IN LAST SEVEN DAYS, BEFORE PROCEEDING TO THE NEXT ITEM, ASK: In total, how <u>many</u> times yesterday during the day or at night did (NAME FROM Q452) eat (ITEM)?	LAST 7 DAYS NUMBER OF DAYS	YESTERDAY/ LAST NIGHT NUMBER OF TIMES
a	Any green leafy vegetables?	a ☐	a ☐
b	Mangos and Papayas?	b ☐	b ☐
c	Any other fruits such as orange, bananas, apples/sauce, avocados, tomatoes?	c ☐	c ☐
d	Pumpkin, red or yellow yams or squash, carrots, or red sweet potatoes?	d ☐	d ☐
e	Injera	e ☐	e ☐
f	Any food made from grains such as gaat, sebko, ajja, biscuits etc.?	f ☐	f ☐
g	Any other food made from roots or tubers such as white potatoes, white yams, manioc, cassava, or other local roots or tubers?	g ☐	g ☐
h	Any food made from legumes such as lentils, beans, soyabeans, pulses, or peanuts?	h ☐	☐ h
i	Cheese or yoghurt?	i ☐	i ☐
j	Meat, poultry, fish or Eggs?	j ☐	j ☐
k	Any food made with oil, fat, or butter?	k ☐	k ☐
l	Any other solid or semi-solid foods?	l ☐	l ☐
	FOR EACH ITEM NOT GIVEN IN THE LAST SEVEN DAYS RECORD ‘0’ IN THE CORROSPONDING NUMBER OF DAYS BOX AND LEAVE THE NUMBER OF TIMES BOX BLANK. IF 7 OR MORE TIMES, RECORD '7'. IF DON'T KNOW RECORD '8'.	☐	☐

SECTION 4B: CHILD IMMUNIZATION AND HEALTH AND CHILD AND WOMEN'S NUTRITION

454	ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN JANUARY 2005 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH (IF THERE ARE MORE THAN 2 BIRTHS, USE LAST COLUMN OF ADDITIONAL QUESTIONNAIRES).		
455	LINE NUMBER FROM 212	LAST BIRTH LINE NUMBER ..... ☐☐	NEXT-TO-LAST BIRTH LINE NUMBER..... ☐☐
456	NAME FROM 212 AND ALIVE OR DEAD FROM 216	NAME _____ ALIVE ☐ DEAD ☐ (GO TO 456 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 483A)	NAME _____ ALIVE ☐ DEAD ☐ (GO TO 456 IN LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 483A)
458	Do you have a card where (NAME'S) vaccinations are written down? IF YES: May I see it please?	YES, SEEN..... 1 (SKIP TO 460) YES, NOT SEEN..... 2 (SKIP TO 462) NO CARD..... 3	YES, SEEN..... 1 (SKIP TO 460) YES, NOT SEEN ..... 2 (SKIP TO 462) NO CARD 3
459	Did you ever have a vaccination card for (NAME)?	YES..... 1 (SKIP TO 462) NO 2	YES ..... 1 (SKIP TO 462) NO 2
460	(1) COPY VACCINATION DATE FOR EACH VACCINE FROM THE CARD. (2) WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A VACCINATION WAS GIVEN, BUT NO DATE IS RECORDED.		

	VACCINE		DAY	MONTH	YEAR	VACCINE	DAY	MONTH	YEAR
	BCG	BCG				BCG			
	POLIO 0 (POLIO GIVEN AT BIRTH)	POLIO 0				POLIO 0			
	POLIO 1	POLIO 1				POLIO 1			
	POLIO 2	POLIO 2				POLIO 2			
	POLIO 3	POLIO 3				POLIO 3			
	DPT+HepB1/ DPT-HepB+Hib1	DPT+HepB1/ DPT-HepB+Hib1				DPT+HepB1/ DPT-HepB+Hib1			
	DPT+HepB2/ DPT-HepB+Hib2	DPT+HepB2/ DPT-HepB+Hib2				DPT+HepB2/ DPT-HepB+Hib2			
	DPT+HepB3/ DPT-HepB+Hib3	DPT+HepB3/ DPT-HepB+Hib3				DPT+HepB3/ DPT-HepB+Hib3			
	MEASLES	MEASLES				MEASLES			

NO	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
460A	CHECK 460: CHILD RECEIVED ALL VACCINATIONS	NO ☐ → YES ☐ (SKIP TO 464)	NO ☐ → YES ☐ (SKIP TO 464)
461	Has (NAME) received any vaccinations that are not recorded on this card, including vaccinations received in a nation immunization campaign? RECORD 'YES' ONLY IF RESPONDENT MENTIONS BCG, POLIO 0-3, DPT+HepB/ DPT-HepB+Hib 1-3, AND/OR MEASLES VACCINE (S).	YES ..... 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 460) (SKIP TO 464) NO ..... 2 DON'T KNOW 8	YES ..... 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 460) (SKIP TO 464) NO ..... 2 DON'T KNOW 8
462	Did (NAME) ever receive any vaccinations to prevent him/her from getting diseases, including vaccinations received in a national immunization day campaign?	YES ..... 1 NO ..... 2 (SKIP TO 465A1) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 465A1) DON'T KNOW 8
463	Please tell me if (name) received any of the following vaccinations:		
463A	A BCG vaccination against tuberculosis that is an injection in the arm or shoulders that usually causes a scar?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
463B	Polio vaccine, that is, drops in the mouth?	YES ..... 1 NO ..... 2 (SKIP TO 463E) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 463E) DON'T KNOW 8
463C	Was the first Polio vaccine received just after birth or later?	JUST AFTER BIRTH ..... 1 LATER 2	JUST AFTER BIRTH ..... 1 LATER 2
463D	How many times was the polio vaccine received?	NUMBER OF TIMES ..... ☐	NUMBER OF TIMES ..... ☐
463E	A DPT+HepB/ DPT-HepB+Hib 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 463G) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 463G) DON'T KNOW 8
463F	How many times was the DPT+HepB/ DPT-HepB+Hib received?	NUMBER OF TIMES ..... ☐	NUMBER OF TIMES ..... ☐
463G	A measles injection that is a shot in the right upper arm at the age of 9 months or older- to prevent him/her from getting measles?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
464	Were any of the vaccinations (NAME) received during the last two years given as a part of a national immunization day campaign?	YES ..... 1 NO ..... 2 (SKIP TO 465A1) NO VACCINATION IN THE LAST 2 YEARS ..... 3 (SKIP TO 465A1) DON'T KNOW ..... 8 (SKIP TO 465A1)	YES ..... 1 NO ..... 2 (SKIP TO 465A1) NO VACCINATION IN THE LAST 2 YEARS ..... 3 (SKIP TO 465A1) DON'T KNOW ..... 8 (SKIP TO 465A1)

NO	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
465	At which national immunization day campaigns did (NAME) receive vaccinations? RECORD ALL COMPAIGNS MENTIONED	POLIO VACCINATION COMPAIGN 2008 ---------- A POLIO VACCINATION COMPAIGN 2009 ---------- B POLIO VACCINATION COMPAIGN 2010---------- C	POLIO VACCINATION COMPAIGN 2008 ---------- A POLIO VACCINATION COMPAIGN 2009 ---------- B POLIO VACCINATION COMPAIGN 2010---------- C
465A1	Has (NAME) ever received a vitamin A dose (like this/any of these)? SHOW COMMON TYPES OF AMPULES/CAPSULES/SYRUPS	YES ..... 1 NO ..... 2 (SKIP TO 465A3) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 465A3) DON'T KNOW 8
465A2	Did (NAME) receive a vitamin A dose within the last six months?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
465A3	In the last seven days, did (NAME) take iron pills, sprinkles with iron, or iron syrup (like this/ any of these)? SHOW COMMON TYPES OF PILLS/ SPRINKLES/ SYRUPS	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
465A4	CHECK : 215 AND 217 CHILD BORN IN JANUARY 2008 OR LATTER OR CHILD IS 0-2 YEARS OLD	YES ☐ NO ☐ (SKIP TO 465A)	YES ☐ NO ☐ (SKIP TO 465A)
465A5	Has the child ever attended growth monitoring program?	YES ..... 1 NO ..... 2 (SKIP TO 465A)	YES ..... 1 NO ..... 2 (SKIP TO 465A)
465A6	How many times did he/she attend the growth monitoring?	TIMES ..... ☐☐ DON'T KNOW 8	TIMES ..... ☐☐ DON'T KNOW 8
465A	CHECK 27 IN THE HOUSEHOLD QUESTIONNAIRE: BED NETS IN THE HOUSEHOLD?	YES ☐ NO ☐ (SKIP TO 466)	YES ☐ NO ☐ (SKIP TO 466)
465B	Does (NAME) usually sleep under a mosquito net?	YES ..... 1 NO 2	YES ..... 1 NO 2
465C	Did (NAME) sleep under a mosquito net last night?	YES ..... 1 (SKIP TO 465E) NO ..... 2 DON'T KNOW 8	YES ..... 1 (SKIP TO 465E) NO ..... 2 DON'T KNOW 8
465D	CHECK 465B: SLEEPS UNDER A MOSQUITO NET?	YES ☐ NO ☐ (SKIP TO 466)	YES ☐ NO ☐ (SKIP TO 466)

NO	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
465E	Now let us talk about the mosquito net (NAME) sleeps under. How long ago was the mosquito net bought or obtained? IF LESS THAN ONE MONTH, RECORD '00'. IF MORE THAN 95 MONTHS, RECORD '95'.	MONTHS ..... ☐☐ DON'T KNOW 98	MONTHS ..... ☐☐ DON'T KNOW 98
465E1	Is the mosquito net long lasting?	YES ..... 1 (SKIP TO 466) ← NO ..... 2 DON'T KNOW 8	YES ..... 1 (SKIP TO 466) ← NO ..... 2 DON'T KNOW 8
465F	Since you got the mosquito net, was it ever soaked or dipped in a liquid to repel mosquitoes or bugs?	YES ..... 1 NO ..... 2 (SKIP TO 466) ← DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 466) ← DON'T KNOW 8
465G	How long ago was the mosquito net last soaked or dipped? IF LESS THAN 1 MONTH, RECORD '00'. IF MORE THAN 95 MONTHS, RECORD '95'.	MONTHS ..... ☐☐ DON'T KNOW 98	MONTHS ..... ☐☐ DON'T KNOW 98
466	Has (NAME) been ill with a fever at any time in the last 2 weeks?	YES ..... 1 NO ..... 2 (SKIP TO 467) ← DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 467) ← DON'T KNOW 8
466A	Does (NAME) have a fever now?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
466B	Was (NAME) given drugs for the fever?	YES ..... 1 NO ..... 2 (SKIP TO 466G) ← DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 466G) ← DON'T KNOW 8
466C	What drugs did (NAME) take? Any other drugs? RECORD ALL MENTIONED ASK TO SEE DRUG(S). IF TYPE OF DRUG IS NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT FOR EACH ANTI-MALARIAL DRUGS TAKEN, ASK: For how many days did (NAME) take (NAME OF DRUG)?	ANTI-MALARIAL — DAYS CHLOROQUINE ..... A ☐☐ FANSIDAR ..... B ☐☐ QUININE ..... C ☐☐ AMODIAQUINE ..... D ☐☐ ARTESUNATE ..... E ☐☐ OTHER ANTI-MALARIAL . F ☐☐ ANTIBOTICS DRUGS PILL/SYRUPS ---------- G INJECTION ---------- H OTHER DRUGS ASPRIN ..... I PANADOL ..... J OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	ANTI-MALARIAL — DAYS CHLOROQUINE ..... A ☐☐ FANSIDAR ..... B ☐☐ QUININE ..... C ☐☐ AMODIAQUINE ..... D ☐☐ ARTESUNATE ..... E ☐☐ OTHER ANTI-MALARIAL . F ☐☐ ANTIBOTICS DRUGS PILL/SYRUPS ---------- G INJECTION ---------- H OTHER DRUGS ASPRIN ..... I PANADOL ..... J OTHER _____ X (SPECIFY) DON'T KNOW ..... Z

NO	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
466D	CHECK 466C: ANTI-MALARIAL DRUG (S) GIVEN: A-F CIRCLED?	YES ☐ NO ☐ (SKIP TO 467)	YES ☐ NO ☐ (SKIP TO 467)
466E	How long after the fever started did (NAME) first take (NAME OF THE ANTI-MALARIAL DRUGS CIRCLED IN 466C)? IF MORE THAN ONE DRUG, ASK FOR THE FIRST DRUG TAKEN	SAME DAY ..... 0 NEXT DAY ..... 1 TWO DAYS AFTER THE FEVER ..... 2 THREE OR MORE DAYS AFTER THE FEVER ..... 3 DON'T KNOW 8	SAME DAY ..... 0 NEXT DAY ..... 1 TWO DAYS AFTER THE FEVER ..... 2 THREE OR MORE DAYS AFTER THE FEVER ..... 3 DON'T KNOW 8
466F	Is the child still taking (NAME OF THE ANTI-MALARIAL DRUGS CIRCLED IN 466C)?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
466G	Was anything else done about (NAME)'s fever?	YES ..... 1 NO ..... 2 (SKIP TO 467) ← DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 467) ← DON'T KNOW 8
466H	What was done about (NAME)'s fever?	CONSULTED TRAD'L HEALER ..... A GAVE WARM SPONGING ..... B GAVE HERBS ..... C OTHER ..... X (SPECIFY)	CONSULTED TRAD'L HEALER ..... A GAVE WARM SPONGING ..... B GAVE HERBS ..... C OTHER ..... X (SPECIFY)
467	Has (NAME) had an illness with a cough at any time in the last 2 weeks?	YES ..... 1 NO ..... 2 (SKIP TO 475) ← DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 475) ← DON'T KNOW 8
468	When (NAME) had an illness with a cough, did he/she breathe faster than usual with short, rapid breaths?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
470	Did you seek advice or treatment for the cough?	YES ..... 1 NO ..... 2 (SKIP TO 475) ←	YES ..... 1 NO ..... 2 (SKIP TO 475) ←
471	Where did you seek advice or treatment for the cough? Anywhere else? RECORD ALL SOURCES MENTIONED.	**PUBLIC SECTOR** GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH STATION ..... C OTHER PUBLIC _____ F (SPECIFY) **PRIVATE MEDICAL SECTOR** PVT. HOSPITAL/CLINIC ..... G PHARMACY ..... H PVT. DOCTOR ..... I COMM. HEALTH WORKER ..... K OTHER PVT. MEDICAL _____ L (SPECIFY) **OTHER SOURCE** SHOP ..... M TRAD. PRACTITIONER ..... N OTHER _____ X (SPECIFY)	**PUBLIC SECTOR** GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH STATION ..... C OTHER PUBLIC _____ F (SPECIFY) **PRIVATE MEDICAL SECTOR** PVT. HOSPITAL/CLINIC ..... G PHARMACY ..... H PVT. DOCTOR ..... I COMM. HEALTH WORKER ..... K OTHER PVT. MEDICAL _____ L (SPECIFY) **OTHER SOURCE** SHOP ..... M TRAD. PRACTITIONER ..... N OTHER _____ X (SPECIFY)

NO	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
475	Has (NAME) had diarrhea in the last 2 weeks?	YES ..... 1 NO ..... 2 (SKIP TO 483) ← DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 483) ← DON'T KNOW 8
475A	Was there any blood in the stools?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
476	Now I would like to know how much (NAME) was offered to drink during the diarrhea (including breast milk). Was he\she offered less than usual to drink, about the same amount, more than usual to drink, nothing 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 SAME ..... 3 MORE ..... 4 NOTHING TO DRINK ..... 5 DON'T KNOW 8	MUCH LESS ..... 1 SOMEWHAT LESS ..... 2 ABOUT SAME ..... 3 MORE ..... 4 NOTHING TO DRINK ..... 5 DON'T KNOW 8
477	When (NAME) had diarrhea, was he\she offered less than usual to eat, about the same amount, more than usual to eat, stopped to eat, 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 SAME ..... 3 MORE ..... 4 STOPED TO EAT ..... 5 NOTHING TO EAT ..... 6 DON'T KNOW 8	MUCH LESS ..... 1 SOMEWHAT LESS ..... 2 ABOUT SAME ..... 3 MORE ..... 4 STOPED TO EAT ..... 5 NOTHING TO EAT ..... 6 DON'T KNOW 8
478	Was (NAME) given a fluid made from a special packet called ORS to drink? SHOW ORS PACKET	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
478A	Was (NAME) given a government- recommended homemade fluid?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
479	Was anything (else) given to treat the diarrhea?	YES ..... 1 NO ..... 2 (SKIP TO 481) ← DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 481) ← DON'T KNOW 8
480	What was given to treat the diarrhea? Anything else? RECORD ALL TREATEMENT GIVEN.	HOME MADE LIQUIDS ..... A PILL OR SYRUP ..... B INJECTION ..... C (I.V.) INTRAVENOUS ..... D HOME REMEDIES/ HERBAL MEDICINES ..... E OTHER _____ X (SPECIFY)	HOME MADE LIQUIDS ..... A PILL OR SYRUP ..... B INJECTION ..... C (I.V.) INTRAVENOUS ..... D HOME REMEDIES/ HERBAL MEDICINES ..... E OTHER _____ X (SPECIFY)
481	Did you seek advice or treatment for the diarrhea?	YES ..... 1 NO ..... 2 (SKIP TO 483) ←	YES ..... 1 NO ..... 2 (SKIP TO 483) ←

NO	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____
482	Where did you seek advice or treatment for diarrhea? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE _____ (NAME OF PLACE) Anywhere else? RECORD ALL SOURCES MENTIONED.	**PUBLIC SECTOR** GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH STATION..... C OTHER PUBLIC _____ F (SPECIFY) **PRIVATE MEDICAL SECTOR** PVT. HOSPITAL/CLINIC..... G PHARMACY..... H PVT. DOCTOR..... I COMM. HEALTH WORKER..... K OTHER PVT. MEDICAL _____ L (SPECIFY) **OTHER SOURCE** SHOP..... M TRAD. PRACTITIONER ..... N RELATIVE/FRIEND..... P OTHER _____ X (SPECIFY)	**PUBLIC SECTOR** GOVT. HOSPITAL..... A GOVT. HEALTH CENTER..... B GOVT. HEALTH STATION ..... C OTHER PUBLIC _____ F (SPECIFY) **PRIVATE MEDICAL SECTOR** PVT. HOSPITAL/CLINIC ..... G PHARMACY ..... H PVT. DOCTOR ..... I COMM. HEALTH WORKER ..... K OTHER PVT. MEDICAL _____ L (SPECIFY) **OTHER SOURCE** SHOP..... M TRAD. PRACTITIONER..... N RELATIVE/FRIEND ..... P OTHER _____ X (SPECIFY)
482A	CHECK 482	TWO OR MORE CODES CIRCLED ONLY ONE CODE CIRCLED (SKIP TO 483)	TWO OR MORE CODES CIRCLED ONLY ONE CODE CIRCLED (SKIP TO 483)
482B	Where did you first seek advice or treatment? USE LETTER CODE FROM 482	FIRST PLACE ☐	FIRST PLACE ☐
483		GO BACK TO 456 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 483A.	GO BACK TO 456 IN LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 483A.

483A	When a child has diarrhea, should he/she be given less to drink than usual, about the same amount, or more than usual?	LESS TO DRINK ..... 1 ABOUT SAME AMOUNT TO DRINK..... 2 MORE TO DRINK ..... 3 NOTHING TO DRINK .....4 DON'T KNOW..... 8	
483B	When a child has diarrhea, should he/she be given less to eat than usual, about the same amount, or more than usual?	LESS TO EAT ..... 1 ABOUT SAME AMOUNT TO EAT ..... 2 MORE TO EAT ..... 3 DON'T KNOW..... 8	
483C	When a child is sick with diarrhea, what signs of illness would tell you that he/she should be taken to a health facility or health worker? Anything else? RECORD ALL SIGNS MENTIONED	REPEATED WATERY STOOLS ..... A ANY WATERY STOOLS..... B REPEATED VOMITING ..... C ANY VOMITING..... D BLOOD IN STOOLS ..... E FEVER ..... F MARKED THIRST ..... G NOT EATING/NOT DRINKING WELL.... H GETTING SICKER/VERY SICK ..... I NOT GETTING BETTER ..... J OTHER_____ X (SPECIFY) DON'T KNOW..... Z	
483D	When a child is sick with cough, what signs of illness would tell you that he/she should be taken to a health facility or health worker? RECORD ALL SIGNS MENTIONED	FAST BREATHING..... A DIFFICULT BREATHING ..... B NOISY BREATHING ..... C FEVER ..... D UNABLE TO DRINK ..... E NOT EATING/ NOT DRINKING WELL.... F GETTING SICKER/VERY SICK ..... G NOT GETTING BETTER ..... H OTHER_____ X (SPECIFY) DON'T KNOW..... Z	
483E	CHECK 215 AND 218, ALL ROWS NUMBER OF CHILDREN BORN IN JANUARY 2005 OR LATER AND LIVING WITH THE RESPONDENT ONE OR MORE ☐ NONE ☐ → 486 RECORD LINE NUMBER AND NAME (FROM 212) OF YOUNGEST CHILD LIVING WITH HER (AND CONTINUE WITH 483F) _____ ☐☐ (NAME)		

483F	The last time (NAME FROM ABOVE) 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)	
486	CHECK 478: NOT ASKED ☐ NO CHILD RECEIVED FLUID FROM ORS PACKET ☐ ANY CHILD RECEIVED FLUID FROM ORS PACKET ☐ → 490		
487	Have you ever heard of a special product called ORS you can get for the treatment of diarrhea?	YES ..... 1 NO 2	

490	Now I would like to ask you some questions about medical care for you yourself. Many different factors can prevent women from getting medical advice or treatment for themselves. When you are sick and want to get medical advice or treatment, is each of the following a big problem or not?	BIG PROBLEM	NOT A BIG PROBLEM	
	Knowing where to go.....	1	2	
	Getting permission to go.....	1	2	
	Getting money needed for treatment.....	1	2	
	The distance to the health facility	1	2	
	Having to take transport.....	1	2	
	Not wanting to go alone.....	1	2	
	Concern that there may not be a female health provider	1	2	
	Queuing in line for treatment	1	2	
	Quality of the health service	1	2	
491	CHECK 27: IN THE HOUSEHOLD QUESTIONNAIRE BED NETS IN THE HOUSEHOLD? YES ☐ NO ☐ → 501			
492	Do you usually sleep under a mosquito net?	YES ..... 1 NO 2		
493	Did you sleep under a mosquito net last night?	YES ..... 1 NO 2		→ 495
494	CHECK 492: "YES" CIRCLED ☐ "YES" NOT CIRCLED ☐ → 501			

495	Now let us talk about the mosquito net you sleep under. How long ago was the mosquito net bought or obtained? IF LESS THAN ONE MONTH, RECORD '00'. IF MORE THAN 95 MONTHS, RECORD '95'.	MONTHS ..... ☐☐ DON'T KNOW 98	
495A	Is the mosquito net long lasting?	YES ..... 1 → 501 NO ..... 2 DON'T KNOW 8	
496	Since you got the mosquito net, was it ever soaked or dipped in a liquid to repel mosquitoes or bugs?	YES ..... 1 NO ..... 2 DON'T KNOW ..... 8 → 501	
497	How long ago the mosquito net was last soaked or dipped? IF LESS THAN 1 MONTH, RECORD '00'. IF MORE THAN 95 MONTHS, RECORD '95'.	MONTHS ..... ☐☐ DON'T KNOW 98	

SECTION 5. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	Are you currently married or living with a man as if married?	YES, CURRENTLY MARRIED ..... 1 YES, LIVING WITH A MAN ..... 2 NO, NOT IN UNION 3	→ 505
502	Have you ever been married or lived with a man?	YES, FORMERLY MARRIED ..... 1 YES, LIVED WITH A MAN ..... 2 NO 3	→ 510 → 512A
504	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED ..... 1 DIVORCED ..... 2 SEPARATED 3	→ 510
505	Is your husband/partner living with you now or is he staying elsewhere?	LIVING WITH HER ..... 1 STAYING ELSEWHERE 2	→ 506
505A	When was the last time you were living with your husband/partner together? IF LESS THAN A MONTH RECORD '00' IN MONTHS BOX. RECORD 'MONTHS AGO' IF LESS THAN A YEAR, OTHERWISE RECORD 'YEARS AGO'.	MONTHS AGO ..... 1 ☐☐ YEARS AGO ..... 2 ☐☐	
506	RECORD THE HUSBAND/PARTNER'S NAME AND LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE. IF HE IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'.	NAME _____ LINE NUMBER ..... ☐☐	
507	Does your husband/partner have any other wives besides yourself or does he live with other women as if married?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→ 510
508	Including yourself, in total, how many wives or partners does your husband have?	TOTAL NUMBR OF WIVES AND LIVE-IN PARTNERS ..... ☐☐ DON'T KNOW 98	→ 510
509	Are you his first, second… wife?	RANK ..... ☐☐	
510	Have you been married or lived with a man only once, or more than once?	ONCE ..... 1 MORE THAN ONCE 2	
511	CHECK 510: MARRIED/LIVED WITH A MAN ONLY ONCE ☐ → In what month and year did you start living with your husband/partner? MARRIED/LIVED WITH A MAN MORE THAN ONCE ☐ → Now we will talk about your first husband/partner. In what month and year did you start living with him?	MONTH ..... ☐☐ DON'T KNOW MONTH ..... 98 YEAR ..... ☐☐☐☐ DON'T KNOW YEAR 9998	→ 512A
512	How old were you when you started living with him?	AGE ..... ☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
512A	CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
514	Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family life issues. How old were you when you first had sexual intercourse (if ever)?	NEVER..... 00 AGE IN YEARS..... ☐☐ FIRST TIME WHEN STARTED LIVING WITH (FIRST) HUSBAND/PARTNER..... 95	→ 515 → 515
514A	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	→ 524
515	When was the last time you had sexual intercourse? IF LESS THAN 12 MONTHS, ANSWER MUST BE RECORDED IN DAYS, WEEKS OR MONTHS. IF 12 MONTHS (ONE YEAR) OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO..... 1 ☐☐ WEEKS AGO..... 2 ☐☐ MONTHS AGO..... 3 ☐☐ YEARS AGO ..... 4 ☐☐	→ 524
516	The last time you had sexual intercourse, was a condom used?	YES ..... 1 NO 2	→ 518
517	What is the main reason you used a condom on that occasion?	PREVENT HIV/STD..... 1 AVOID PREGNANCY ..... 2 BOTH PREVENT STD/HIV AND PREGNANCY..... 3 PARTNER WANTED TO USE ..... 4 OTHER_____ 6 (SPECIFY)	
518	What was your relationship to this person with whom you had sexual intercourse the last time? IF BOYFRIEND: Were you living together as if married? IF YES, CIRCLE '2' IF NO, CIRCLE '3'	HUSBAND---------- 1 (SKIP TO 524) ← LIVE-IN PARTNER---------- 2 BOYFRIEND NOT LIVING WITH RESPONDENT---------- 3 CASUAL ACQUAINTANCE ---------- 4 PAYING CLIENT ---------- 5 OTHER_____ 6 (SPECIFY)	
519	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 ☐☐ WEEKS---------- 2 ☐☐ MONTHS---------- 3 ☐☐	
520	CHECK 106: AGE 15-24 ☐ ↓ AGE 25-49 ☐ →		→ 523A
521	How old is this person? RECORD AGE AT THE LAST SEXUAL INTERCOURSE	AGE OF PARTNER..... ☐☐ DON'T KNOW 98	→ 523A
522	Is 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 8	→ 523A
523	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	
523A	The last time you had sexual intercourse, did you or your partner drink alcohol?	YES ..... 1 NO 2	→ 523C

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
523B	Were you or your partner drunk at that time? IF YES: Who was drunk?	RESPONDENT ONLY ..... 1 PARTNER ONLY ..... 2 BOTH RESPONDENT AND PARTNER ..... 3 NO ONE 4	
523C	Apart from the person you had sexual intercourse last time, have you had sexual intercourse with any other person in the last 12 months?	YES ..... 1 NO 2	
523D	In the last 12 months, have you ever given or received money, gifts or favors in return for sex?	YES ..... 1 NO 2	
524	Do you know of a place where a person can get MALE condoms?	YES ..... 1 NO 2	→ 601
525	Where is that? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE) Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER..... B FAMILY PLANNING CLINIC ..... C OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC..... G PHARMACY ..... H PRIVATE DOCTOR..... I OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER PRIVATE SECTOR SHOP ..... M FRIEND/RELATIVE..... N OTHER _____ X (SPECIFY)	
540	If you wanted to, could you yourself get MALE condom?	YES ..... 1 NO ..... 2 DON'T KNOW/UNSURE……..8	

SECTION 6: FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	CHECK 311/311A: NEITHER STERILIZED ☐ → NOT ASKED ☐ → HE OR SHE STERLILIZED ☐		614
602	CHECK 226: NOT PREGNANT OR UNSURE ☐ → Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children? PREGNANT ☐ → Now I have some questions about the future. After the child you are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE (A/ANOTHER) CHILD ..... 1 NO MORE/NO ONE ..... 2 SAYS SHE CAN'T GET PREGNANT ..... 3 UNDECIDED/DON'T KNOW 8	 → 604 → 614 → 609
603	CHECK 226: NOT PREGNANT OR UNSURE ☐ → How long would you like to wait from now before the birth of (a/another) child? PREGNANT ☐ → After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS ..... 1 ☐☐ YEARS ..... 2 ☐☐ SOON/NOW ..... 993 SAYS SHE CAN'T GET PREGNANT ..... 994 AFTER MARRIAGE ..... 995 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	 → 609 → 614 → 609
604	CHECK 226: NOT PREGNANT OR UNSURE ☐ → PREGNANT ☐		→ 610A
605	CHECK 310: USING A CONTRACEPTIVE METHOD? NOT ASKED ☐ → NOT CURRENTLY USING ☐ → CURENTLY USING ☐		→ 614
606	CHECK 603: NOT ASKED ☐ → 24 OR MORE MONTHS OR 2 OR MORE YEARS ☐ → 00-23 MONTHS OR 00-01 YEAR ☐		610A

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
607	CHECK 602: WANTS TO HAVE A (ANOTHER) CHILD ☐ ↓ You have said that you do not want (a/another) child soon, but you are not using any method to avoid pregnancy. Can you tell me why? Any other reason? RECORD ALL REASONS MENTIONED WANTS NO MORE (NONE) ☐ ↓ You have said that you do not want any (more) children, but you are not using any method to avoid pregnancy. Can you tell me why? Any other reason?	NOT MARRIED ..... A FERTILITY-RELATED REASONS NOT HAVING SEX ..... B INFREQUENT SEX ..... C MENOPAUSAL/HYSTERECTOMY ..... D SUBFECUND/INFECUND ..... E POSTPARTUM AMENORRHEIC ..... F BREASTFEDING ..... 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 COST TOO MUCH ..... R INCONVENIENT TO USE ..... S INTERFERES WITH BODY'S NORMAL PROCESSES ..... T OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	
609	CHECK 310: USING A CONTRACEPTIVE METHOD? NOT ASKED ☐ ↓ NOT CURRENTLY USING ☐ ↓ YES CURRENTLY USING ☐ →		614
610A	Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future?	YES ..... 1 NO ..... 2 DON'T KNOW 8	 → 612 → 614
611	Which contraceptive method would you prefer to use?	FEMALE STERILIZATION ..... 01 MALE STERILIZATION ..... 02 PILL ..... 03 IUD ..... 04 INJECTIONS ..... 05 IMPLANTS ..... 06 CONDOM ..... 07 FEMALE CONDOM ..... 08 DIAPHRAGM ..... 09 FOAM/JELLY ..... 10 LACT.AMEN. METHOD ..... 11 PERIODIC ABSTINENCE ..... 12 WITHDRAWAL ..... 13 OTHER _____ 96 (SPECIFY) UNSURE 98	→ 614

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
612	What is the main reason that you think you will not use a contraceptive method at any time in the future?	NOT MARRIED ..... 11 FERTILITY-RELATED REASONS INFREQUENT SEX/NO SEX ..... 21 MENOPAUSAL/HYSTERECTOMY ..... 22 SUBFECUND/INFECUND ..... 23 WANTS AS MANY CHILDREN AS POSSIBLE ..... 24 OPPOSITION TO USE RESPONDENT OPPOSED ..... 31 HUSBAND OPPOSED ..... 32 OTHERS OPPOSED ..... 33 RELIGIOUS PROHIBITION ..... 34 LACK OF KNOWLEDGE KNOWS NO METHOD ..... 41 KNOWS NO SOURCE ..... 42 METHOD-RELATED REASONS HEALTH CONCERNS ..... 51 FEAR OF SIDE EFFECTS ..... 52 LACK OF ACCESS/TOO FAR ..... 53 COST TOO MUCH ..... 54 INCONVENIENT TO USE ..... 55 INTERFERES WITH BODY'S NORMAL PROCESSES ..... 56 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→ 614
613	Would you ever use a contraceptive method if you were married?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
614	CHECK 216: HAS LIVING CHILDREN ☐ ↓ — If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ ↓ — If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NUMBER ..... ☐☐ DON'T WANT ANY CHILD ..... 00 OTHER _____ 96 (SPECIFY)	→ 616
615	How many of these children would you like to be boys, how many would you like to be girls and for how many would the sex not matter?	BOYS GIRLS EITHER NUMBER ... ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	
616	Would you say that you approve or disapprove of couples using a method to avoid getting pregnant?	APPROVE ..... 1 DISAPPROVE ..... 2 NO OPINION 3	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
616A	Is it acceptable or not acceptable to you for information on family planning to be provided: On the radio? On the television? In a newspaper or magazine? In video or films?	ACCEPT-ABLE / NOT ACCEPT-ABLE / DK RADIO ..... 1 2 8 TELEVISION ..... 1 2 8 NEWSPAPER/ MEGAZINE ……. 1 2 8 VIDEO/FILMS……1 2 8	
617	In the last 12 months have you heard, read, or seen about family planning: On the radio? On the television? In a newspaper or magazine? Posters? Pamphlets? In video or films?	YES / NO RADIO ..... 1 2 TELEVISION ..... 1 2 NEWSPAPER OR MAGAZINE..... 1 2 POSTERS……..1 2 PAMPHLETS……1 2 VIDEO OR FILMS 1 2	
621	CHECK 501: YES, CURRENTLY MARRIED ☐ ↓ YES, LIVING WITH A MAN ☐ ↓ NO, NOT IN UNION ☐ →		701
621A	CHECK 311/311A: CODE B, G, OR M CIRCLED ☐ →		621C
	NO CODE CIRCLED ☐ →		622
	OTHER ☐ ↓		
621B	Does your husband/partner know that you are using a method of family planning?	YES..... 1 NO ..... 2 DON'T KNOW..... 8	
621C	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)	
622	Now I want to ask you about your husband's/partner's views on family planning. Do you think that your husband/partner approves or disapproves of couples using a method to avoid or delay pregnancy?	APPROVES..... 1 DISAPPROVES..... 2 DON'T KNOW..... 8	
623	How often have you talked to your husband/partner about family planning in the last 12 months?	NEVER..... 1 ONCE OR TWICE ..... 2 MORE OFTEN..... 3	
623A	CHECK 311/311A: NEITHER STERILIZED ☐ ↓ NOT ASKED ☐ ↓ HE OR SHE STERILIZED ☐ →		701
624	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	

SECTION 7A. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	CHECK 501 AND 502: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ FORMERLY MARRIED/ LIVED WITH A MAN ☐ → 703 NEVER MARRIED AND NEVER LIVED WITH A MAN ☐ → 707		
702	How old was your husband/partner on his last birthday?	AGE IN COMPLETED YEARS.... ☐☐	
703	Did your (last) husband/partner ever attend school?	YES..... 1 NO..... 2 → 706	
704	What was the highest level of school he attended: Primary/elementary, middle, secondary, or higher?	PRIMARY ..... 1 MIDDLE ..... 2 SECONDARY ..... 3 HIGHER ..... 4 DON'T KNOW..... 8 → 706	
705	What was the highest Grade/Year he completed at that level? IF NONE, WRITE '00'	GRADE/YEAR ..... ☐☐ DON'T KNOW..... 98	
706	CHECK 701: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ What is your husband's/partner's occupation? That is, what kind of work does he mainly do? FORMERLY MARRIED/ LIVED WITH A MAN ☐ What was your (last) husband's/ partner's occupation? That is, what kind of work did he mainly do?	■■ _____ _____ _____	
707	Aside from your own housework, have you done any work for at least one hour in the last seven days?	YES..... 1 NO..... 2	→ 710
708	As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. Are you currently doing any of these things or any other work?	YES..... 1 NO..... 2	→ 710
708A	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	→ 710
709	Have you done any work in the last 12 months?	YES..... 1 NO..... 2	→ 724
710	What is your usual occupation, that is, what kind of work do you mainly do?	■■ _____ _____ _____	
711	CHECK 710: WORKS IN AGRICULTURE ☐ DOES NOT WORK IN AGRICULTURE ☐ → 713		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
712	Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else's/government's land?	OWN LAND ..... 1 FAMILY LAND ..... 2 RENTED LAND ..... 3 SOMEONE ELSE'S/GOVERNMENT'S LAND ..... 4 OTHER_____ 6 (SPECIFY)	
713	Do you do this work for a member of your family, for someone else/government, or are you self-employed?	FOR FAMILY MEMBER ..... 1 FOR SOMEONE ELSE/GOVERNMENT .... 2 SELF-EMPLOYED 3	
714	Do you usually work at home or away from home?	HOME ..... 1 AWAY 2	
715	Do you usually work throughout the year, or do you work seasonally, or only once in a while?	THROUGHOUT THE YEAR ..... 1 SEASONALLY/PART OF THE YEAR ..... 2 ONCE IN A WHILE 3	
716	Are you paid or do you earn in cash or kind for this work or are you not paid at all?	CASH ONLY ..... 1 CASH AND KIND ..... 2 IN KIND ONLY ..... 3 NOT PAID 4	→ 721C
721	CHECK 501: YES, CURRENTLY MARRIED YES, LIVING WITH A MAN ☐ Who mainly decides how the money you earn will be used: you, your husband/partner, you and your husband/partner jointly, someone else, or you and someone else jointly? NO, NOT IN UNION ☐ Who mainly decides how the money you earn will be used: You, someone else, or you and someone else jointly?	RESPONDENT DECIDES ..... 1 HUSBAND/PARTNER DECIDES ..... 2 JOINTLY WITH HUSBAND/PARTNER ..... 3 SOMEONE ELSE DECIDES ..... 4 JOINTLY WITH SOMEONE ELSE 5	
721A	CHECK 501: YES, CURRENTLY MARRIED YES, LIVING WITH A MAN ☐ NO, NOT IN UNION ☐		→ 724
721B	Would you say that the money that you earn is more than what your husband/partner earns less than what he earns, or about the same?	MORE THAN HIM ..... 1 LESS THAN HIM ..... 2 ABOUT THE SAME ..... 3 HUSBAND/PARTNER DOESN'T BRING IN ANY MONEY ..... 4 HUSBAND/PARTNER HAS NO EARNINGS ..... 5 DON'T KNOW 8	→ 724 → 724
721C	Who usually decides how your husband's/partner's earnings will be used: you, your husband/partner, or you and your husband/partner jointly?	RESPONDENT ..... 1 HUSBAND/PARTNER ..... 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY ..... 3 OTHER_____ 6 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP

724 Who in the family usually has the final say on the following decisions?

	RESPONDENT	HUSBAND/PARTNER	RESPONDENT& HUSBAND/PARTNER JOINTLY	SOMEONE ELSE	RESPONDENT & SOMEONE ELSE JOINTLY	HUSBAND & SOMEONE ELSE JOINTLY	DECISION NOT MADE/NOT APPLICABLE
Your own health care?	1	2	3	4	5	6	7
Making large household purchases?	1	2	3	4	5	6	7
Making household purchases for daily needs?	1	2	3	4	5	6	7
Visits to family or relatives?	1	2	3	4	5	6	7
What food should be cooked each day?	1	2	3	4	5	6	7
Assisting your family?	1	2	3	4	5	6	7

724A1 PRESENCE OF OTHERS AT THIS POINT (PRESENT AND LISTENING, PRESENT BUT NOT LISTENING, OR NOT PRESENT)

	PRES./ LISTEN.	PRES./ NOT LISTEN.	NOT PRES.
CHILDREN < 10	1	2	3
HUSBAND	1	2	3
OTHER MALES	1	2	3
OTHER FEMALES	1	2	3

724A 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

724B Do you think that if a woman refuses to have sex with her husband when he wants her to, he has the right to…

	YES	NO	DK/DEPENDS
a) Get angry and reprimand her?	1	2	8
b) Refuse to give her money or other means of support?	1	2	8
c) Use force and have sex with her even if she doesn't want to?	1	2	8
d) Have sex with another woman?	1	2	8

SECTION 7B: FEMALE CIRCUMCISION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
725	Have you ever heard of female circumcision?	YES ..... 1 NO 2	→ 725B
725A	In a number of countries, there is a practice in which a girl may have a part of her genitals cut. Have you ever heard about this practice?	YES ..... 1 NO 2	→ 801
725B	Have you yourself ever been circumcised/ had your genitals cut?	YES ..... 1 NO 2	→ 729
727	How old were you when you were circumcised? PROBE FOR A NUMERIC ANSWER BEFORE CIRCLING DON'T KNOW	AGE DAYS ..... 1 ☐☐ MONTHS..... 2 ☐☐ YEARS ..... 3 ☐☐ DON'T KNOW 998	
728	Who performed the circumcision?	DOCTOR ..... 1 TRAINED NURSE/MIDWIFE ..... 2 TRADITIONAL BIRTH ATTENDANT..... 3 CIRCUMCISION PRACTITIONER..... 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	
729	CHECK 214 AND 216: HAS AT LEAST ONE LIVING DAUGHTER ☐	HAS NO LIVING DAUGHTER ☐	→ 739
729A	How many living daughters do you have? CHECK THE RESPONSE WITH Q216	UNDER 15 ..... ☐☐ GREATER THAN OR EQUAL 15 ... ☐☐	
730	Have any of your live daughters been circumcised/had her genitals cut? IF YES: How many?	NUMBER CIRCUMCISED UNDER15 ..... ☐☐ NUMBER CIRCUMCISED 15 AND ABOVE..... ☐☐ NO DAUGTHER CIRCUMCISED .....95 DON'T KNOW 98	→ 733A → 739
730A	IF ONLY ONE DAUGHTER IN Q730 ASK: What is her name? _____ (DAUGHTER'S NAME) IF MORE THAN ONE DAUGHTER IN Q730 ASK: To which of your daughters did this happen most recently? _____ (DAUGHTER'S NAME) INTERVIEWER: CHECK 212 AND RECORD THE LINE NUMBER FOR THE DAUGHTER.	DAUGHTER'S LINE NUMBER FROM 212..... ☐☐	
731	How old was (NAME FROM 730a) when she was circumcised? PROBE FOR A NUMERIC ANSWER BEFORE CIRCLING DON'T KNOW	AGE DAYS ..... 1 ☐☐ MONTHS..... 2 ☐☐ YEARS ..... 3 ☐☐ DON'T KNOW 998	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
732	Who performed the circumcision?	DOCTOR ..... 1 TRAINED NURSE/MIDWIFE ..... 2 TRADITIONAL BIRTH ATTENDANT ..... 3 CIRCUMCISION PRACTITIONER..... 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	
733	Did you or any one object to her being circumcised? IF YES: Who was that? Anyone else? RECORED ALL PERSONS MENTIONED	RESPONDENT ..... A RESPONDENT'S HUSBAND..... B RESPONDENT'S SON/DAUGHTER ..... C RESPONDENT'S MOTHER ..... D RESPONDENT'S MOTHER-IN-LAW ..... E OTHER RELATIVE OF RESPONDENT.... F OTHERS _____X (SPECIFY) NO ONE..... Y	
733A	CHECK 730: AT LEAST ONE DAUGHTER NOT CIRCUMCISED ☐ ALL DAUGHTER CIRCUMCISED ☐ → 739		
733B	What was the main reason for not being circumcised?	TOO YOUNG..... 01 NO FEMALE CIRCUMCISER ..... 02 AGAINST THE LAW ..... 03 FAMILY NO LONGER PRACTICE ..... 04 AGAINST CULTURE..... 05 AGAINST RELIGION ..... 06 OTHER_____ 96 (SPECIFY)	
739	What benefits do girls themselves get if they undergo genital cutting? PROBE: Any other benefits? RECORD ALL BENEFITS MENTIONED	CLEANLINESS/HYGIENE ..... A SOCIAL ACCEPTANCE ..... B BETTER MARRIAGE PROSPECTS..... C PRESERVE VIRGINITY/PREVENT PREMARITAL SEX..... D MORE SEXUAL PLEASURE FOR THE MAN..... E RELIGIOUS APPROVAL ..... F OTHER_____X (SPECIFY) NO BENEFITS..... Y	
741	Would you say that this practice is a way to prevent a girl from having sex before marriage or does have no effect on premarital sex?	PREVENT SEX..... 1 NO EFFECT ..... 2 DON'T KNOW 8	
742A	Do you think that this practice should be continued, or should it be discontinued?	CONTINUED..... 1 DISCONTINUED..... 2 DEPENDS ..... 3 DON'T KNOW 8	
743	CHECK 501: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ NO, NOT IN UNION ☐ → 745		
744	Does your husband/partner think female circumcision should be continued or discontinued?	CONTINUED..... 1 DISCONTINUED..... 2 DON'T KNOW.....8	
745	Have there been any activities against female circumcision arranged in this area?	YES ..... 1 NO .....2 DON'T KNOW 8	
745A	Do you know that there is proclamation in Eritrea that bans female circumcision?	YES .....1 NO 2	

SECTION 8: HIV/AIDS AND OTHER SEXUALLY TRANSMITTED DISEASES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	YES ..... 1 NO 2	→ 817
801A	From which sources of information have you learned about AIDS? Any other sources? RECORD ALL SOURCES MENTIONED.	RADIO ..... A TV ..... B NEWS PAPERS/MAGAZINES ..... C PAMPHLETS/POSTERS ..... D HEALTH WORKERS ..... E MOSQUES/CHURCHES ..... F SCHOOLS/TEACHERS ..... G COMMUNITY MEETINGS/SEMINARS ..... H FRIENDS/RELATIVES ..... I WORK PLACE ..... J FAMILIES……K OTHER_____ X (SPECIFY)	
802	Is there anything a person can do to avoid getting AIDS or the virus that causes AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→ 804 → 804
803	What can a person do to avoid getting AIDS? 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 SHARING FOOD WITH AIDS PATIENT ..... G AVOID SEX WITH PERSONS WHO INJECT DRUGS INTRAVENOUSLY ..... H AVOID BLOOD TRANSFUSIONS ..... I AVOID INJECTIONS ..... J AVOID SHARING RAZORS/BLADES ..... K AVOID KISSING ..... L AVOID MOSQUITO BITES ..... M SEEK PROTECTION FROM TRADITIONAL HEALER ..... N OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	
804	Can people reduce their chances of getting the AIDS virus by having just one uninfected sex partner who has no other partners?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
805	Can a person get the AIDS virus from mosquito bites?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
806	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	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
807	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
807A	Can people reduce their chance of getting the AIDS virus by not having sexual intercourse at all?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
807B	Can people get the AIDS virus because of Witchcraft or other supernatural means?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
809	Is it possible for a healthy-looking person to have the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
809A	Do you think that persons with AIDS almost never die from the disease, sometimes die, or almost always die?	ALMOST NEVER ..... 1 SOMETIMES ..... 2 ALMOST ALWAYS ..... 3 DON'T KNOW 8	
809B	Can AIDS be cured?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
809C	Do you think your chance of getting AIDS is small, moderate, great, or no risk at all?	SMALL ..... 1 MODERATE ..... 2 GREAT ..... 3 NO RISK AT ALL ..... 4 HAS AIDS 5	→ 809E → 810
809D	Why do you think that you have no or small risk of getting AIDS? Any other reasons? RECORD ALL REASONS MENTIONED	ABSTAIN FROM SEX ..... A USE CONDOMS ..... B HAVE ONLY ONE SEX PARTNER ..... C LIMITED NUMBER OF SEX PARTNERS ..... D SPOUSE HAS NO OTHER PARTNER ..... E NO HOMOSEXUAL CONTACT ..... F NO BLOOD TRANSFUSIONS ..... G NO INJECTIONS ..... H OTHER_____ X (SPECIFY)	→ 810
809E	Why do you think that you have moderate/great risk of getting AIDS? Any other reasons? RECORD ALL REASONS MENTIONED	DO NOT USE CONDOMS ..... A MORE THAN ONE SEX PARTNER ..... B SPOUSE HAS OTHER PARTNER (S) ..... C HAD HOMOSEXUAL CONTACT ..... D HAD BLOOD TRANSFUSION ..... E HAD INJECTIONS ..... F OTHER_____ X (SPECIFY)	
810	Do you know someone personally who has the virus that causes AIDS or someone who died of AIDS?	YES ..... 1 NO 2	
811	Can the virus that causes AIDS be transmitted from a mother to a child?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→ 812E
812	When can the virus that causes AIDS be transmitted from a mother to a child?	YES NO DK	
	During pregnancy?	DURING PREG 1 2 8	
	During delivery?	DURING DELIVERY 1 2 8	
	By breastfeeding?	BREASTFEEDING 1 2 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
812A	CHECK 812 AT LEAST ONE 'YES' ☐ OTHER ☐		→ 812E
812B	Are there any special drugs that a doctor or a nurse can give to a woman infected with AIDS virus to reduce the risk of transmission to the baby?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→ 812E
812C	Do you know of a place where a pregnant woman with the AIDS virus can go to get this drug to reduce the risk of her baby getting the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW/NOT SURE 8	→ 812E
812D	Where is this place? Any other place? PROBE TO IDENTIFY TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, OR VCT CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE) RECORD ALL PLACES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH STATION ..... C MCH CLINIC ..... D VCT CENTER ..... E OUTREACH ..... F OTHER PUBLIC _____ G (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL ..... H PRIVATE CLINIC ..... I OTHER PRIVATE MEDICAL _____ J (SPECIFY) OTHER _____ X (SPECIFY)	
812E	Have you heard about any drugs that people infected with the AIDS virus can get from a health facility to help them live longer?	YES ..... 1 NO ..... 2 DON'T KNOW/NOT SURE 8	→ 813
812F	From which sources of information have you heard or seen about drug treatments for AIDS? Any other sources? RECORD ALL SOURCES MENTIONED.	RADIO ..... A TV ..... B NEWS PAPERS/MAGAZINES ..... C PAMPHLETS/POSTERS ..... D HEALTH WORKERS ..... E BEDEHO ASSOCIATION ..... F FRIENDS/RELATIVES ..... G WORK PLACE ..... H FAMILIES ..... I HIV INFECTED PERSON ..... J OTHER _____ X (SPECIFY)	
813	CHECK 501 AND 502: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ FORMERLY MARRIED/ LIVING WITH A MAN ☐ NEVER MARRIED/ LIVED WITH A MAN ☐		→ 815
814	Have you ever talked with (your husband/former husband/the man you are/were living with) about ways to prevent getting the virus that causes AIDS?	YES ..... 1 NO ..... 2 DON'T REMEMBER 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
815	If a member of your family got infected with the virus that causes AIDS, would you want it to remain a secret or not?	YES, REMAIN A SECRET ..... 1 NO ..... 2 DK/NOT SURE/DEPENDS 8	
816	If a member of your family became sick with the virus that causes AIDS, would you be willing to care for her or him in your own household?	YES ..... 1 NO ..... 2 DK/NOT SURE/DEPENDS 8	
816A	In your opinion, if a teacher has AIDS virus, but not sick, should she/he be allowed to continue teaching in the school?	SHOULD BE ALLOWED ..... 1 SHOULD NOT BE ALLOWED ..... 2 DK/NOT SURE/DEPENDS 8	
816B	Should children age 12-14 years be thought about using condoms to avoid getting AIDS?	YES ..... 1 NO ..... 2 DK/NOT SURE/DEPENDS 8	
816C	Have you ever heard of VCT?	YES ..... 1 NO 2	
816D	CHECK 208 AND 215: NO BIRTHS ☐ → 816M LAST BIRTH SINCE JANUARY 2007 ☐ ↓ LAST BIRTH BEFORE JANUARY 2007 ☐ → 816M		
816E	CHECK 406A: FOR LAST BIRTH: HAD ANTENATAL CARE ☐ ↓ NO ANTENATAL CARE ☐ → 816M		
816F	CHECK FOR PRESENCE OF OTHERS BEFORE CONTINUING AND MAKE EVERY EFFORT TO ENSURE PRIVACY.		
816G	During any of the antenatal visits for your last birth, did anyone talk to you about: a) Babies getting the AIDS virus from their mother? b) Things that you can do to prevent getting the AIDS virus? c) 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	
816H	Were you advised to have a test for the AIDS virus as part of your antenatal care?	YES ..... 1 NO 2	
816I	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	→ 816M

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
816J	Where was the test done? IF THE TEST WAS DONE IN MORE THAN ONE PLACE, RECORD THE PLACE WHERE THE LAST TEST WAS DONE. PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF SOURCE IS HOSPITAL, HEALTH CENTER, OR VCT CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL ..... 11 GOVT. HEALTH CENTER/CLINIC ..... 12 FAMILY PLANNING CLINIC ..... 13 VCT CENTER ..... 14 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR MISSIONARY/CHURCH HOSP./ CLINIC ..... 21 PRIVATE CLINIC ..... 22 VCT CENTER ..... 24 NURSING OR MATERNITY HOMES ..... 25 BLOOD TRANSFUSION SERVICES ..... 26 OTHER PRIVATE MEDICAL _____ 27 (SPECIFY) OTHER_____ 96 (SPECIFY)	
816K	Have you been tested for the AIDS virus since that time you were tested during your pregnancy?	YES ..... 1 NO 2	→ 816N
816L	When was the last time you were tested for the AIDS virus?	LESS THAN 12 MONTHSAGO ..... 1 12 - 23 MONTHS AGO ..... 2 2 OR MORE YEARS AGO 3	→ 817
816M	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	→ 816Q
816N	When was the last time you tested?	LESS THAN 12 MONTHS AGO ..... 1 12-23 MONTHS AGO ..... 2 2 OR MORE YEARS AGO 3	
816O	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 TEST ..... 1 OFFERED AND ACCEPTED ..... 2 REQUIRED ..... 3 PRE-MARRITAL SAFTEY 4	
816P	Where was the test done? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR VCT CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL ..... 11 GOVT. HEALTH CENTER/CLINIC ..... 12 FAMILY PLANNING CLINIC ..... 13 VCT CENTER ..... 14 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR MISSIONARY/CHURCH HOSP./ CLINIC ..... 21 PRIVATE CLINIC ..... 22 VCT CENTER ..... 24 NURSING OR MATERNITY HOMES ..... 25 BLOOD TRANSFUSION SERVICES ..... 26 OTHER PRIVATE MEDICAL _____ 27 (SPECIFY) OTHER_____ 96 (SPECIFY)	→ 817
816Q	Would you want to be tested for the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW/ NOT SURE..... 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
816R	Do you know of a place where people can go to get tested for the AIDS virus?	YES ..... 1 NO 2	→ 817
816S	Where is that? Where else? RECORD ALL THAT MENTIONED IF SOURCE IS HOSPITAL, HEALTH CENTER, OR VCT CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER/CLINIC ..... B FAMILY PLANNING CLINIC ..... C VCT CENTER ..... D OTHER PUBLIC _____ E (SPECIFY) PRIVATE MEDICAL SECTOR MISSIONARY/CHURCH HOSP./ CLINIC ..... F PRIVATE CLINIC ..... G VCT CENTER ..... H NURSING OR MATERNITY HOMES ..... I BLOOD TRANSFUSION SERVICES ..... J OTHER PRIVATE MEDICAL _____ K (SPECIFY) OTHER_____ X (SPECIFY)	
817	CHECK 801: 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	→ 819A
818	If a man has a sexually transmitted disease, what symptoms might he have? Any others? RECORD ALL SYMPTOMS MENTIONED.	ABDOMINAL PAIN ..... A GENITAL DISCHARGE/DRIPPING ..... B FOUL SMELLING DISCHARGE ..... C BURNING PAIN ON URINATION ..... D REDNESS/INFLAMMATION IN GENITAL AREA ..... E SWELLING IN GENITAL AREA ..... F GENITAL SORES/ULCERS ..... G GENITAL WARTS ..... H GENITAL ITCHING ..... I BLOOD IN URINE ..... J LOSS OF WEIGHT ..... K IMPOTENCE ..... L OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) NO SYMPTOMS ..... Y DON'T KNOW ..... Z	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
819	If a woman has a sexually transmitted disease, what symptoms might she have? Any others? RECORD ALL SYMPTOMS MENTIONED.	ABDOMINAL PAIN ..... A GENITAL DISCHARGE ..... B FOUL SMELLING DISCHARGE ..... C BURNING PAIN ON URINATION ..... D REDNESS/INFLAMMATION IN GENITAL AREA ..... E SWELLING IN GENITAL AREA ..... F GENITAL SORES/ULCERS ..... G GENITAL WARTS ..... H GENITAL ITCHING ..... I BLOOD IN URINE ..... J LOSS OF WEIGHT ..... K HARD TO GET PREGNANT/ HAVE A CHILD ..... L OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) NO SYMPTOMS ..... Y DON'T KNOW ..... Z	
819A	CHECK 514 : HAS HAD SEXUAL INTERCOURSE ☐ HAS NOT HAD SEXUAL INTERCOURSE ☐ →		901
819B	CHECK 817: HEARD ABOUT OTHER SEXUALLY TRANSMITTED INFECTIONS? YES ☐ NO ☐ →		819D
819C	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/ NOT SURE 8	
819D	Sometimes women experience a bad smelling or abnormal genital discharge. During the last 12 months, have you had a bad smelling or abnormal genital discharge?	YES ..... 1 NO ..... 2 DON'T KNOW/ NOT SURE 8	
819E	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/ NOT SURE 8	
819F	CHECK 819C,819D AND 819E : HAS HAD AN INFECTION (ANY YES) ☐ HAS NOT HAD ANY INFECTION OR DOES NOT KNOW ☐ →		901
819G	Last time you had (Problem(s) From 819C/819D/819E), did you seek any kind of advice or treatment?	YES ..... 1 NO 2	→ 819I

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
819H	Where is that? What else? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, OR VCT CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**PUBLIC SECTOR** GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER/HEALTH STATION ..... B MCH CLINIC ..... C OTHER PUBLIC _____ D (SPECIFY) **PRIVATE MEDICAL SECTOR** CHURCH HOSP./CLINIC……E PRIVATE CLINIC……F VCT CENTER.....…G PRIVATE HOSPITAL……..H OTHER PRIVATE MEDICAL _____ I (SPECIFY) **OTHER SOURCE** TRADITIONAL HEALER……J PHARMACY……K FRIENDS OR RELATIVES……L OTHER_____X (SPECIFY)	
819I	When you had (PROBLELM(S) FROM 819C/819D/819E, did you inform the person(s) with whom you were having sex?	YES, INFORMED ALL PARTNERS ..... 1 INFORMED SOME NOT ALL…….. 3 NO, INFORMED NONE ..... 2 DIDN'T HAVE A PARTNER 4	
819J	When you had (PROBLELM(S) FROM 819C/819D/819E, did you do anything to avoid infecting your sexual partner(s)?	YES, ... 1 NO,..... 2 DIDN'T HAVE A PARTNER 3	→901 →901
819K	What did you do to avoid infecting your partner(s) Did you: Use medicine? Stop having sex? Use a condom when having sex?	YES NO USE MEDICINE 1 2 STOP SEX 1 2 USE CONDOM 1 2	

SECTION 9: OTHER HEALTH ISSUES

NO	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	Have you ever heard of an illness called tuberculosis or TB?	YES ..... 1 NO 2	→ 905
902	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 BITE ..... F OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	
903	Can tuberculosis be cured?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
904	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	
905	Have you ever smoked cigarettes?	YES ..... 1 NO 2	→ 908
906	Do you currently smoke cigarettes?	YES ..... 1 NO 2	→ 908
907	In the last 24 hours, how many cigarettes did you smoke?	CIGARETTES ..... ☐☐	
908	Have you ever smoked or use any other type of tobacco products	YES ..... 1 NO 2	→ 911
909	Do you currently smoke or use any other type of tobacco products?	YES ..... 1 NO 2	→ 911
910	What (other) type of tobacco do you currently smoke or use? RECORD ALL MENTIONED.	PIPE ..... A CHEWING TOBACCO ..... B SNUFF ..... C SAFA ..... D OTHER _____ X (SPECIFY)	
911	Do you know that Eritrea has a proclamation which ban cigarette smoking or other type of tobacco usage in public places?	YES ..... 1 NO 2	
911A	When do you usually wash your hands? DO NOT PROMPT CIRCLE ALL MENTIONED .	NEVER ----- A → 912 BEFORE FOOD PREPARATION ----- B BEFORE EATING FOOD ----- C AFTER EATING FOOD ----- D BEFORE FEEDING CHILDREN ----- E AFTER DEFECATION ----- F AFTER ATTENDING TO A CHILD WHO HAS DEFECATED ----- G BEFORE PRAYING ----- H OTHER _____ X (SPECIFY)	

NO	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
911B	How do you usually wash your hands?	ASH ---------- 1 SOAP ---------- 2 SOIL ---------- 3 WATER ONLY ---------- 4 OTHER _____ 6 (SPECIFY)	
912	Sometimes a woman can have a problem such that she experiences a constant leakage of urine or stool from her vagina during the day and night. This problem usually occurs after a difficult childbirth, but may also occur after a sexual assault or after a pelvic surgery. Have you ever experienced a constant leakage of urine or stool from your vagina during the day and night?	YES ---------- 1 → 914 NO ---------- 2	
913	Have you ever heard of this kind of problem, such that a woman experiences a constant leakage of urine or stool from her vagina during the day and night?	YES ---------- 1 NO ---------- 2	→ 1001
914	Did this problem occur: after delivery, after a sexual assault, after pelvic surgery, or after some other events? CIRCLE ALL MENTIONED	DELIVERY ---------- A SEXUAL ASSAULT ---------- B PELVIC SURGERY ---------- C OTHER ---------- X	→ 916
914A	Did this problem occur after an uncomplicated delivery, after a difficult delivery where the child was born alive, or after a difficult delivery where the child was born still?	UNCOMPLICATED DELIVERY---------- 1 DIFF DELIVERY, LIVE BORN ---------- 2 DIFF DELIVERY, STILLBORN---------- 3	
915	After which delivery did this occur?	DELIVERY NUMBER ☐☐	
916	How many days after (ANSWER TO Q914) did the leakage start? ASK FOR THE HIGHEST ANSWER ON LIST ENTER "95" IF MORE THAN 95.	NUMBER OF DAYS ☐☐	
917	Have you sought treatment for this condition?	YES ---------- 1 → 919 NO ---------- 2	
918	Why have you not sought treatment? CIRCLE ALL THAT ARE MENTIONED	COULD BE FIXED ---------- A DON'T KNOW WHERE TO GO ---------- B TOO EXPENSIVE ---------- C TOO FAR ---------- D POOR QUALITY OF CARE ---------- E COULD NOT GET PERMISSION---------- F EMBARASSMENT ---------- G OTHER _____ X (SPECIFY) DON'T KNOW ---------- Z	→ 1001
919	From whom did you last seek treatment?	**HEALTH PROFESSIONAL** DOCTOR/CLINICAL OFFICIER ---------- 11 NURSE/MIDWIFE ---------- 12 PATIENT ATTENDANT---------- 13 OTHER _____ 16 (SPECIFY) **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT ---------- 21 COMMUNITY HELATH AGENT ---------- 22 OTHER _____ 26 (SPECIFY)	
920	Did the treatment stop the problem?	YES, NO MORE LEAKAGE AT ALL ------ 1 YES, BUT STILL SOME LEAKAGE ------- 2 NO, STILL HAVE PROBLEM ---------- 3	
921	How many times did you have surgery for Fistula repair?	NONE ---------- 1 ONE ---------- 2 TWO ---------- 3 THREE OR MORE ---------- 4	

SECTION 10: MATERNAL MORTALITY

NO	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1001	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. Did your mother give birth to any children other than yourself?	YES ---------- 1 NO ---------- 2 → 1008 DON'T KNOW ---------- 8 → 1008	
1002	How many sons did your mother have who are still alive?	BOYS LIVING ---------- ☐☐	
1003	Besides yourself, how many daughters did your mother have who are still alive?	GIRSL LIVING ---------- ☐☐	
1004	How many sons did your mother have who have died?	BOYS DEAD ---------- ☐☐	
1005	How many daughters did your mother have who have died?	GIRLS DEAD ---------- ☐☐	
1006	Has your mother given birth to other children for whom you do not know whether they are still alive or have died?	YES ---------- 1 NO ---------- 2 → 1008	
1007	How many other children has your mother had for whom you do not know whether they are still alive or have died?	OTHER CHILDREN ---------- ☐☐	
1008	SUM ANSWERS TO 1002, 1003, 1004, 1005, AND 1007, ADD 1(THE RESPONDENT) AND RECORD THE TOTAL	TOTAL ---------- ☐☐	
1009	CHECK 1008: Just to make sure that I have this right: your mother gave birth to _____ child (ren), including yourself. Is that correct? YES ↓ NO → PROBE AND CORRECT 1001- 1008 AS NECESSARY		
1010	CHECK 1008: TWO OR MORE BIRTHS ↓ ONLY ONE BIRTH (RESPONDENT ONLY) ☐ →		1022
1011	How many of these births did your mother have before you were born?	NUMBER OF PRECEDING BIRTHS… ☐☐	

NO	QUESTIONS AND FILTERS	CODING CATEGORIES					
1012	What was the name given to your oldest (next oldest) brother or sister?	(1) _____	(2) _____	(3) _____	(4) _____	(5) _____	(6) _____
1013	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
1014	Is (NAME) still alive?	YES--------- 1 NO ---------- 2 1016 ← DK ---------- 8 (C.2) ←	YES -------- 1 NO---------- 2 1016 ← DK---------- 8 (C.3) ←	YES--------- 1 NO ---------- 2 1016 ← DK ---------- 8 (C.4) ←	YES -------- 1 NO---------- 2 1016 ← DK---------- 8 (C.5) ←	YES--------- 1 NO ---------- 2 1016 ← DK ---------- 8 (C.6) ←	YES -------- 1 NO---------- 2 1016 ← DK---------- 8 (C.7) ←
1015	How old is (NAME)?	☐☐ GO TO (C.2)	☐☐ GO TO (C.3)	☐☐ GO TO (C.4)	☐☐ GO TO (C.5)	☐☐ GO TO (C.6)	☐☐ GO TO (C.7)
1016	How many years ago did (NAME) die?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
1017	How old was (NAME) when he/she died?	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.2)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.3)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.4)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.5)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.6)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.7)
1018	Was (NAME) pregnant when she died?	YES -------1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8	YES ------ 1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8	YES ------ 1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8
1019	Did (NAME) die during child birth?	YES -------1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8	YES ------ 1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8	YES ------ 1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8
1020	Did (NAME) die within two months after the end of pregnancy or child birth?	YES -------1 NO -------- 2 DK..... 8	YES -------1 NO-------- 2 DK 8	YES ------ 1 NO -------- 2 DK..... 8	YES -------1 NO-------- 2 DK 8	YES ------ 1 NO -------- 2 DK..... 8	YES -------1 NO-------- 2 DK 8
1021	How many live born children did (NAME) give birth to during her lifetime (before this pregnancy)	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
IF NO MORE BROTHERS OR SISTERS, GO TO 1022							

NO	QUESTIONS AND FILTERS	CODING CATEGORIES					
1012	What was the name given to your oldest (next oldest) brother or sister?	(7) _____	(8) _____	(9) _____	(10) _____	(11) _____	(12) _____
1013	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
1014	Is (NAME) still alive?	YES--------- 1 NO ---------- 2 1016 ← DK ---------- 8 (C.8) ←	YES -------- 1 NO---------- 2 1016 ← DK---------- 8 (C.9) ←	YES--------- 1 NO ---------- 2 1016 ← DK ---------- 8 (C.10) ←	YES -------- 1 NO---------- 2 1016 ← DK---------- 8 (C.11) ←	YES--------- 1 NO ---------- 2 1016 ← DK ---------- 8 (C.12) ←	YES--------- 1 NO---------- 2 1016 ← DK---------- 8 (C.13) ←
1015	How old is (NAME)?	☐☐ GO TO (C.8)	☐☐ GO TO (C.9)	☐☐ GO TO (C.10)	☐☐ GO TO (C.11)	☐☐ GO TO (C.12)	☐☐ GO TO (C.13)
1016	How many years ago did (NAME) die?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
1017	How old was (NAME) when he/she died?	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.8)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.9)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.10)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.1)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.12)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.13)
1018	Was (NAME) pregnant when she died?	YES -------1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8	YES ------ 1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8	YES ------ 1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK..... 8
1019	Did (NAME) die during child birth?	YES -------1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8	YES ------ 1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8	YES ------ 1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK..... 8
1020	Did (NAME) die within two months after the end of pregnancy or child birth?	YES -------1 NO -------- 2 DK..... 8	YES -------1 NO-------- 2 DK 8	YES ------ 1 NO -------- 2 DK..... 8	YES -------1 NO-------- 2 DK 8	YES ------ 1 NO -------- 2 DK..... 8	YES -------1 NO-------- 2 DK..... 8
1021	How many live born children did (NAME) give birth to during her lifetime (before this pregnancy)	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
CHECK (X) HERE IF CONTINUETION SHEET IS USED IF NO MORE BROTHERS OR SISTERS GO TO 1022							☐
1022	RECORD THE TIME	HOURS ---------- ☐☐ MINUTES ---------- ☐☐					

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

NAME OF THE INTERVIEWER:_____DATE: _____/_____/_____SIGNATURE_____

SUPERVISOR'S OBSERVATIONS

NAME OF THE SUPERVISOR:_____DATE: _____/_____/_____SIGNATURE_____

EDITOR'S OBSERVATIONS

NAME OF THE EDITOR:_____DATE: _____/_____/_____SIGNATURE_____

THE STATE OF ERITREA
MINISTRY OF NATIONAL DEVELOPMENT
NATIONAL STATISTICS OFFICE

ERITREA POPULATION AND HEALTH SURVEY
CORE EPHS+: MEN'S QUESTIONNAIRE
ALL INFORMATION COLLECTED IS CONFIDENTIAL AND IS ONLY FOR STATISTICAL USE

IDENTIFICATION

ZOBA .....

SUB-ZOBA .....

VILLAGE/TOWN NAME _____
[ASMARA=1, OTHER TOWN =2, RURAL = 3].....

CLUSTER NUMBER .....

HOUSEHOLD NUMBER .....
NAME OF HOUSEHOLD HEAD _____

NAME AND LINE NUMBER OF MAN _____
TYPE OF QUESTIONNAIRE (1=CORE 2=MATERNAL MORBIDITY AND MORTALITY)

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	____/____/____ DD MM YYYY	____/____/____ DD MM YYYY	____/____/____ DD MM YYYY	DAY MONTH YEAR
TEAM				TEAM
INTERVIEWER'S NAME	_____	_____	_____	NAME
RESULT **SEE* BELOW**				RESULT
NEXT VISIT: DATE TIME	____/____/____ DD MM YYYY _____	____/____/____ DD MM YYYY _____		TOTAL NO. OF VISITS

*** RESULT CODES**
1=COMPLETED
2=NOT AT HOME
3=POSTPONED
4= REFUSED
5=PARTIALLY COMPLETED
6=INCAPACITATED
7=OTHER_____ (SPECIFY)

LANGUAGE: **SEE ** BELOW**
QUESTIONNAIRE
LANGUAGE OF INTERVIEW
NATIVE LANGUAGE OF RESPONDENT

** LANGUAGE CODES:
01=AFAR 02= BILEN 03= HEDARIB (Bedawit) 04= KUNAMA 05= NARA
06= ARABIC 07= SAHO 08= TIGRE 09= TIGRIGNA 10= OTHER _____ (SPECIFY)

TRANSLATOR USED (1= NOT AT ALL, 2= SOMETIMES, 3= ALL THE TIME)……

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME_____	NAME_____		
DATE____/_____/_____ DD MM YYYY	DATE____/_____/_____ DD MM YYYY		

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION

Hello. My name is _____ and I am working with the National Statistics Office. 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 questionnaire usually takes between 30 and 45 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shown to other persons.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR ..... ☐☐ MINUTES ..... ☐☐	
102	First I would like to ask some questions about you and your household. For most of the time until you were 12 years old, did you live in a city, in a town, or in a village?	CITY ..... 1 TOWN ..... 2 VILLAGE 3	
102A	What was the name of the village/town/city in which you lived as child? RECORD NAME OF VILLAGE/TOWN AND ZOBA. IF PLACE WAS OUTSIDE OF ERITREA, RECORD NAME OF THE COUNTRY.	NAME OF VILLAGE/TOWN/CITY __ ZOBA NAME_____ ☐ COUNTRY _____ 8	
103	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS ..... ☐☐ ALWAYS ..... 95 VISITOR 96	→ 105
104	Just before you moved here, did you live in a city, in a town, or in a village?	CITY ..... 1 TOWN ..... 2 VILLAGE 3	
105	In what month and year were you born?	MONTH ..... ☐☐ DON'T KNOW MONTH ..... 98 YEAR ..... ☐☐☐☐ DON'T KNOW YEAR 9998	
106	How old were you at your last birthday? COMPARE AND CORRECT 105 AND/OR 106 IF INCONSISTENT.	AGE IN COMPLETED YEARS ..... ☐☐	
107	Have you ever attended school?	YES ..... 1 NO 2	→ 113A
108	What is the highest level of school you attended: Primary, middle, secondary, or higher?	PRIMARY ..... 1 MIDDLE ..... 2 SECONDARY ..... 3 HIGHER 4	
109	What is the highest grade /year you completed at that level?	GRADE/YEAR ..... ☐☐	
110	CHECK 106: AGE 29 OR BELOW ☐ ↓ AGE 30 OR ABOVE ☐ →		113

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
111	Are you currently attending school?	YES ..... 1 NO 2	→ 113
112	What was the main reason you stopped attending school?	FAMILY NEEDED HELP ON FARM OR IN BUSINESS ..... 01 COULD NOT PAY SCHOOL FEES ..... 02 NEEDED TO EARN MONEY ..... 0 3 GRADUATED/HAD ENOUGH SCHOOLING ..... 04 DID NOT PASS ENTRANCE EXAM ..... 05 DID NOT LIKE SCHOOL ..... 06 SCHOOL NOT ACCESSABLE/TOO FAR ..... 07 ILLNESS ..... 08 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
113	CHECK 108: PRIMARY ☐ ↓ MIDDLE SCHOOL OR ABOVE ☐ →		114
113A	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT IF RESPONDENT CAN NOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CAN NOT READ AT ALL ---------- 1 ABLE TO READ ONLY PART OF SENTENCE ---------- 2 ABLE TO READ WHOLE SENTENCE ----- 3 NO CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED ---------- 5	→ 115 →115
114	Do you usually read a newspaper or magazine almost once every day, at least once a week, less than once a week or not at all?	ALMOST EVERYDAY ..... 1 AT LEAST ONCE A WEEK ..... 2 LESS THAN ONCE A WEEK ..... 3 NOT AT ALL 4	
115	Do you usually listen to the radio almost once every day, at least once a week, less than once a week or not at all?	ALMOST EVERYDAY ..... 1 AT LEAST ONCE A WEEK ..... 2 LESS THAN ONCE A WEEK ..... 3 NOT AT ALL 4	
116	Do you usually watch television almost once every day, at least once a week, less than once a week or not at all?	ALMOST EVERYDAY ..... 1 AT LEAST ONCE A WEEK ..... 2 LESS THAN ONCE A WEEK ..... 3 NOT AT ALL 4	
117	What is your religion?	ORTHODOX ..... 1 CATHOLIC ..... 2 PROTESTANT ..... 3 MUSLIM ..... 4 TRADITIONAL BELIEVER ..... 5 OTHER _____ 6 (SPECIFY)	
118	To which ethnic group do you belong?	AFAR ..... 01 BILEN ..... 02 HEDARIB ..... 03 KUNAMA ..... 04 NARA ..... 05 RASHAIDA ..... 06 SAHO ..... 07 TIGRE ..... 08 TIGRIGNA ..... 09 OTHER _____ 96 (SPECIFY)	

SECTION 2: REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about any children you have had during your life. I am interested in all of the children that are biologically yours, even if they are not legally yours or do not have your last name. Have you ever fathered any children with any woman?	YES ..... 1 NO 2	→ 206
202	Do you have any sons or daughters that you have fathered who is now living with you?	YES ..... 1 NO 2	→ 204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME ..... ☐☐ DAUGHTERS AT HOME..... ☐☐	
204	Do you have any sons or daughters that you have fathered who are alive but do not live with you?	YES ..... 1 NO 2	→ 206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE..... ☐☐ DAUGHTERS ELSEWHERE..... ☐☐	
206	Have you ever fathered a son or a daughter who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES ..... 1 NO 2	→ 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 ..... ☐☐	
210	CHECK 208: HAS HAD MORE THAN ONE CHILD ☐ HAS HAD ONLY ONE CHILD ☐ → 210C HAS NOT HAD ANY CHILDREN ☐ → 212E		
210A	Did all of the children you have fathered have the same biological mother?	YES ..... 1 NO 2	→ 210C
210B	In all, how many women have you fathered children with? IF MORE THAN "7" WOMEN RECORD "7"	NUMBER OF WOMEN ..... ☐	
210C	How old were you when your (first) child was born?	AGE IN YEARS ..... ☐☐	
210D	CHECK 203 AND 205: AT LEAST ONE LIVING CHILD ☐ NO LIVING CHILDREN ☐ → 212E		
210E	How old is your (youngest) child?	AGE IN COMPLETED YEARS..... ☐☐	

210F	CHECK 210E: (YOUNGEST) CHILD IS AGE 0-3 YEARS ☐ ↓ OTHER ☐ → 212E		
212	What is the name of your (youngest) child? WRITE NAME OF (YOUNGEST) CHILD NAME OF (YOUNGEST) CHILD)		
212A	When (NAME's) mother was pregnant with (NAME) did she have any antenatal check-ups?	YES ..... 1 NO ..... 2 DON'T KNOW ----- 8	→ 212C
212B	Where you ever present during any of those antenatal check-ups?	YES ..... 1 NO 2	
212C	Was (NAME) born in a health facility?	HEALTH FACILITY ..... 1 OTHER 2	→ 212E
212D	What was the main reason why (NAME's) mother did not deliver in a health facility?	COST TOO MUCH ----- 01 FACILITY CLOSED ----- 02 TOO FAR/NO TRANSPORTATION ----- 03 DON'T TRUST FACILITY/ POOR QUALITY SERVICE ----- 04 NO FEMALE PROVIDER ----- 05 NOT THE FIRST CHILD ----- 06 CHILD's MOTHER DID NOT THINK IT WAS NECESSARY ----- 07 HE DID NOT THINK IT WAS NECESSORY ----- 08 FAMILY DID NOT THINK IT WAS NECESSARY ----- 09 OTHER _____ 96 (SPECIFY) DON'T KNOW ----- 98	
212E	When a child has diarrhea, how much should he or she be given to drink: more than usual, the same amount as usual, less than usual, or should he or she not be given anything to drink at all?	LESS TO DRINK..... 1 ABOUT SAME AMOUNT TO DRINK ..... 2 MORE TO DRINK..... 3 NOTHING TO DRINK ..... 4 DON'T KNOW 8	
238	Now I would like to ask you about a woman's risk of pregnancy? From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant 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	Do you know any signs of pregnancy complications?	YES ..... 1 NO 2	

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 A PARTNER WHO HAD AN OPERATION TO AVOID HAVING 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	INJECTIONS 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 Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES ..... 1 NO 2	
07	Male CONDOM can put a rubber sheath on their penis before sexual intercourse.	YES ..... 1 NO ..... 2 ↴	YES ..... 1 NO 2
08	FEMALE CONDOM Women can place a sheath in their vagina before sexual intercourse.	YES ..... 1 NO 2	
09	DIAPHRAGM Women can place a thin flexible disk in their vagina before intercourse.	YES ..... 1 NO 2	
10	FOAM OR JELLY Women can place a suppository, jelly, or cream in their vagina before intercourse.	YES ..... 1 NO 2	
11	LACTATIONAL AMENORRHEA METHOD (LAM) Up to 6 months after childbirth, a woman can use a method that requires that she breastfeeds frequently, day and night, and that her menstrual period has not returned.	YES ..... 1 NO 2	
12	RHYTHM OR PERIODIC ABSTINENCE Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant.	YES ..... 1 NO ..... 2 ↴	YES ..... 1 NO 2
13	WITHDRAWAL Men can be careful and pull out before climax.	YES ..... 1 NO ..... 2 ↴	YES ..... 1 NO 2
14	EMERGENCY CONTRACEPTION Women can take pills up to three days after sexual intercourse to avoid becoming pregnant.	YES ..... 1 NO 2	
15	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES ..... 1 _____ (SPECIFY) _____ (SPECIFY) NO 2	YES ..... 1 NO ..... 2 YES ..... 1 NO 2

303	CHECK 302: AT LEAST ONE 'YES' **(EVER USED)** ☐ ↓ NOT A SINGLE 'YES' **(NEVER USED)** ☐ → 312B		
310	Are you currently doing something or using any method with any partner to delay or avoid pregnancy?	YES ..... NO ..... → 312B	
311	Which method are you or your partner using to delay or avoid pregnancy? Any other method (with any partner)? CIRCLE ALL MENTIONED.	FEMALE STERILIZATION ---------- A MALE STERILIZATION ---------- B PILL ---------- C IUD ---------- D INJECTABLES ---------- E IMPLANTS ---------- F MALE CONDOM ---------- G FEMALE CONDOM ---------- H DIAPHRAGM ..... I FOAM OR JELLY ..... J LACTATIONAL AMEN. METHOD ---- K RHYTHM METHOD ---------- L WITHDRAWAL ---------- M OTHER _____ X (SPECIFY)	
312A	Do 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)	
312B	In the last six months have you: a) Heard family planning on the radio? b) Seen about family planning on the television? c) Read about family planning in news paper or magazine? d) Seen about family planning in video of films?	YES NO RADIO……1 2 TELEVISION……1 2 NEWSPAPER OR MAGAZINE…1 2 VIDEO OR FILMS……1 2	
312C	In the last six months, have you talked about practice of family planning with a health worker or health professional?	YES ..... 1 NO 2	
312D	Do you think that woman who is breastfeeding her baby can become pregnant?	YES ..... 1 NO ..... 2 DEPENDS ..... 3 DON'T KNOW 8	
312E	I will now read you some statements about contraception. Please tell me if you agree or disagree with each one. a) Contraception is women's business and a man should not have to worry about it b) Women who use contraception may have sex with many men.	AGREE DIS AGREE DK CONTRACEPTION WOMEN'S BUSINESS…1 2 8 WOMAN MAY HAVE SEX WITH MANY MEN……..1 2 8	

SECTION 5. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	Are you currently married or living with a women as if married?	YES, CURRENTLY MARRIED ..... 1 YES, LIVING WITH A WOMAN ..... 2 NO, NOT IN UNION 3	→ 505
502	Have you ever been married or lived with a woman?	YES, FORMERLY MARRIED ..... 1 YES, LIVED WITH A WOMAN ..... 2 NO 3	→ 510 → 512A
504	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED ..... 1 DIVORCED ..... 2 SEPARATED 3	→ 512A
505	Is your wife (partner) living with you now or is she staying elsewhere?	LIVING WITH HER ..... 1 STAYING ELSEWHERE 2	
507	Do you currently have more than one wife or woman you live with as if married?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→ 508A
508	All together, how many wives do you currently have or other partners do you live with now as if married?	TOTAL NUMBR OF WIVES AND LIVE-IN PARTNERS ..... ☐☐	
508A	CHECK 507: ONE WIFE/ PARTNER ☐ → Please tell me the name of your wife (the woman you are living with as if married). MORE THAN ONE WIFE/PARTNER ☐ → Please tell me the name of each of your current wives (and/or of each woman you are living with as if married). RECORD THE NAME AND THE LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE FOR EACH WIFE AND LIVE-IN PARTNER. IF A WOMAN IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'. ASK 508B FOR EACH PERSON.	NAME _____ LINE NUMBER ☐☐ _____ ☐☐ _____ ☐☐ _____ ☐☐	508B. How old was (NAME) on her last birthday? AGE ☐☐ ☐☐ ☐☐ ☐☐
508C	CHECK 508A: ONE WIFE/ PARTNER ☐ MORE THAN ONE WIFE/ PARTNER ☐		→ 511A
510	Have you been married or lived with a woman only once, or more than once?	ONCE ..... 1 MORE THAN ONCE 2	→ 511A
511	In what month and year did you start living with your wife (partner)?	MONTH ..... ☐☐ DON'T KNOW MONTH 98	
511A	Now I would like to ask a question about your first wife/ partner. In what month and year did you start living with your first wife/ partner?	YEAR ..... ☐☐☐☐ DON'T KNOW YEAR 9998	→ 512A
512	How old were you when you first started living with her?	AGE ---------- ☐☐	
512A	CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
514	Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family life issues. How old were you when you first had sexual intercourse (if ever)?	NEVER HAD SEXUAL INTERCOURSE ..... 00 AGE IN YEARS ..... ☐☐ FIRST TIME WHEN STARTED LIVING WITH (FIRST) WIFE/PARTNER 95	→ 515 → 515
514A	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	→ 524
515	When was the last time you had sexual intercourse? IF LESS THAN 12 MONTHS, ANSWER MUST BE RECORDED IN DAYS, WEEKS OR MONTHS. IF 12 MONTHS (ONE YEAR) OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO ..... 1 ☐☐ WEEKS AGO..... 2 ☐☐ MONTHS AGO..... 3 ☐☐ YEARS AGO ..... 4 ☐☐	→ 524
516	The last time you had sexual intercourse, was a condom used?	YES ..... 1 NO 2	→ 518
517	What is the main reason you used a condom on that occasion?	PREVENT HIV/STD ---------- 1 AVOID PREGNANCY ---------- 2 BOTH PREVENT STD/HIV AND PREGNANCY ---------- 3 PARTNER WANTED TO USE ---------- 4 OTHER_____ 6 (SPECIFY)	
518	What was your relationship to this person with whom you had sexual intercourse the last time? IF GIRL FRIEND: Were you living together as if married? IF YES, CIRCLE '2' IF NO, CIRCLE '3'	WIFE ---------- 1 LIVE-IN PARTNER---------- 2 GIRL FRIEND NOT LIVING WITH RESPONDENT---------- 3 CASUAL ACQUAINTANCE ---------- 4 PROSTITUTE ---------- 5 OTHER_____ 6 (SPECIFY)	→ 524
519	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 ☐☐ WEEKS ---------- 2 ☐☐ MONTHS ---------- 3 ☐☐	
523A	The last time you had sexual intercourse, did you or your partner drink alcohol?	YES ..... 1 NO 2	→ 523C
523B	Were you or your partner drunk at that time? IF YES: Who was drunk?	RESPONDENT ONLY ---------- 1 PARTNER ONLY ---------- 2 BOTH RESPONDENT AND PARTNER ---- 3 NO ONE 4	
523C	Apart from the person you had sexual intercourse last time, have you had sexual intercourse with any other person in the last 12 months?	YES ..... 1 NO 2	
523D	In the last 12 months, did you pay anyone in exchange for having sexual intercourse?	YES ..... 1 NO 2	
524	Do you know of a place where a person can get MALE condoms?	YES ..... 1 NO 2	→ 601

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
525	Where is that? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE) Any other place? RECORD ALL SOURCES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER ..... B FAMILY PLANNING CLINIC ..... C OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... G PHARMACY ..... H PRIVATE DOCTOR ..... I OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER PRIVATE SECTOR SHOP ..... M HOTEL/BARS ..... N FRIEND/RELATIVE ..... O OTHER _____ X (SPECIFY)	

SECTION 6: FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	CHECK 507: ONE WIFE/PARTNER ☐ → MORE THAN ONE WIVES/PARTNERS ☐ → QUESTION NOT ASKED ☐ → 614		
602	CHECK 302(02): MAN NOT STERLIZED ☐ → MAN STERLIZED ☐ → 614		
603	(Is your wife (partner)/Are any of your wives (partners)) currently pregnant?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
604	CHECK 603: NO WIFE/PARTNER PREGNANT DON'T KNOW ☐ → 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/WIVES PARTNER(S) PREGNANT ☐ → Now I have some questions about the future. After the child you and your (wife/wives)/partner(s) 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 COUPLE INFECUND ..... 3 WIFE (WIVES)/PARTNER(S) STERLIZED ..... 4 UNDECIDED/DON'T KNOW 8	614
605	CHECK 507: ONE WIFE/ PARTNER ☐ → MORE THAN ONE WIFE/ PARTNER ☐ → 607		
606	CHECK 603: WIFE/PARTNER PREGNANT DON'T KNOW ☐ → How long would you like to wait from now before birth of (a/another) child? WIFE/ PARTNER 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 COUPLE INFECUND ..... 994 AFTER MARRIAGE ..... 995 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	614
607	How long would you like to wait from now before the birth of (a/another) child?	MONTHS ..... 1 ☐☐ YEARS ..... 2 ☐☐ SOON/NOW ..... 993 HE/ALL HIS WIVES/PARTNERS ARE INFECUND ..... 994 AFTER MARRIAGE ..... 995 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
614	CHECK 203 and 205: HAS LIVING CHILDREN ☐ → If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ → If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NUMBER ..... ☐☐ NONE ..... 00 OTHER _____ 96 (SPECIFY)	→ 707
615	How many of these children would you like to be boys, how many would you like to be girls and for how many would the sex not matter?	BOYS GIRLS EITHER NUMBER ... ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	

SECTION 7. EMPLOYMENT AND GENDER ROLES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
707	Have you done any work in the last seven days?	YES ..... 1 NO 2	→ 710
708A	Although you did not work in the last seven days, do you have any job or business from which you were absent for leave, illness, vacation or any other such reason?	YES ..... 1 NO 2	→ 710
709	Have you done any work in the last 12 months?	YES ..... 1 NO 2	→ 724
710	What is your usual occupation, that is, what kind of work do you mainly do?	☐☐ _____ _____ _____	
711	CHECK 710: WORKS IN AGRICULTURE ☐ ↓ DOES NOT WORK IN AGRICULTURE ☐ →		713
712	Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else's land?	OWN LAND ..... 1 FAMILY LAND ..... 2 RENTED LAND ..... 3 SOMEONE ELSE'S LAND ..... 4 OTHER_____ 6 (SPECIFY)	
713	Do you do this work for a member of your family, for someone else, or are you self-employed?	FOR FAMILY MEMBER ..... 1 FOR SOMEONE ELSE ..... 2 SELF-EMPLOYED 3	
715	Do you usually work throughout the year, or do you work seasonally, or only once in a while?	THROUGHOUT THE YEAR ..... 1 SEASONALLY/PART OF THE YEAR ..... 2 ONCE IN A WHILE 3	
716	Are you paid or do you earn in cash or kind for this work or are you not paid at all?	CASH ONLY ..... 1 CASH AND KIND ..... 2 IN KIND ONLY ..... 3 NOT PAID 4	
716A	CHECK 507: ONE OR MORE WIVES/, PARTNERS ☐ ↓ QUESTION NOT ASKED ☐ →		724
716B	CHECK 716: CODE 1 OR 2 CIRCLED ☐ ↓ OTHER ☐ →		724

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
721	Who decides how the money you earn will be used: mainly you, mainly your (wife(wives)/partner(s)), or you and your (wife(wives)/partner(s)) jointly?	RESPONDENT ---------- 1 WIFE(WIVES)/PARTNER(S)---------- 2 RESPONDENT AND WIFE (WIVES)/ PARTNER(S) JOINTLY ---------- 3 OTHER_____ 6 (SPECIFY)	
724	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? a) Making major household purchases? b) Making purchases for daily household needs? c) Deciding about visits to the wife's family or relatives? d) Deciding what to do with the money she earns for her work? e) Deciding how many children to have and when?	HUSBAND 1 / WIFE 2 / BOTH EQUALLY 3 / DON'T KNOW DEPENDS 8 a) 1 2 3 8 b) 1 2 3 8 c) 1 2 3 8 d) 1 2 3 8 e) 1 2 3 8	
724A1	I will now read some sentences about pregnancy. Please tell me if you agree or disagree with them. a) Childbearing is a women's concern and there is no need for the father to get involved. b) It is crucial for the mother's and child's health that a woman have assistance from a doctor or nurse at delivery?	AGREE 1 / DISAGREE 2 / DK 8 CHILDBEARING WOMEN'S CONCERN 1 2 8 DOCTOR/NURSES'S ASSISTANCE CRUCIAL 1 2 8	
724A	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: If she goes out without telling him? If she neglects the children? If she argues with him? If she refuses to have sex with him? If she burns the food?	YES 1 / NO 2 / DK 8 GOES OUT ..... 1 2 8 NEGL. CHILDREN .... 1 2 8 ARGUES ..... 1 2 8 REFUSES SEX ..... 1 2 8 BURNS FOOD 1 2 8	
724B	Do you think that if a woman refuses to have sex with her husband when he wants her to, he has the right to… a) Get angry and reprimand her? b) Refuse to give her money or other means of support? c) Use force and have sex with her even if she doesn't want to? d) Have sex with another woman?	YES 1 / NO 2 / DK/DEPENDS 8 a) ..... 1 2 8 b) ..... 1 2 8 c) ..... 1 2 8 d) 1 2 8	

SECTION 8: HIV/AIDS AND OTHER SEXUALLY TRANSMITTED DISEASES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	YES ..... 1 NO 2	→ 817
801A	From which sources of information have you learned about AIDS? Any other sources? RECORD ALL SOURCES MENTIONED.	RADIO ..... A TV ..... B NEWS PAPERS/MAGAZINES ..... C PAMPHLETS/POSTERS ..... D HEALTH WORKERS ..... E MOSQUES/CHURCHES ..... F SCHOOLS/TEACHERS ..... G COMMUNITY MEETINGS/SEMINARS ..... H FRIENDS/RELATIVES ..... I WORK PLACE ..... J FAMILIES ..... K OTHER _____ X (SPECIFY)	
802	Is there anything a person can do to avoid getting AIDS or the virus that causes AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→ 804
803	What can a person do to avoid getting AIDS? Anything else? RECORD ALL WAYS MENTIONED.	ABSTAIN FROM SEX ..... A USE CONDOMS ..... B LIMIT SEX TO ONE PARTNER/STAY FAITHFUL TO ONE PARTNER ..... C LIMIT NUMBER OF SEXUAL PARTNERS ..... D AVOID SEX WITH PROSTITUTES ..... E AVOID SEX WITH PERSONS WHO HAVE MANY PARTNERS ..... F AVOID SEX WITH HOMOSEXUALS ..... G AVOID SEX WITH PERSONS WHO INJECT DRUGS INTRAVENOUSLY ..... H AVOID BLOOD TRANSFUSIONS ..... I AVOID INJECTIONS ..... J AVOID SHARING RAZORS/BLADES ..... K AVOID KISSING ..... L AVOID MOSQUITO BITES ..... M SEEK PROTECTION FROM TRADITIONAL HEALER ..... N AVOID SHARING FOOD WITH AIDS PATIENT ..... O OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	
804	Can people reduce their chances of getting the AIDS virus by having just one uninfected sex partner who has no other partners?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
805	Can a person get the AIDS virus from mosquito bites?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
806	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	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
807	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
807A	Can people reduce their chance of getting the AIDS virus by not having sexual intercourse at all?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
807B	Can people get the AIDS virus because of Witchcraft or other supernatural means?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
809	Is it possible for a healthy-looking person to have the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
809A	Do you think that persons with AIDS almost never die from the disease, sometimes die, or almost always die?	ALMOST NEVER ..... 1 SOMETIMES ..... 2 ALMOST ALWAYS ..... 3 DON'T KNOW 8	
809B	Can AIDS be cured?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
809C	Do you think your chance of getting AIDS is small, moderate, great, or no risk at all?	SMALL ..... 1 MODERATE ..... 2 GREAT ..... 3 NO RISK AT ALL ..... 4 HAS AIDS 5	→ 809E → 810
809D	Why do you think that you have no or small risk of getting AIDS? Any other reasons? RECORD ALL REASONS MENTIONED	ABSTAIN FROM SEX ..... A USE CONDOMS ..... B HAVE ONLY ONE SEX PARTNER ..... C LIMITED NUMBER OF SEX PARTNERS ..... D SPOUSE HAS NO OTHER PARTNER ..... E NO HOMOSEXUAL CONTACT ..... F NO BLOOD TRANSFUSIONS ..... G NO INJECTIONS ..... H OTHER _____ X (SPECIFY)	→ 810
809E	Why do you think that you have moderate/great risk of getting AIDS? Any other reasons? RECORD ALL REASONS MENTIONED	DO NOT USE CONDOMS ..... A MORE THAN ONE SEX PARTNER ..... B SPOUSE HAS OTHER PARTNER (S) ..... C HAD HOMOSEXUAL CONTACT ..... D HAD BLOOD TRANSFUSION ..... E HAD INJECTIONS ..... F OTHER _____ X (SPECIFY)	
810	Do you know someone personally who has the virus that causes AIDS or someone who died of AIDS?	YES ..... 1 NO 2	
811	Can the virus that causes AIDS be transmitted from a mother to a child?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→ 812E
812	When can the virus that causes AIDS be transmitted from a mother to a child? During pregnancy? During delivery? By breastfeeding?	YES NO DK DURING PREG ..... 1 2 8 DURING DELIVERY .... 1 2 8 BREASTFEEDING 1 2 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
812A	CHECK 812 AT LEAST ONE 'YES' ☐ OTHER ☐		812E
812B	Are there any special drugs that a doctor or a nurse can give to a woman infected with AIDS virus to reduce the risk of transmission to the baby?	YES .....1 NO .....2 DON'T KNOW 8	812E
812C	Do you know of a place where a pregnant woman with the AIDS virus can go to get this drug to reduce the risk of her baby getting the AIDS virus?	YES .....1 NO .....2 DON'T KNOW 8	812E
812D	Where is this place? PROBE: Any other place? PROBE TO IDENTIFY TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, OR VCT CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE) RECORD ALL PLACES MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL .....A GOVT. HEALTH CENTER .....B GOVT. HEALTH STATION.....C MCH CLINIC .....D VCT CENTER.....E OUTREACH.....F OTHER PUBLIC _____ G (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL .....H PRIVATE CLINIC .....I OTHER PRIVATE MEDICAL _____J (SPECIFY) OTHER _____ X (SPECIFY)	
812E	Have you heard about any drugs that people infected with the AIDS virus can get from a health facility or a nurse to help them live longer?	YES ..... 1 NO ..... 2 DON'T KNOW..... 8	813
812F	From which sources of information have you heard or seen about drug treatments for AIDS? Any other sources? RECORD ALL SOURCES MENTIONED.	RADIO ..... A TV ..... B NEWS PAPERS/MAGAZINES ..... C PAMPHLETS/POSTERS..... D HEALTH WORKERS..... E BEDEHO ASSOCIATION..... F FRIENDS/RELATIVES..... G WORK PLACE ..... H FAMILIES.....I HIV INFECTED PERSON..... J OTHER_____ X (SPECIFY)	
813	CHECK 501 AND 502: CURRENTLY MARRIED/ LIVING WITH A WOMAN ☐ FORMERLY MARRIED/ LIVING WITH A WOMAN ☐ NEVER MARRIED/ NOT LIVED WITH A WOMAN ☐		815
814	Have you ever talked with (your wife/the woman you are living with)/(former wife/woman you were living with) about ways to prevent getting the virus that causes AIDS?	YES ..... 1 NO ..... 2 DON'T REMEMBER 8	
815	If a member of your family got infected with the virus that causes AIDS, would you want it to remain a secret or not?	YES, REMAIN A SECRET ..... 1 NO ..... 2 DK/NOT SURE/DEPENDS 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
816	If a member of your family became sick with the virus that causes AIDS, would you be willing to care for her or him in your own household?	YES ..... 1 NO ..... 2 DK/NOT SURE/DEPENDS 8	
816A	In your opinion, if a teacher has AIDS virus, but not sick, should she/he be allowed to continue teaching in the school?	SHOULD BE ALLOWED ..... 1 SHOULD NOT BE ALLOWED ..... 2 DK/NOT SURE/DEPENDS 8	
816B	Should children age 12-14 years be thought about using condoms to avoid getting AIDS?	YES ..... 1 NO ..... 2 DK/NOT SURE/DEPENDS 8	
816C	Have you ever heard of VCT	YES ..... 1 NO 2	
816M	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	→ 816Q
816N	When was the last time you tested?	LESS THAN 12 MONTHS AGO..... 1 12 - 23 MONTHS AGO..... ..... 2 2 OR MORE YEARS AGO..... 3	
816O	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 TEST ..... 1 OFFERED AND ACCEPTED ..... 2 REQUIRED ..... 3 PRE-MARRITAL SAFTEY 4	
816P	Where was the test done? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR VCT CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL ..... 11 GOVT. HEALTH CENTER/CLINIC ..... 12 FAMILY PLANNING CLINIC ..... 13 VCT CENTER ..... 14 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR MISSIONARY/CHURCH HOSP./ CLINIC ..... 21 PRIVATE CLINIC ..... 22 VCT CENTER ..... 24 NURSING OR MATERNITY HOMES ..... 25 BLOOD TRANSFUSION SERVICES ..... 26 OTHER PRIVATE MEDICAL _____ 27 (SPECIFY) OTHER _____ 96 (SPECIFY)	→ 817
816Q	Would you want to be tested for the AIDS virus?	YES ..... 1 NO ..... 2 DON'T KNOW/ NOT SURE..... 8	
816R	Do you know of a place where people can go to get tested for the AIDS virus?	YES ..... 1 NO 2	→ 817

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
816S	Where is that? PROBE: Any other place? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR VCT CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER/CLINIC ..... B FAMILY PLANNING CLINIC ..... C VCT CENTER ..... D OTHER PUBLIC _____ E (SPECIFY) PRIVATE MEDICAL SECTOR MISSIONARY/CHURCH HOSP./ CLINIC ..... F PRIVATE CLINIC ..... G VCT CENTER ..... H NURSING OR MATERNITY HOMES ..... I BLOOD TRANSFUSION SERVICES ..... J OTHER PRIVATE MEDICAL _____ K (SPECIFY) OTHER _____ X (SPECIFY)	
817	CHECK 801: 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	→ 819A
818	If a man has a sexually transmitted disease, what symptoms might he have? Any others? RECORD ALL SYMPTOMS MENTIONED.	ABDOMINAL PAIN ..... A GENITAL DISCHARGE/DRIPPING ..... B FOUL SMELLING DISCHARGE ..... C BURNING PAIN ON URINATION ..... D REDNESS/INFLAMMATION IN GENITAL AREA ..... E SWELLING IN GENITAL AREA ..... F GENITAL SORES/ULCERS ..... G GENITAL WARTS ..... H GENITAL ITCHING ..... I BLOOD IN URINE ..... J LOSS OF WEIGHT ..... K IMPOTENCE ..... L OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) NO SYMPTOMS ..... Y DON'T KNOW ..... Z	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
819	If a woman has a sexually transmitted disease, what symptoms might she have? Any others? RECORD ALL SYMPTOMS MENTIONED.	ABDOMINAL PAIN ..... A GENITAL DISCHARGE ..... B FOUL SMELLING DISCHARGE ..... C BURNING PAIN ON URINATION ..... D REDNESS/INFLAMMATION IN GENITAL AREA ..... E SWELLING IN GENITAL AREA ..... F GENITAL SORES/ULCERS ..... G GENITAL WARTS ..... H GENITAL ITCHING ..... I BLOOD IN URINE ..... J LOSS OF WEIGHT ..... K HARD TO GET PREGNANT/ HAVE A CHILD ..... L OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) NO SYMPTOMS ..... Y DON'T KNOW ..... Z	
819A	CHECK 514 : HAS HAD SEXUAL INTERCOURSE ☐ HAS NOT HAD SEXUAL INTERCOURSE ☐ →		901
819B	CHECK 817: HEARD ABOUT OTHER SEXUALLY TRANSMITTED INFECTIONS? YES ☐ NO ☐ →		819D
819C	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/ NOT SURE ……...8	
819D	Sometimes men experience an abnormal discharge from their penis. During the last 12 months, have you had an abnormal discharge from your penis?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
819E	Sometimes men have a sore or ulcer on or near their penis. During the last 12 months, have you had a sore or ulcer on or near your penis?	YES ..... 1 NO ..... 2 DON'T KNOW/ NOT SURE 8	
819F	CHECK 819C,819D AND 819E : HAS HAD AN INFECTION (ANY YES) ☐ HAS NOT HAD ANY INFECTION OR DOES NOT KNOW ☐ →		901
819G	Last time you had (Problem(s) From 819C/819D/819E), did you seek any kind of advice or treatment?	YES ..... 1 NO 2	→ 819I

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
819H	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, OR VCT CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER/ HEALTH STATION ..... B MCH CLINIC ..... C OTHER PUBLIC _____ D (SPECIFY) PRIVATE MEDICAL SECTOR CHURCH HOSP./CLINIC……E PRIVATE CLINIC……F VCT CENTER..... …G PRIVATE HOSPITAL……..H OTHER PRIVATE MEDICAL _____ I (SPECIFY) OTHER SOURCE TRADITIONAL HEALER……J PHARMACY……K FRIENDS OR RELATIVES……L OTHER_____X (SPECIFY)	
819I	When you had (PROBLELM(S) FROM 819C/819D/819E, did you inform the person(s) with whom you were having sex?	YES, INFORMED ALL PARTNERS ..... 1 NO, INFORMED NONE ..... 2 INFORMED SOME NOT ALL…….. 3 DIDN'T HAVE A PARTNER 4	
819J	When you had (PROBLELM(S) FROM 819C/819D/819E, did you do anything to avoid infecting your sexual partner(s)?	YES, ... 1 NO, ... 2 DIDN'T HAVE A PARTNER 3	→ 901
819K	What do you do to avoid infecting your partner(s) Did you: Use medicine? Stop having sex? Use a condom when having sex?	YES NO USE MEDICINE 1 2 STOP SEX 1 2 USE CONDOM 1 2	

SECTION 9: OTHER HEALTH ISSUES

NO	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	Have you ever heard of an illness called tuberculosis or TB?	YES……. 1 NO ……..... 2	→ 904A
902	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 BITE…….. F OTHER _____ X (SPECIFY) DON'T KNOW ……Z	
903	Can tuberculosis be cured?	YES…… 1 NO ……. 2 DON'T KNOW ……. 8	
904	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	
904A	Some men are circumcised. Are you circumcised?	YES……..…… 1 NO ……..... 2	
905	Have you ever smoked cigarettes?	YES……..…… 1 NO ……..... 2	→ 908
906	Do you currently smoke cigarettes?	YES……..…… 1 NO ……..... 2	→908
907	In the last 24 hours, how many cigarettes did you smoke?	CIGARETTES…… ☐☐	
908	Have you ever smoked or use any other type of tobacco products	YES……..…… 1 NO ……..... 2	→ 910A
909	Do you currently smoke or use any other type of tobacco products?	YES…… 1 NO ……..... 2	→ 910A
910	What (other) type of tobacco do you currently smoke or use? RECORD ALL MENTIONED.	PIPE…….. A CHEWING TOBACCO…… B SNUFF……..…… C SAFA ……..…… D OTHER _____ X (SPECIFY)	
910A	Do you know that Eritrea has a proclamation that bans cigarette smoking or other type of tobacco usage in public places?	YES..... 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
910B	When do you usually wash your hands? DO NOT PROMPT CIRCLE ALL MENTIONED RESPONSES.	NEVER ---------- A BEFORE FOOD PREPARATION --------- B BEFORE EATING FOOD ---------- C AFTER EATING FOOD ---------- D BEFORE FEEDING CHILDREN ---------- E AFTER DEFECATION ---------- F AFTER ATTENDING TO A CHILD WHO HAS DEFECATED ---------- G BEFORE PRAYING ---------- H OTHER _____ X (SPECIFY)	→ 911A
910C	How do you usually wash your hands?	ASH ---------- 1 SOAP ---------- 2 SOIL ---------- 3 WATER ONLY ---------- 4 OTHER _____ 6 (SPECIFY)	
911A	In a number of countries, there is a practice in which a girl may have a part of her genitals cut. Have you ever heard about this practice?	YES ..... 1 NO 2	→ 918A
912	CHECK 203 AND 205: HAS AT LEAST ONE LIVING DAUGHTER ☐ ↓ HAS NO LIVING DAUGHTER ☐ →		915
913	Have any of your alive daughters been circumcised/had her genitals cut? IF YES: How many?	NUMBER CIRCUMCISED ..... ☐☐ NO DAUGTHER CIRCUMCISED ..... 95 DON'T KNOW 98	→ 915 → 915
914	Did you or any one object to any of your daughter being circumcised?	YES ..... 1 NO 2	
915	What benefits do you think girls get if they undergo genital cutting? PROBE: Any other benefits? RECORD ALL BENEFITS MENTIONED	CLEANLINESS/HYGIENE ..... A SOCIAL ACCEPTANCE ..... B BETTER MARRIAGE PROSPECTS ..... C PRESERVE VIRGINITY/PREVENT PREMARITAL SEX ..... D MORE SEXUAL PLEASURE FOR THE MAN ..... E RELIGIOUS APPROVAL ..... F OTHER _____ X (SPECIFY) NO BENEFITS ..... Y	
917	Do you think that this practice should be continued, or should it be discontinued?	CONTINUED ..... 1 DISCONTINUED ..... 2 DEPENDS ..... 3 DON'T KNOW 8	
918	Do you know that Eritrea has issued proclamation (**No. 158/2007**) banning female circumcision in Eritrea?	YES ..... 1 NO 2	
918A	RECORD THE TIME	HOURS ---------- ☐☐ MINUTES ---------- ☐☐	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

NAME OF THE INTERVIEWER:_____DATE: _____/_____/_____SIGNATURE_____

SUPERVISOR'S OBSERVATIONS

NAME OF THE SUPERVISOR:_____DATE: _____/_____/_____SIGNATURE_____

EDITOR'S OBSERVATIONS

NAME OF THE EDITOR:_____DATE: _____/_____/_____SIGNATURE_____

THE STATE OF ERITREA
MINISTRY OF NATIONAL DEVELOPMENT
NATIONAL STATISTICS OFFICE

ERITREA POPULATION AND HEALTH SURVEY
MATERNAL MORBIDITY AND MORTALITY: HOUSEHOLD QUESTIONNARIE

ALL INFORMATION COLLECTED IS CONFIDENTIAL AND IS ONLY FOR STATISTICAL USE

IDENTIFICATION

ZOBA .....

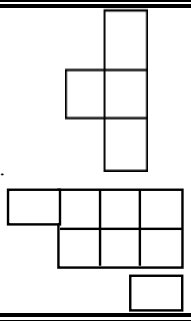
SUB-ZOBA .....

VILLAGE/TOWN NAME _____
[ASMARA=1, OTHER TOWN =2, RURAL = 3].....

CLUSTER NUMBER.....

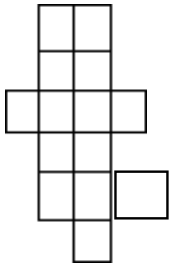
HOUSEHOLD NUMBER .....

NAME OF HOUSEHOLD HEAD _____
TYPE OF QUESTIONNAIRE (1=CORE 2=MATERNAL MORBIDITY AND MORTALITY)



INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	____/_____/_____ DD MM YYYY	____/_____/_____ DD MM YYYY	____/_____/_____ DD MM YYYY	DAY.....
				MONTH.....
TEAM				YEAR .....
INTERVIEWER'S NAME	_____	_____	_____	TEAM.....
				NAME.....
RESULT **SEE * BELOW**				RESULT .....
NEXT VISIT: DATE	____/_____/_____ DD MM YYYY	____/_____/_____ DD MM YYYY		TOTAL NO. OF VISITS
TIME	_____	_____		



* RESULT CODES
1=COMPLETED
2=NO HOUSEHOLD MEMBER/COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3=ENTIRE HOUSEHOLD ABSENT FOR EXT. PERIOD
4=POSTPONED
5=REFUSED
6=DWELLING VACANT OR ADDRESS NOT A DWELLING
7=DWELLING DESTROYED
8=DWELLING NOT FOUND
9=OTHER_____ (SPECIFY)

LANGUAGE:**SEE ** BELOW**

QUESTIONNAIRE

LANGUAGE OF INTERVIEW

NATIVE LANGUAGE OF THE RESPONDENT

** LANGUAGE CODES:
01=AFAR 02= BILEN 03= HEDARIB (Bedawit) 04= KUNAMA 05= NARA
06= ARABIC 07= SAHO 08= TIGRE 09= TIGRIGNA 10= OTHER____ (SPECIFY)

TRANSLATOR USED (1= NOT AT ALL, 2= SOMETIMES, 3= ALL THE TIME)……..…….

TOTAL PERSONS IN THE HOUSEHOLD

TOTAL ELIGIBLE WOMEN

LINE NUMBER OF RESPONDENT TO HOUSEHOLD SCHEDULE

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME_____	NAME_____		
DATE____/_____/_____ DD MM YYYY	DATE____/_____/_____ DD MM YYYY		

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 VISTORS	SEX	RELATION TO HEAD OF HOUSE-HOLD*	RESIDENCE		AGE	DISABILITY	ELEGIBILITY
	Please give me the name 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.	Is (NAME) male or female?	What is the relation-ship of (NAME) to the head of the household ? SEE * BELOW	Does (NAME) usually live here?	Did (NAME) Stay here last night?	How old is (NAME)?	Is (NAME) physically or mentally disabled IF YES: State the type SEE CODES AT THE END	CIRCLE LINE NUMBER OF ALL WOMEN AGED 15-49
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(7A)	(16)
01		**M F** **1 2**	☐☐	YES NO 1 2	YES NO 1 2	IN YEARS ☐☐	☐☐	01
02		**1 2**	☐☐	1 2	1 2	☐☐	☐☐	02
03		**1 2**	☐☐	1 2	1 2	☐☐	☐☐	03
04		**1 2**	☐☐	1 2	1 2	☐☐	☐☐	04
05		**1 2**	☐☐	1 2	1 2	☐☐	☐☐	05
06		**1 2**	☐☐	1 2	1 2	☐☐	☐☐	06
07		**1 2**	☐☐	1 2	1 2	☐☐	☐☐	07
08		**1 2**	☐☐	1 2	1 2	☐☐	☐☐	08
09		**1 2**	☐☐	1 2	1 2	☐☐	☐☐	09
10		**1 2**	☐☐	1 2	1 2	☐☐	☐☐	10
11		**1 2**	☐☐	1 2	1 2	☐☐	☐☐	11
12		**1 2**	☐☐	1 2	1 2	☐☐	☐☐	12
13		**1 2**	☐☐	1 2	1 2	☐☐	☐☐	13
14		**1 2**	☐☐	1 2	1 2	☐☐	☐☐	14

TICK HERE IF CONTINUATION SHEET USED ☐

Just to make sure that I have a complete listing:

1. Are there any other persons such as small children or infants that we have not listed?…… .YES ☐ → ENTER EACH IN TABLE NO ☐
2. In addition, are there any other people who may not be members of your family such as domestic servants , lodgers or friends who usually live here?……YES ☐ → ENTER EACH IN TABLE NO ☐
3. Are there any guests or temporary visitors staying here, or any one else who slept here last night that have not been listed?……YES ☐ → ENTER EACH IN TABLE NO ☐

*** CODES FOR Q.4 : RELATIONSHIP TO HEAD OF HOUSEHOLD**

01=Head	03=Son or daughter	05=Grand child	07=Parent-in-law	09=Co-wife	11=Adopted/foster/step child	98=Don't know
02=Wife or husband	04=Son in-law or daughter in-	06=Parent	08=Brother or sister	10=Other relatives	12=Not related	

THE QUESTIONNAIRE HAS SPACES TO RECORD UP TO 14 HOUSEHOLD MEMBERS, IF MORE ADD ANOTHER QUESTIONNAIRE.

17A During the past two years, that is 24 months, has any of the usual members of this household died?

YES ☐ NO ☐ → 19

Now we would like to have some information about all of the deaths that occurred in this household to usual residents during the past 24 months.

IF MORE THAN FIVE DEATHS ADD NEW HOUSEHOLD QUESTIONNAIRE

ASK IF THE PERSON DIED IS FEMALE AND AGE AT DEATH 12 AND ABOVE

Sr. No.	NAME OF PERSON	SEX	AGE AT DEATH	DATE OF DEATH		
				MONTH	YEAR	
	Please give me the names of all the persons who were usual residents of this household and died during the past 24 months, that is, since JANUARY 2008 to the month of interview.	Was (NAME) Male or Female?	How old was (NAME) when he/she died? RECORD IN COMPLETED YEARS	In what month did (NAME) die? PROBE: During what season?	In what year did (NAME) die? PROBE: This year or last year?	Did (NAME) die during pregnancy, delivery, or two months after delivery?
	(17B)	(17C)	(17D)	(17E)	(17F)	(17G)
1		M F 1 2	AGE	MONTH	YEAR	YES NO DK 1 2 8
2		1 2				1 2 8
3		1 2				1 2 8
4		1 2				1 2 8
5		1 2				1 2 8
TOTAL NUMBER OF DEATHS IN HOUSEHOLD						☐

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
19	What is the main source of drinking water for members of your household?	**PIPED WATER** PIPED IN TO RESIDENCE /YARD /PLOT ..... 11 PUBLIC TAP ..... 12 PRIVATE TAP ..... 13 **PROTECTED WELL WATER** WELL IN RESIDENCE/YARD/PLOT ..... 21 PUBLIC WELL ..... 22 **UN PROTECTED WELL WATER** WELL IN RESIDENCE/YARD/PLOT ..... 31 PUBLIC WELL ..... 32 **SURFACE WATER** SPRING ..... 41 RIVER/STREAM ..... 42 POND/LAKE ..... 43 DAM ..... 44 **TANKER TRUCK** ..... 51 **CART WITH SMALL TANK** ..... 52 **RAIN WATER** ..... 53 **BOTTLED WATER** ..... 54 **OTHER** _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
21	What kind of toilet facility do members of your household usually use?	FLUSH TO PIPED SEWER SYSTEM .....01 FLUSH TO SEPTIC TANK .....02 FLUSH TO PIT LATRINE .....03 TRADITIONAL PIT TOILET ..... 04 VENTILATED IMPROVED PIT (VIP) LATRINE..... 05 NO FACILITY /BUSH/FIELD .....06 OTHER ..... 9 6 (SPECIFY)	
22	Does your household have: Electricity? A radio? A television? A mobile telephone? A fixed telephone A refrigerator? A cassette player? Receiver? Personal computer A washing Basin? Washing machine? A sofa? Yoke beam?	YES NO ELECTRICITY ..... 1 2 RADIO..... 1 2 TELEVISION..... 1 2 MOBILE TELEPHONE..... 1 2 FIXED TELEPHONE ..... 1 2 REFRIGERATOR..... 1 2 CASSETTE PLAYER..... 1 2 RECIEVER .....1 2 PERSONAL COMPUTER.....1 2 WASHING BASIN…… 1 2 WASHING MACHINE…… 1 2 SOFA…… 1 2 YOKE BEAM.....1 2	
22A1	Does this household own any livestock, herds, other farm animals, or poultry?	YES ----------1 NO---------- 2 →	22B
22A	How many of the following animals does this household own? IF NONE, WRITE "000''. IF MORE THAN 995 WRITE "995". IF UNKNOWN, WRITRE "998". Local cattle (indigenous)? Exotic/Cross Cattle? Camels? Horse, donkeys, or mules? Goats? Sheep? Chicken?	CATTLE(INDIGENOUS)……..... EXOTIC/CROSS CATTLE..... CAMELS HORSES/DONKEYS/MULES……. GOATS…….. SHEEP…… CHICKEN…….	
22B	Over the last week, how many meals have your household eaten per day on average?	ONE MEAL---------- 1 TWO MEALS ---------- 2 THREE MEALS OR MORE---------- 3	
22C	Did members of the household consume any of the following items during the last 7 days? 1.Sorghum/Millet 2.Barely 3. Rice 4. Milk (include: pasteurised, un-pasteurised, powdered) 5. Wheat bread, bakery 6. Sugar 7. Cooking oil 8. Taff 9. Egg 10. Meat 11. Fish 12. Vegetables 13. Fruits	YES NO SORGHUM/MILLET ---------- 1 2 BARELY ---------- 1 2 RICE ---------- 1 2 MILK (INCLUDE: PASTEURISED, UN-PASTEURISED, POWDERED) ---------- 1 2 WHEAT BREAD, BAKERY ---------- 1 2 SUGAR---------- 1 2 COOKING OIL ---------- 1 2 TAFF ----------1 2 EGG ----------1 2 MEAT ----------1 2 FISH ----------1 2 VEGETABLES ----------1 2 FRUITS ----------1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
22D	How does the household dispose of solid waste and garbage?	COLLECTED ---------- 1 PUBLIC CONTAINER(CLOSED) ---------- 2 PUBLIC CONTAINER(OPEN) ---------- 3 DUMPED ANYWHERE ---------- 4	
23A	How many rooms excluding kitchen, toilet, and bath rooms but including closed in verands this dwelling are for the exclusive use for the members of this household ?	NUMBER OF ROOMS..... ☐☐	
23B	How many rooms in your household are used for sleeping?	NUMBER OF ROOMS..... ☐☐	
23C	Are any farm animals kept within the living area of the household?	YES..... 1 NO..... 2	
24	PRINCIPAL MATERIALS OF WHICH THE FLOOR OF THE LIVING QUARTERS IS MADE RECORD OBESERVATION.	**NATURAL FLOOR** EARTH /SAND..... 11 DUNG..... 12 **RUDIMENTARY FLOOR** WOOD PLANKS..... 21 PALM /BAMBOO/REEDS..... 22 **FINISHED FLOOR** PARQUET OR POLISHED WOOD..... 31 VINIL OR ASPHALT STRIPS..... 32 CERAMIC TILES..... 33 CONCRETE/CEMENT..... 34 CARPET/PLASTIC..... 35 OTHER _____ 96 (SPECIFY)	
24A	PRINCIPAL MATERIALS OF WHICH THE ROOF OF THE LIVING QUARTERS IS MADE RECORD OBESERVATION.	**NATURAL ROOFING** GRASS/THATCH..... 11 WOOD,DUNG, MUD..... 12 PALM LEAVES AND TREES..... 13 TENT/GARMENT..... 14 **RUDIMENTARY ROOFING** TIN CANS..... 21 **FINISHED ROOFING** CORRUGATED IRON..... 31 ASBESTOS SHEET..... 32 VINIL OR ASPHALT STRIPS..... 33 CEMENT /STEEL/CONCRETE..... 34 ROOF TILES..... 35 OTHER _____ 96 (SPECIFY)	
24B	PRINCIPAL MATERIALS OF WHICH THE WALLS OF THE LIVING QUARTERS IS MADE RECORD OBESERVATION.	**NATURAL WALLS** NO WALLS..... 11 CANE/PALM/TRUNCKS..... 12 TENT/GARMENT..... 13 **RUDIMENTARY WALLS** BAMBOO WITH MUD..... 21 STONE WITH MUD..... 22 PLAYWOOD..... 23 WOOD PLANKS/SHINGLES..... 24 **FINISHED WALLS** CEMENT..... 31 STONE WITH LIME/CEMENT..... 32 BRICKS..... 33 CEMENT BLOCKS..... 34 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
25	Does any member of your household own: An animal drawn cart? A bicycle? A motorcycle? A car or truck? A motor Boat?	YES NO ANIMAL DRAWN CART ..... 1 2 BICYCLE ..... 1 2 MOTORCYCLE ..... 1 2 CAR\TRUCK ..... 1 2 A MOTOR BOAT 1 2	
25A	What type of fuel does your household mainly use for cooking?	ELECTRICITY ..... 01 LPG/NATURAL GAS ..... 02 BIOGAS ..... 03 KEROSINE ..... 04 COAL, LIGINITE ..... 05 CHARCOAL ..... 06 FIREWOOD, STRAW,SAWDUST ..... 07 ANIMAL DUNG, MANURE ..... 08 AGRICULTURAL CROP ----------09 NO FOOD COOKED IN HOUSEHOLD ----------95 OTHER _____ 96 (SPECIFY)	
25B	Does your household have a separate room which is used as a kitchen?	YES ..... 1 NO 2	
25C	Does your household own this structure (house, flat, shack), do you rent it, or do you live here without pay?	OWNS ---------- 1 PAYS RENT /LEASE ----------2 FREE---------- 3	
25D	Does any member of your household own any agricultural land?	YES ----------1 NO---------- 2	→ END
25E	What is the size of the agricultural land (altogether) owned by the members of this household? IF MORE THAN 95 WRITE “95.0” IF UNKNOWN CIRCLE “999.8”	NUMBER OF HECTARES ---------- 1 ☐☐.☐ TSMDI ----------2 ☐☐.☐ GEMEL---------- 3 ☐☐.☐ TRACTOR HOURS ---------- 4 ☐☐.☐ DON’T KNOW 999.8	

CODES FOR Q7A (HH ROSTER)

00=None

01= Blindness of both eyes

02 = Blindness of one eye

10 = Total deafness

11 = Partial deafness one/two ears

20 = Dumbness(can not speak)

30 = One or both legs amputed

31 = One or both legs paralysis

32 = Short leg

33 = Leg deformity

34 = elephantiasis

35= Other related motion impairments

40 = One or both hands amputed

41 = One or both hands paralysed

42 = Hand deformities/ paralysis of any kind

43 = Other hand impairments

50 = Insanity

51 = Mental retardation

52 = Epilepsy

53 = Other mental impairments

60 = Leprosy

70 = Multiple disabilities (specify)

80 = Other disability (specify)

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

NAME OF THE INTERVIEWER:_____DATE: _____/_____/_____SIGNATURE_____

SUPERVISOR'S OBSERVATIONS

NAME OF THE SUPERVISOR:_____DATE: _____/_____/_____SIGNATURE_____

EDITOR'S OBSERVATIONS

NAME OF THE EDITOR:_____DATE: _____/_____/_____SIGNATURE_____

THE STATE OF ERITREA
MINISTRY OF NATIONAL DEVELOPMENT
NATIONAL STATISTICS OFFICE

ERITREA POPULAITON AND HEALTH SURVEY
MATERNAL MORBIDITY AND MORTALITY: WOMEN'S QUESTIONNAIRE
ALL INFORMATION COLLECTED IS CONFIDENTIAL AND IS ONLY FOR STATISTICAL USE

IDENTIFICATION

ZOBA .....

SUB-ZOBA .....

VILLAGE/TOWN NAME _____
[ASMARA=1, OTHER TOWN =2, RURAL = 3]

CLUSTER NUMBER .....

HOUSEHOLD NUMBER.....
NAME OF HOUSEHOLD HEAD _____

NAME AND LINE NUMBER OF WOMAN _____

TYPE OF QUESTIONNAIRE (1=CORE 2=MATERNAL MORBIDITY AND MORTALITY)

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	____/____/____ DD MM YYYY	____/____/____ DD MM YYYY	____/____/____ DD MM YYYY	DAY MONTH YEAR
TEAM				TEAM
INTERVIEWER'S NAME	_____	_____	_____	NAME
RESULT **SEE* BELOW**				RESULT
NEXT VISIT: DATE	____/____/____ DD MM YYYY	____/____/____ DD MM YYYY		TOTAL NO. OF VISITS
TIME	_____	_____		

*** RESULT CODES**
1=COMPLETED
2=NOT AT HOME
3= POSTPONED
4= REFUSED
5=PARTIALLY COMPLETED
6=INCAPACITATED
7=OTHER_____ (SPECIFY)

LANGUAGE: **SEE ** BELOW**
QUESTIONNAIRE
LANGUAGE OF INTERVIEW
NATIVE LANGUAGE OF RESPONDENT

** LANGUAGE CODES:
01=AFAR 02= BILEN 03= HEDARIB (Bedawit) 04= KUNAMA 05= NARA
06=Arabic 07= SAHO 08= TIGRE 09= TIGRIGNA 10= OTHER _____ (SPECIFY)

TRANSLATOR USED (1= NOT AT ALL, 2= SOMETIMES, 3= ALL THE TIME)……

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME_____	NAME_____		
DATE____/_____/_____ DD MM YYYY	DATE____/_____/_____ DD MM YYYY		

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION

Hello. My name is _____ and I am working with the National Statistics Office. We are conducting a national survey about the health of women and children. We would very much appreciate your participation in this survey. I would like to ask you about your health (and the health of your children). This information will help the government to plan health services. The questionnaire usually takes between 30-45 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shown to other persons.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR ..... ☐☐ MINUTES ..... ☐☐	
102	First I would like to ask some questions about you and your household. For most of the time until you were 12 years old, did you live in a city, in a town, or in a village?	CITY ..... 1 TOWN ..... 2 VILLAGE 3	
102A	What was the name of the village/town/city in which you lived as child? RECORD NAME OF VILLAGE/TOWN AND ZOBA. IF PLACE WAS OUTSIDE OF ERITREA, RECORD NAME OF THE COUNTRY.	VILLAGE/TOWN/CITY _____ ZOBA NAME _____ ☐ COUNTRY _____ 8	
103	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS ..... ☐☐ ALWAYS ..... 95 VISITOR 96	 → 105 → 105
104	Just before you moved here, did you live in a city, in a town, or in a village?	CITY ..... 1 TOWN ..... 2 VILLAGE 3	
105	In what month and year were you born?	MONTH ..... ☐☐ DON'T KNOW MONTH ..... 98 YEAR ..... ☐☐☐☐ DON'T KNOW YEAR 9998	
106	How old were you at your last birthday? COMPARE AND CORRECT 105 AND/OR 106 IF INCONSISTENT.	AGE IN COMPLETED YEARS ..... ☐☐	
107	Have you ever attended school?	YES ..... 1 NO 2	 → 113A
108	What is the highest level of school you attended: Primary, middle, secondary, or higher?	PRIMARY ..... 1 MIDDLE ..... 2 SECONDARY ..... 3 HIGHER 4	
109	What is the highest grade /year you completed at that level?	GRADE/YEAR ..... ☐☐	
113	CHECK 108: PRIMARY ☐ (↓) MIDDLE SCHOOL OR ABOVE ☐ (→)		→ 114

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
113A	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT IF RESPONDENT CAN NOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CAN NOT READ AT ALL ---------- 1 ABLE TO READ ONLY PART OF SENTENCE ---------- 2 ABLE TO READ WHOLE SENTENCE ----- 3 NO CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED ---------- 5	→ 115 → 115
114	Do you usually read a newspaper or magazine almost once every day, at least once a week, less than once a week or not at all?	ALMOST EVERYDAY ..... 1 AT LEAST ONCE A WEEK ..... 2 LESS THAN ONCE A WEEK ..... 3 NOT AT ALL 4	
115	Do you usually listen to the radio almost once every day, at least once a week, less than once a week or not at all?	ALMOST EVERYDAY ..... 1 AT LEAST ONCE A WEEK ..... 2 LESS THAN ONCE A WEEK ..... 3 NOT AT ALL 4	
116	Do you usually watch television almost once every day, at least once a week, less than once a week or not at all?	ALMOST EVERYDAY ..... 1 AT LEAST ONCE A WEEK ..... 2 LESS THAN ONCE A WEEK ..... 3 NOT AT ALL 4	
117	What is your religion?	ORTHODOX ..... 1 CATHOLIC ..... 2 PROTESTANT ..... 3 MUSLIM ..... 4 TRADITIONAL BELIEVER ..... 5 OTHER _____ 6 (SPECIFY)	
118	To which ethnic group do you belong?	AFAR ..... 01 BILEN ..... 02 HEDARIB ..... 03 KUNAMA ..... 04 NARA ..... 05 RASHAIDA ..... 06 SAHO ..... 07 TIGRE ..... 08 TIGRIGNA ..... 09 OTHER _____ 96 (SPECIFY)	

SECTION 2: REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES ..... 1 NO 2	→ 206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES ..... 1 NO 2	→ 204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME ..... ☐☐ DAUGHTERS AT HOME ..... ☐☐	
204	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES ..... 1 NO 2	→ 206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE ..... ☐☐ DAUGHTERS ELSEWHERE ..... ☐☐	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES ..... 1 NO 2	→ 208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD ..... ☐☐ GIRLS DEAD ..... ☐☐	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL ..... ☐☐	
209	CHECK 208: Just to make sure that I have this right: you have had in TOTAL _____ births during your life. Is that correct? YES ☐ NO ☐ → PROBE AND CORRECT 201-208 AS NECESSARY.		
210	CHECK 208: ONE OR MORE BIRTHS ☐ NO BIRTHS ☐		→ 225

211 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had.

RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.

212 What name was given to your (first/next) baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COM-PLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR.', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between [NAME OF PREVIOUS BIRTH] AND [NAME]?
01	SING.. 1 MULT 2	BOY. 1 GIRL 2	MONTH YEAR	YES.... 1 NO ..... 2 → 220	AGE IN YEARS	YES..... 1 NO 2	LINE NUMBER (NEXT BIRTH)	DAYS ..... 1 MONTHS 2 YEARS 3	IF YES, ADD THAT BIRTH TO THE END OF THE BIRTH HISTORY (212)
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 COM-PLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR.', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between [NAME OF PREVIOUS BIRTH] AND [NAME]?
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 ☐☐ → (GOTO 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 ☐☐ → (GOTO 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 ☐☐ → (GOTO 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 ☐☐ → (GOTO 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 ☐☐ → (GOTO 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, ADD THAT BIRTH TO THE END OF THE BIRTH HISTORY (212)	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..... ☐

FOR EACH LIVING CHILD: CURRENT AGE IS RECORDED ..... ☐

FOR EACH DEAD CHILD: AGE AT DEATH IS RECORDED..... ☐

FOR AGE AT DEATH 12 MONTHS OR 1 YEAR: PROBED TO DETERMINE EXACT NUMBER OF MONTHS..... ☐

224 CHECK 215 AND ENTER THE NUMBER OF BIRTHS IN JANUARY 2005 OR LATER. ☐

IF NONE, RECORD "0".

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
225	Have you ever had a pregnancy that was aborted/miscarried?	YES ..... 1 NO 2	→ 225F
225A	In what month and year did the last miscarriage/abortion occur?	MONTH..... ☐☐ YEAR ..... ☐☐☐☐	
225B	CHECK 225A: LAST ABORTION/ MISCARRIAGE OCCURRED IN JANUARY 2005 OR LATER ☐ ↓ LAST ABORTION/ MISSCARRIAGE OCCURRED BEFORE JANUARY 2005 ☐ →		225F
225C	How many months pregnant were you when the last miscarriage/abortion occurred? RECORD NUMBER OF COMPLETED MONTHS	MONTHS..... ☐☐	
225D	Where was the abortion/miscarriage occurred?	HEALTH FACILITY ---------- 1 TRADITIONAL HEALER ---------- 2 MY HOME ---------- 3 OTHER HOME ---------- 4 OTHER_____ 6 (SPECIFY)	
225E	Who mainly decided on the abortion/miscarriage? IF THE LAST PREGNANCY ENDED IN MISSCARIRAGE CIRCLE CODE "7" FOR NOT APPLICABLE	HEALTH PERSONEL ---------- 1 HUSBAND/PARTNER ---------- 2 MY SELF ---------- 3 OTHER_____ 6 (SPECIFY) NOT APPLICABLE ---------- 7	
225F	Have you ever had a pregnancy that terminated in still birth?	YES ..... 1 NO 2	→ 226
225G	In what month and year did the last still birth occur?	MONTH..... ☐☐ YEAR ..... ☐☐☐☐	
225H	CHECK 225G: LAST STILL BIRTH OCCURRED IN JANUARY 2005 OR LATER ☐ ↓ LAST STILL BIRTH OCCURRED BEFORE JANUARY 2005 ☐ →		226
225I	How many months pregnant were you when the last still birth occurred? RECORD NUMBER OF COMPLETED MONTHS	MONTHS..... ☐☐	
225J	Since JANUARY 2005, have you had any other pregnancies that did not result in a live birth?	YES..... 1 NO..... 2	
226	Are you pregnant now?	YES..... 1 NO..... 2 UNSURE..... 8	→ 237
227	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS.	NUMBER OF MONTHS ☐☐	
228	At the time you became pregnant did you want to become pregnant then, did you want to wait until later, or did you not want to have any (more) children at all?	THEN..... 1 LATER..... 2 NOT AT ALL 3	

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 → 401	
239	Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods?	JUST BEFORE HER PERIOD BEGINS ..... 1 DURING HER PERIOD ..... 2 RIGHT AFTER HER PERIOD HAS ENDED ..... 3 HALFWAY BETWEEN TWO PERIODS ..... 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	

SECTION 4A: PREGNANCY, POSTNATAL CARE, AND MATERNAL MORBIDITY

401	CHECK 224: ONE OR MORE BIRTHS IN JANUARY 2005 OR LATER ☐ → NO BIRTH IN JANUARY 2005 OR LATER ☐ → 912		
402	ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF THE LAST BIRTH in JANUARY 2005 OR LATER. ASK THE QUESTIONS ABOUT THE LAST BIRTH. Now I would like to ask you some questions about the last pregnancies that end to live birth in JANUARY 2005 or later.		
403	LINE NUMBER FROM 212	LAST BIRTH LINE NUMBER ☐☐	
404	NAME FROM 212 AND SURVIVAL STATUS FROM 216	NAME _____ ALIVE ☐ DEAD ☐	SKIP
404A	During this pregnancy, did you make preparations for the following: 1)Delivery in a health facility by skilled birth attendant 2)Knowing the telephone no. of health facility or service provider 3)Arranging means of transport to health facility when labor starts 4) keeping some money aside for transport or other expenses 5) Baby clothes 6) Extra food for after delivery 7) other preparation	YES NO DELIVERY IN A HEALTH FACILITY BY SKILLED BIRTH ATTENDANT……..1 2 KNOWING THE TELEPHONE NO. OF HEALTH FACILITY OR SERVICE PROVIDER…….1 2 ARRANGING MEANS OF TRANSPORT TO HEALTH FACILITY WHEN LABOR STARTS……1 2 KEEPING SOME MONEY ASIDE FOR TRANSPORT OR OTHER EXPENSES……..1 2 BABY CLOTHES……..1 2 EXTRA FOOD FOR AFTER DELIVERY……..1 2 OTHER_____1 2 (SPECIFY)	
405	At the time you became pregnant with (NAME), did you want to become pregnant <u>then</u>, did you want to wait until <u>later</u>, or did you <u>not want</u> to have any (more) children at all?	THEN ..... 1 → (SKIP TO 406A) LATER ..... 2 NOT AT ALL ..... 3 → (SKIP TO 406A)	
406	How much longer would you like to have waited?	MONTHS ..... 1 ☐☐ YEARS ..... 2 ☐☐ DON'T KNOW 998	
406A	When you were pregnant with (NAME), did you see anyone for antenatal care?	YES ..... 1 NO ..... 2 → 414A	

	QUESTONS AND FILTERS	CODING CATEGORIES	SKIP
407	Whom did you see for antenatal care for this pregnancy? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS SEEN.	**HEALTH PERSONNEL** DOCTOR ..... A NURSE/MIDWIFE ..... B ASSOCIATE NURSE ..... C **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT ..... D COMMUNITY HEALTH WORKER ..... E OTHER _____ X (SPECIFY)	
407A	Where did you receive antenatal care for this pregnancy? Anywhere else? PROBE TO IDENTIFY TYPE(S) OF SOURCE(S) AND CIRCLE THE APPROPRATE CODE(S). IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	**HOME** YOUR HOME ..... A TBA'S HOME ..... B OTHER HOME ..... C **PUBLIC MEDICAL SECTOR** GOV. HOSPITAL ..... D GOV. HEALTH CENTER ..... E GOV. HEALTH STATION ..... F GOV. DISPENSARY ..... G OTHER PUBLIC MED. ..... H _____ (SPECIFY) **PRIVATE MEDICAL SECTOR** FAITH-BASED, CHURCH HOSPITAL/CLINIC ..... I PRIVATE HOSPITAL/ CLINIC ..... J NURSING/MATERNITY HOME ..... K OTHER PRIVATE MED ..... L _____ (SPECIFY) OTHER _____ X (SPECIFY)	
408	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS ..... ☐☐ DON'T KNOW 98	
409	How many times did you receive antenatal care during this pregnancy?	NO. OF TIMES ..... ☐☐ DON'T KNOW 98	
410	CHECK 409: NUMBER OF TIMES RECEIVED ANTENATAL CARE	ONCE ☐ → (SKIP TO 412) MORE THAN ONCE OR DON'T KNOW ☐ →	
411	How many months pregnant were you the last time you received antenatal care?	MONTHS ..... ☐☐ DON'T KNOW 98	

	QUESTONS AND FILTERS	CODING CATEGORIES	SKIP
412	As part of your antenatal care during this pregnancy, were any of the following done at least once? Were you weighed? Was your height measured? Was your blood pressure measured? Did you give a urine sample? Did you give a blood sample? Given any information or counseled about breastfeeding? Prevention of Mother to Child Transmission of HIV (PMTCT)	YES NO WEIGHT ..... 1 2 HEIGHT ..... 1 2 BLOOD PRESSURE..... 1 2 URINE SAMPLE ..... 1 2 BLOOD SAMPLE..... 1 2 COUNCELED ABOUT BREAST FEEDING……1 2 PMTCT ……1 2	
413	During (any of) your antenatal care visit(s), were you told about the signs of pregnancy complications?	YES ..... 1 NO ..... 2 → 414A DON'T KNOW ..... 8 → 414A	
414	Were you told where to go if you had any of these complications?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
414A	At any time during this pregnancy, did you experience any of the following: Bleeding Excessive vomiting Convulsions Swelling Fever Pain/urine Jaundice High blood pressure Anemia Other IF THE RESPONDENT DID NOT EXPERIENCE ANY OF THE PROBLEMS SKIP TO 426	YES NO DK BLEEDING 1 2 8 EXCESSIVE VOMITING 1 2 8 CONVULSIONS 1 2 8 SWELLING 1 2 8 FEVER…… 1 2 8 PAIN/URINE…… 1 2 8 JAUNDICE…. 1 2 8 HIGH BP 1 2 8 ANEMIA 1 2 8 OTHER 1 2 8	
414B	Were you admitted to hospital during this pregnancy for any of these problems?	YES ---------- 1 NO ---------- 2 → 426	
414C	What was the reason(s) for admission? Any other reason? CIRCLE ALL MENTIONED	BLEEDING ..... A EXCESSIVE VOMITING ..... B CONVULSIONS ..... C SWELLING ..... D FEVER ..... E PAIN/URINE ..... F JAUNDICE ..... G HIGH BP ..... H ANEMIA ..... I OTHER _____ X (SPECIFY)	
414D	CHECK 414C	CODE "A" CIRCLED CODE "A" NOT CIRCLED (SKIP TO 426)	
414E	When did the bleeding occur? When else?	FIRST 3 MONTHS ---------- A MIDDLE 3 MONTHS ---------- B LAST 3 MONTHS ----------C	

	QUESTONS AND FILTERS	CODING CATEGORIES	SKIP
426	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS ASSISTING. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY	**HEALTH PERSONNEL** DOCTOR ..... A NURSE/MIDWIFE ..... B ASSOCIATE NURSE ..... C **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT ..... D COMMUNITY HEALTH WORKER ..... E RELATIVE/FRIEND ..... F OTHER _____ X (SPECIFY) NO ONE ..... Y	
426A	How long were you in labor during this pregnancy?	LESS THAN 12 HOURS ---------- 1 12 – 24 HOURS ---------- 2 MORE THAN 24 HOURS ---------- 3	
426B	Was there difficulty in removing the placenta?	YES ---------- 1 NO ---------- 2	
426C	How long was the placenta retained?	LESS THAN 6 HOURS ---------- 1 6-12 HOURS ---------- 2 MORE THAN 12 HOURS ---------- 3	
426D	During labor and/or delivery, were you sick with a high fever?	YES ---------- 1 NO ---------- 2 DON'T KNOW ---------- 8	→ 426G
426E	Did you seek treatment for the fever?	YES ---------- 1 NO ---------- 2	→ 426G
426F	Where did you seek treatment for the fever?	IN SAME HEALTH FACILITY WHERE DELIVERY TOOK PLACE ---- 1 REFERED TO A HIGHER LEVEL OF SERVICE ---------- 2 OTHER _____ 6 (SPECIFY)	
426G	During labor and/or delivery, did you have any convulsions not caused by fever - that is eclampsia?	YES ---------- 1 NO ---------- 2 DON'T KNOW ---------- 8	→ 426J
426H	Did you seek treatment for the convulsions?	YES ---------- 1 NO ---------- 2	→ 426J
426I	Where did you seek treatment for the convulsions?	IN SAME HEALTH FACILITY WHERE DELIVERY TOOK PLACE ---- 1 REFERED TO A HIGHER LEVEL OF SERVICE ---------- 2 OTHER _____ 6 (SPECIFY)	
426J	During labor and/or delivery, did you lose a lot of blood? PROBE: Did you bleed so much that you were afraid of dying?	YES ---------- 1 NO ---------- 2 DON'T KNOW ---------- 8	

	QUESTONS AND FILTERS	CODING CATEGORIES	SKIP
427	Where did you give birth to (NAME)? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**HOME** YOUR HOME ..... 11 OTHER HOME ..... 12 → 428D **PUBLIC SECTOR** GOVT.HOSPITAL ..... 21 GOVT. HEALTH CENTER ..... 22 GOVT. HEALTH STATION ..... 23 OTHER PUBLIC_____ 26 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC ..... 31 MISSION HOSPITAL/ CLINIC ..... 32 NURSING/MATERNITY HOME ..... 33 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 → 428D (SPECIFY)	
427A	How did you reach that facility? IF MORE THAN ONE MEANS OF TRANSPORTATION WAS USED, RECORD THE MEANS BY WHICH THE LONGEST DISTANCE IS COVERED	ON FOOT ..... 1 CARRIED ON A STRETCHER ..... 2 ON ANIMAL (DONKEY, HORSE, CAMEL) ..... 3 AMBULANCE ..... 4 PRIVATE VEHICLES ..... 5 PUBLIC VEHICLE ..... 6 OTHER _____ 8 (SEPCIFY)	
427B	How long did it take you to reach that facility?	LESS THAN 2 HOURS ---------- 1 2-4 HOURS ---------- 2 5 HOURS OR MORE---------- 3	
427C	After delivery, how long did you stay in a health facility?	LESS THAN ONE DAY ---------- 1 1-2 DAYS ---------- 2 3 DAYS OR MORE ---------- 3 DON'T KNOW ---------- 8	
428	Was (NAME) delivered by caesarian section?	YES ..... 1 NO ..... 2 → 428B	
428A	What was the reason for delivery in a Caesarian section? CIRCLE ALL THAT ARE MENTIONED	ABNORMAL PRESENTATION (ABDOMINAL) ---------- A ABNORMAL PRESENTATION (VAGINAL) ---------- B PELVIS TOO SMALL ---------- C BABY TOO BIG ---------- D FETAL DISTRESS ---------- E PLACENTA PRAEVIA ---------- F ABRUPTION PLACENTA ---------- G REPEAT CAESARIAN SECTION ------ H NO PROGRESS IN LABOR ---------- I OTHER _____ X (SPECIFY) DON'T KNOW ---------- Z	

	QUESTONS AND FILTERS	CODING CATEGORIES	SKIP
428B	On discharge from health facility, were you counseled on the following: 1.Exclusive breast feeding 2.Maternal nutrition 3.Immunization of the child 4.Contraceptives 5.Other	YES NO EXCLUSIVE BREAST FEEDING..1 2 MATERNAL NUTRITION……1 2 IMMUNIZATION OF THE CHILD..1 2 CONTRACEPTIVES……..1 2 OTHER _____1 2 (SPECIFY)	
428C	After you were discharged, did any health care provider or a traditional birth attendant check on your health?	YES ..... 1 → 430 NO ..... 2 → 432B	
428D	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 DIDN'T ALLOW ----------F NOT NECESSARY ---------- G NOT CUSTOMARY ---------- H FEAR OF RE-INFIBULATION ---------I OTHER _____ X (SPECIFY)	
429	After (NAME) was born, did any health provider or a traditional birth attendant check on your health?	YES ..... 1 NO ..... 2 → 432B	
430	How long after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS. RECORD "00" DAYS IF SAME DAY.	HOURS ---------- 1 ☐☐ DAYS ----------2 ☐☐ WEEKS ---------- 3 ☐☐ DON'T KNOW ---------- 998	
431	Who checked on your health at that time? PROBE AND CIRCLE FOR MOST QUALIFIED IF MORE THAN ONE PERSON.	**HEALTH PERSONNEL** DOCTOR ..... 11 NURSE/MIDWIFE ..... 12 ASSOCIATE NURSE ..... 13 **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT ..... 21 COMMUNITY HEALTH WORKER ----------22 OTHER _____ 96 (SPECIFY)	

	QUESTONS AND FILTERS	CODING CATEGORIES	SKIP
432	Where did this first check take place? IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. _____ (NAME OF PLACE)	**HOME** YOUR HOME ..... 11 OTHER HOME..... 12 **PUBLIC SECTOR** GOVT. HOSPITAL ..... 21 GOVT. HEALTH CENTER..... 22 GOVT. HEALTH STATION ..... 23 OTHER PUBLIC _____ 26 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC..... 31 MISSION HOSPITAL/ CLINIC……. ……..…… 32 NURSING/MATERNITY HOME ……..…….. 33 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	
432A	CHECK 428C:	YES ☐ NOT ASKED ☐ (SKIP TO 432F)	
432B	In the two months after (NAME) was born, did any health care provider or a traditional birth attendant check on his/her health?	YES ..... 1 NO..... 2 DON'T KNOW ---------- 8	→ 432F
432C	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. RECORD "00" DAYS IF SAME DAY..	HOURS ---------- 1 ☐☐ DAYS ----------2 ☐☐ WEEKS ---------- 3 ☐☐ DON'T KNOW ---------- 998	
432D	Who checked on (NAME)'s health at that time? PROBE FOR MOST QUALIFIED PERSON.	**HEALTH PERSONNEL** DOCTOR ..... 11 NURSE/MIDWIFE ..... 12 ASSOCIATE NURSE..... 13 **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT ..... 21 COMMUNITY HEALTH WORKER ----------22 OTHER _____ 96 (SPECIFY)	

	QUESTONS AND FILTERS	CODING CATEGORIES	SKIP
432E	Where did this first check of (NAME) take place? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	**HOME** YOUR HOME ..... 11 OTHER HOME..... 12 **PUBLIC SECTOR** GOVT. HOSPITAL ..... 21 GOVT. HEALTH CENTER..... 22 GOVT. HEALTH STATION ..... 23 OTHER PUBLIC _____ 26 (SPECIFY) **PRIVATE MEDICAL SECTOR** PRIVATE HOSPITAL/ CLINIC..... 31 MISSION HOSPITAL/ CLINIC……. ……..…… 32 NURSING/MATERNITY HOME ……..…….. 33 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)	
432F	Did you lose a lot of blood after delivery of this pregnancy (Postpartum hemorrhage)? PROBE: Did you bleed so much that you were afraid of dying?	Yes ---------- 1 No ---------- 2 →	432H
432G	When did it happen?	FIRST DAY (24 HOURS) ---------- 1 FIRST WEEK ---------- 2 2-6 WEEKS AFTER DELIVERY -------- 3	
432H	Did you experience any of these complications during the postpartum period (from delivery up to 6 weeks)? 1.Postpartum sepsis 2.Postpartum eclampsia 3.Postpartum psychosis 4.Breast abscess 5.Others	YES NO POSTPARTUM SEPSIS .....1 2 POSTPARTUM ECLAMPSIA.....1 2 POSTPARTUM PSYCHOSIS …..1 2 BREAST ABSECESS ……1 2 OTHERS_____1 2 (SPECIFY)	

SECTION 9: OTHER HEALTH ISSUES

NO	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
912	Sometimes a woman can have a problem such that she experiences a constant leakage of urine or stool from her vagina during the day and night. This problem usually occurs after a difficult childbirth, but may also occur after a sexual assault or after a pelvic surgery. Have you ever experienced a constant leakage of urine or stool from your vagina during the day and night?	YES ---------- 1 NO---------- 2	→ 914
913	Have you ever heard of this kind of problem, such that a woman experiences a constant leakage of urine or stool from her vagina during the day and night?	YES ----------1 NO ---------- 2	→ 1001
914	Did this problem occur: after delivery, after a sexual assault, after pelvic surgery, or after some other events?	DELIVERY ----------A SEXUAL ASSAULT ----------B PELVIC SURVERY ----------C OTHER ----------X	→ 916
914A	Did this problem occur after an uncomplicated delivery, after a difficult delivery where the child was born alive, or after a difficult delivery where the child was born still?	UNCOMPLICATED DELIVERY---------- 1 DIFF DELIVERY, LIVE BORN---------- 2 DIFF DELIVERY, STILLBORN ---------- 3	
915	After which delivery did this occur?	DELIVERY NUMBER ☐☐	
916	How many days after (ANSWER TO Q914) did the leakage start? ASK FOR THE HIGHEST ANSWER ON LIST ENTER "95" IF MORE THAN 95.	NUMBER OF DAYS ☐☐	
917	Have you sought treatment for this condition?	YES ---------- 1 NO---------- 2	→ 919
918	Why have you not sought treatment? CIRCLE ALL THAT ARE MENTIONED	COULD BE FIXED ---------- A DON'T KNOW WHERE TO GO ----------B TOO EXPENSIVE ----------C TOO FAR ---------- D POOR QUALITY OF CARE ----------E COULD NOT GET PERMISSION---------- F EMBARASSMENT ---------- G OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	→ 1001
919	From whom did you last seek treatment?	**HEATH PROFESSIONAL** DOCTOR/CLINICAL OFFICIER ----------11 NURSE/MIDWIFE---------- 12 PATIENT ATTENDANT---------- 13 OTHER _____ 16 (SPECIFY) **OTHER PERSON** TRADITIONAL BIRTH ATTENDANT ----------21 COMMUNITY HELATH AGENT ----------22 OTHER _____26 (SPECIFY)	
920	Did the treatment stop the problem?	YES, NO MORE LEAKAGE AT ALL ----- 1 YES, BUT STILL SOME LEAKAGE ------ 2 NO, STILL HAVE PROBLEM ---------- 3	
921	How many times did you have surgery for Fistula repair?	NONE ---------- 1 ONE ----------2 TWO ----------3 THREE OR MORE---------- 4	

SECTION 10: MATERNAL MORTALITY

NO	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1001	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. Did your mother give birth to any children other than yourself?	YES ----------1 NO ----------2 → 1008 DON'T KNOW ---------- 8 → 1008	
1002	How many sons did your mother have who are still alive?	BOYS LIVING ---------- ☐☐	
1003	Excluding yourself, how many daughters did your mother have who are still alive?	GIRSL LIVING---------- ☐☐	
1004	How many sons did your mother have who have died?	BOYS DEAD ---------- ☐☐	
1005	How many daughters did your mother have who have died?	GIRLS DEAD---------- ☐☐	
1006	Has your mother given birth to other children for whom you do not know whether they are still alive or have died?	YES ----------1 NO ----------2 → 1008	
1007	How many other children has your mother had for whom you do not know whether they are still alive or have died?	OTHER CHILDREN ---------- ☐☐	
1008	SUM ANSWERS TO 1002, 1003, 1004, 1005, AND 1007, ADD 1(THE RESPONDENT) AND RECORD THE TOTAL	TOTAL---------- ☐☐	
1009	CHECK 1008: Just to make sure that I have this right: your mother gave birth to _____ child (ren), including yourself. Is that correct? YES ☐ ↓ NO → PROBE AND CORRECT 1001- 1008 AS NECESSARY		
1010	CHECK 1008: TWO OR MORE BIRTHS ☐ ↓ ONLY ONE BIRTH (RESPONDENT ONLY) ☐ → 1022		
1011	How many of these births did your mother have before you were born?	NUMBER OF PRECEDING BIRTHS… ☐☐	

NO	QUESTIONS AND FILTERS	CODING CATEGORIES					
1012	What was the name given to your oldest (next oldest) brother or sister?	(1) _____	(2) _____	(3) _____	(4) _____	(5) _____	(6) _____
1013	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
1014	Is (NAME) still alive?	YES--------- 1 NO ---------- 2 1016 ← DK ---------- 8 (C.2) ←	YES -------- 1 NO---------- 2 1016 ← DK---------- 8 (C.3) ←	YES--------- 1 NO ---------- 2 1016 ← DK ---------- 8 (C.4) ←	YES -------- 1 NO---------- 2 1016 ← DK---------- 8 (C.5) ←	YES--------- 1 NO ---------- 2 1016 ← DK ---------- 8 (C.6) ←	YES -------- 1 NO---------- 2 1016 ← DK---------- 8 (C.7) ←
1015	How old is (NAME)?	☐☐ GO TO (C.2)	☐☐ GO TO (C.3)	☐☐ GO TO (C.4)	☐☐ GO TO (C.5)	☐☐ GO TO (C.6)	☐☐ GO TO (C.7)
1016	How many years ago did (NAME) die?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
1017	How old was (NAME) when he/she died?	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.2)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.3)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.4)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.5)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.6)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.7)
1018	Was (NAME) pregnant when she died?	YES -------1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8	YES ------ 1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8	YES ------ 1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8
1019	Did (NAME) die during child birth?	YES -------1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8	YES ------ 1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8	YES ------ 1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8
1020	Did (NAME) die within two months after the end of pregnancy or child birth?	YES -------1 NO -------- 2 DK..... 8	YES -------1 NO-------- 2 DK 8	YES ------ 1 NO -------- 2 DK..... 8	YES -------1 NO-------- 2 DK 8	YES ------ 1 NO -------- 2 DK..... 8	YES -------1 NO-------- 2 DK 8
1021	How many live born children did (NAME) give birth to during her lifetime (before this pregnancy)	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
IF NO MORE BROTHERS OR SISTERS, GO TO 1022							

NO	QUESTIONS AND FILTERS	CODING CATEGORIES					
1012	What was the name given to your oldest (next oldest) brother or sister?	(7) _____	(8) _____	(9) _____	(10) _____	(11) _____	(12) _____
1013	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
1014	Is (NAME) still alive?	YES--------- 1 NO ---------- 2 1016 ← DK ---------- 8 (C.8) ←	YES -------- 1 NO---------- 2 1016 ← DK---------- 8 (C.9) ←	YES--------- 1 NO ---------- 2 1016 ← DK ---------- 8 (C.10) ←	YES -------- 1 NO---------- 2 1016 ← DK---------- 8 (C.11) ←	YES--------- 1 NO ---------- 2 1016 ← DK ---------- 8 (C.12) ←	YES--------- 1 NO---------- 2 1016 ← DK---------- 8 (C.13) ←
1015	How old is (NAME)?	☐☐ GO TO (C.8)	☐☐ GO TO (C.9)	☐☐ GO TO (C.10)	☐☐ GO TO (C.11)	☐☐ GO TO (C.12)	☐☐ GO TO (C.13)
1016	How many years ago did (NAME) die?	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
1017	How old was (NAME) when he/she died?	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.8)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.9)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.10)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.1)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.12)	☐☐ IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO (C.13)
1018	Was (NAME) pregnant when she died?	YES -------1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8	YES ------ 1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8	YES ------ 1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK..... 8
1019	Did (NAME) die during child birth?	YES -------1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8	YES ------ 1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK 8	YES ------ 1 1021 ← NO -------- 2 DK..... 8	YES -------1 1021 ← NO-------- 2 DK..... 8
1020	Did (NAME) die within two months after the end of pregnancy or child birth?	YES -------1 NO -------- 2 DK..... 8	YES -------1 NO-------- 2 DK 8	YES ------ 1 NO -------- 2 DK..... 8	YES -------1 NO-------- 2 DK 8	YES ------ 1 NO -------- 2 DK..... 8	YES -------1 NO-------- 2 DK..... 8
1021	How many live born children did (NAME) give birth to during her lifetime (before this pregnancy)	☐☐	☐☐	☐☐	☐☐	☐☐	☐☐
CHECK (X) HERE IF CONTINUETION SHEET IS USED IF NO MORE BROTHERS OR SISTERS GO TO 1022							☐
1022	RECORD THE TIME	HOURS ---------- MINUTES ----------					☐☐ ☐☐

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

NAME OF THE INTERVIEWER:_____DATE:
_____/_____/_____SIGNATURE_____

SUPERVISOR'S OBSERVATIONS

NAME OF THE SUPERVISOR:_____DATE: _____/_____/_____SIGNATURE_____

EDITOR'S OBSERVATIONS

NAME OF THE EDITOR:_____DATE: _____/_____/_____SIGNATURE_____