Ethiopia
Mini Demographic and Health Survey
2014

Central Statistical Agency

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MOH

The 2014 Ethiopia Mini Demographic and Health Survey (EMDHS) was conducted under the aegis of the Ministry of Health and implemented by the Central Statistical Agency (CSA). Funding for the EMDHS was provided through the Promoting of Basic Services Project III which supports development of country statistical systems. The United Nations Children's Fund (UNICEF) purchased height boards for the measurement of child height. Technical assistance for the survey was provided by a team of experts hired by the World Bank with experience in the conduct of the previous three DHS surveys in Ethiopia. The World Bank provided technical guidance and logistical support throughout the implementation of the project.

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FOREWORD

The 2014 Mini Ethiopia Demographic and Health Survey (EMDHS) was conducted by the Central Statistical Agency (CSA) under the aegis of the Ministry of Health. The main objective of the survey was to collect population-based data on key demographic indicators that support the monitoring and evaluation needs for Phase IV of the Ethiopia Health Sector Development Program. It is envisaged that the survey would provide a basis for measuring the progress of the health sector goals set under the Growth and Transformation Plan (GTP) and that is also closely aligned to the Millennium Development Goals (MDG). Specifically, the 2014 EMDHS was conducted to obtain current information on: contraceptive prevalence; maternity care indicators, including at least one antenatal visit, and skilled birth attendance at delivery; and, data to measure specific MDG indicators.

The EMDHS interviewed 8,070 women age 15-49 from a nationally representative sample of 8,475 households. In this report key health indicators are provided for the country as a whole, for urban and rural areas, and for each of the nine regional states and two city administrations.

Major stakeholders from various government, non-government and UN organizations have been involved and contributed in the technical, managerial and operational aspects of the survey. The CSA would therefore, like to acknowledge these organizations and individuals who contributed in various ways to the successful completion of the 2014 EMDHS. The Agency is grateful for the commitment of the Government of Ethiopia and the generous funding support from the Promoting of Basic Services (PBS) Project III. Special thanks to the external consultant and two Ethiopians hired by the World Bank to provide day-to-day administrative, technical and logistical support to the CSA during all phases of the survey. Thanks also go to the World Bank for hiring two other consultants to assist CSA with sampling and data processing. All staff hired by the bank had considerable experience in managing and conducting the three previous Ethiopia DHS surveys and this has ensured that results from the EMDHS is closely comparable to the DHS surveys. CSA is grateful to UNICEF for purchasing height boards to support the anthropometric data collection for children under 5 years. The Agency is also grateful for the team of experts from CSA, MOH and EPHI who have participated in preparing the report of the survey in collaboration with consultants from the World Bank.

The Agency also extends a special thanks to the Ministry of Health for overall co-ordination of the survey and to all members of institutions represented in the EMDHS Technical Working Group—MOH, EPHI, and the World Bank, for their valuable contributions to the successful completion of the survey.

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Millennium Development Goal Indicators, Ethiopia 2014

Goal	Indicator	Value		
		Female	Male	Total
1.	**Eradicate extreme poverty and hunger**			
	1.8 Prevalence of underweight children under five years of age[1]	25.7%	24.8%	25.2%
2.	**Achieve universal primary education**			
	2.1 Net attendance ratio in primary education[2]	67.5%	64.0%	65.7%
	2.3 Literacy rate of 15-24 year olds[3]	64.6%	na	na
3.	**Promote gender equality and empower women**			
	3.1a Ratio of girls to boys in primary education[4]			1.1
	3.1b Ratio of girls to boys in secondary education[4]			1.4
	3.1c Ratio of girls to boys in tertiary education[4]			1.0
5.	**Improve maternal health**			
	5.2 Proportion of births attended by skilled health personnel[5]	15.5%	na	na
	5.3 Contraceptive prevalence rate[6]	42.0%	na	na
	5.4 Adolescent birth rate[7]	63 per 1,000	na	na
	5.5 a) Antenatal care coverage: at least one ANC visit	58.3%	na	na
	b) Antenatal care coverage: at least four ANC visits	32.1%	na	na
		Urban	Rural	Total
7.	**Ensure environmental sustainability**			
	7.8 Proportion of population using an improved drinking water source[8]	92.0%	44.8%	52.7%
	7.9 Proportion of population using an improved sanitation facility[9]	14.5%	2.5%	4.5%

na = Not applicable

[1] Proportion of children age 0-59 months who are below -2 standard deviations (SD) from the median of the WHO Child Growth Standards in weight-for-age.

[2] The rate is based on reported attendance, not enrollment, in primary education among primary school age children (7-14 year-olds). The rate also includes children of primary school age enrolled in secondary education. This is a proxy for MDG indicator 2.1, Net enrollment ratio.

[3] Refers to respondents who attended secondary school or higher or who could read a whole sentence or part of a sentence

[4] Based on reported net attendance, not gross enrollment

[5] Among births in the five years preceding the survey

[6] Percentage of currently married women age 15-49 using any method of contraception

[7] Equivalent to the age-specific fertility rate for women age 15-19 for the 3-year period before the survey, expressed in terms of births per 1,000 women age 15-19

[8] Percentage of *de jure* population whose main source of drinking water is a household connection (piped), public standpipe, borehole, protected dug well or spring, rainwater collection, or bottled water.

[9] Percentage of *de jure* population with access to flush toilet, ventilated improved pit latrine, traditional pit latrine with a slab, or composting toilet and does not share this facility with other households.

INTRODUCTION 1

Key Findings

- The 2014 Ethiopia Mini Demographic and Health Survey (EMDHS) is a nationally representative survey of 8,070 women age 15-49.
- The survey provides a basis for measuring the progress of the health sector goals set under the GTP and that is also closely aligned to the MDG. The EMDHS provides updated information on key health indicators since 2011.

1.1 INTRODUCTION

Ethiopia's Growth and Transformation Plan (GTP) 2011-2015 has been designed to maintain the rapid and broad-based economic growth enjoyed by Ethiopia in the recent past and eventually to end poverty (MOFED, 2010). The Health Sector Development Program (HSDP) is a key component of the GTP and its primary objective is to improve the health of the population through the promotion of preventive, curative and rehabilitative health services by:

- Improving access to affordable health services; and
- Improving the quality of health services

The health policy in Ethiopia also takes into account broader issues such as population dynamics, food availability, acceptable living conditions, and other essentials of better health. The HSDP prioritizes maternal and newborn care, and child health, and aims to halt and reverse the spread of major communicable diseases such as HIV/AIDS, TB, and malaria. The Health Extension Programme (HEP) serves as the primary vehicle for the prevention, health promotion, behavioural change communication, and basic curative care. The HEP is an innovative health service delivery programme that aims at universal coverage of primary health care. The programme is based on expanding physical health infrastructure and developing Health Extension Workers (HEWs) who provide basic preventive and curative health services in the rural community.

The first phase of the HSDP (HSDP I) was initiated in 1996/97. Thus far, the country has implemented the HSDP in three cycles and is in its fourth phase, HSDP IV (2010/11-2014/15). Assessment of HSDP III shows remarkable achievements in the expansion and construction of health facilities, and improvement in the quality of health service provision.

HSDP IV is designed to provide massive training of health workers to improve the provision of quality health services and the development of a community health insurance strategy for the country (MOH, 2010). In addition, HSDP IV prioritizes maternal and newborn care, and child health. In line with the government's current five-year national plan, the health sector continues to emphasize primary health care and preventive services; with focus on extending services to those who have not yet been reached and on improving the effectiveness of services, especially addressing difficulties in staffing and the flow of drugs.

To assist with monitoring these objectives, Ethiopia has made considerable effort to generate reliable demographic data by conducting a number of demographic and health surveys including the

2000, 2005, and 2011 Ethiopia Demographic and Health Surveys (EDHS). These surveys yield substantial information on fertility, family planning, contraceptive use, maternal and child health, nutrition and breastfeeding practices, and HIV and other sexually transmitted diseases.

1.2 OBJECTIVES OF THE 2014 EMDHS SURVEY

The 2014 Ethiopia Mini Demographic and Health Survey (EMDHS) was fielded to collect population-based data on key demographic indicators to support the monitoring and evaluation needs for Phase IV of the HSDP. The survey provides a basis for measuring the progress of the health sector goals set under the GTP and that is also closely aligned to the MDG. The EMDHS provides updated information on key health indicators since 2011 when the third Ethiopia Demographic and Health (2011 EDHS) survey was conducted. The sample design, sample selection and survey methodology employed in the EMDHS is identical to that of the three previous EDHS surveys in order to ensure comparability.

The EMDHS was undertaken on a representative sample of women in the reproductive ages of 15-49. Its specific objectives are to collect information which will allow for estimation of some of the MDG indicators including the 3 disbursement linked indicators[1] agreed for the Ethiopia MDG Support Program for Results operation. Specifically the EMDHS:

- measures the contraceptive prevalence rate of women;
- collects data on maternity care indicators including antenatal visits and assistance at delivery; and,
- collects data to measure some MDG indicators.

1.3 ORGANIZATION OF THE SURVEY

The EMDHS was carried out under the aegis of the Ministry of Health which had a primary role in planning for the survey and in the analysis and dissemination of the survey results. The Central Statistical Agency (CSA) served as the implementing agency for the EMDHS. The CSA took responsibility for operational matters including planning and conducting fieldwork, processing of collected data and organizing the writing and distribution of reports. The CSA furnished the necessary central office space for survey personnel and undertook to secure transport for the data collection activities. Staff from the CSA was responsible for overseeing the day-to-day technical operations including recruitment and training of field and data processing staff and the supervision of the office and field operations.

Funding for this survey came from the Promoting of Basic Services Project III which supports development of country statistical systems. An external consultant was hired by the World Bank to provide technical assistance during all phases of the survey together with two Ethiopians who provided day-to-day administrative, technical and logistical support to the CSA. In addition, limited technical assistance was provided on sample design and data processing by two external consultants hired by the World Bank. All staff hired by the bank had considerable experience in managing and conducting the three previous Ethiopia DHS surveys.

[1] These indicators are: contraceptive prevalence rate, antenatal care (at least one visit), and deliveries attended by skilled birth providers.

The CSA formed a Technical Working Group (TWG), to provide ongoing technical input in the planning, implementation and analysis phases of the survey. The TWG was made up of representatives from the Ministry of Health (MOH), Ethiopian Public Health Institute (EPHI), CSA, and the World Bank.

1.4 SAMPLE DESIGN

A detailed sampling plan laying out the target sample size and the sample selection procedures was prepared. In order to achieve the survey objectives, a stratified national sample of about 9,150 private households was targeted for the EMDHS. All women age 15-49, living permanently in the selected households or present in the household on the night before the survey visit, were eligible to be interviewed in the EMDHS.

The EMDHS sample was drawn in two stages. The first stage of sample selection involved the selection of approximately 305 sampling units consisting of enumeration areas that was drawn from the 2007 Population and Housing Census**.** The sample was stratified so as to yield adequate representation in urban and rural areas, and for each of the 11 regions, for which separate estimates of key indicators were obtained through the 2014 EMDHS. In each of these sampling domains, the sampling units were drawn with a probability proportional to their size, and households were drawn with an inverse probability such that the sample is self-weighted within a domain.

Updating of the selected clusters (mapping and a complete listing of households in each sampling unit) was undertaken prior to the EMDHS fieldwork. A total of 22 teams, each consisting of two listers, was recruited for the updating, which was carried out over three months. Twenty-two fieldwork supervisors and five coordinators were responsible for monitoring the activities of the listing teams. The CSA organized a five-day training for the supervisors and listers prior to the start of the sample updating.

In the second stage an equal probability systematic selection of 30 households per cluster was carried out from the newly created household listing. The survey interviewers interviewed only the pre-selected households. No replacements and no changes of the pre-selected households were allowed in the implementing stages in order to prevent bias.

The sampling design provides updated information on some key health indicators for HSDP IV showing trends using the standard DHS reference periods to monitor the country's progress towards achieving the MDG goals. These indicators are calculated exactly the same way to ensure comparability with earlier rounds of DHS.

1.5 QUESTIONNAIRES

The EMDHS used two questionnaires: (1) a Household Questionnaire, and, (2) a Woman's Questionnaire, for individual women. These instruments were based on the 2011 Ethiopia DHS, and adapted to the needs of users of the EMDHS.

The Household Questionnaire was used to list all the usual members and visitors of selected households. Basic information was collected on the characteristics of each person listed, including age, sex, education, and relationship to the head of the household. The data on the age and sex of

household members obtained in the Household Questionnaire were used to identify women who were eligible for the individual interview. The Household Questionnaire also collected information on characteristics of the household's dwelling unit, such as the source of water, type of toilet facilities, materials used for the floor of the house, and ownership of various consumer durable goods. In addition, this questionnaire was used to record height and weight measurements of all children under age 5. For the first time, data was also collected on whether households received support from the Productive Safety Nets Programme.

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

- Background characteristics such as age, education, literacy and marital status
- Birth history and childhood mortality
- Knowledge and use of family planning methods
- Antenatal, delivery and postnatal care.

After preparation of the definitive questionnaires in English, they were translated into the three main Ethiopian languages (Amharic, Oromiffa, and Tigrigna).

In addition to the questionnaires, the following technical documents were also prepared:

- Listing Manual;
- Interviewers' Manual;
- Supervisors'/Field Editors' Manual;
- Interviewer and Supervisor Assignment Sheets;
- Data Processing Manual.

1.6 PRETEST, MAIN TRAINING, FIELDWORK, AND DATA PROCESSING

Pretest

Before the start of fieldwork, the questionnaires were pretested in all three local languages to make sure that the questions were clear and could be understood by the respondents. CSA staff participated in a two-week pretest training and fieldwork conducted by consultants hired by the World Bank, from 12 November to 26 November 2013. Fifteen participants were trained to administer paper questionnaires and take anthropometric measurements. The pretest fieldwork, which covered 200 households, was conducted over five days in urban *kebeles* of Addis Ababa; and in both urban and rural *kebeles* in the surrounding towns of Butajera, Adama and Mekele. These *kebeles* were outside the EMDHS sample points. Debriefing sessions were held with the pretest field staff, and the questionnaires were modified based on lessons drawn from the pretest exercise.

Main Training

Recruitment of interviewers, editors, and supervisors for the main fieldwork was conducted in the nine regions and two city administrations, taking into account the languages of the specific areas. Accommodation was arranged for the trainees and trainers at a training site, Ethiopian Management Institute in Debre Zeit (Besheftu). CSA recruited and trained 132 people for the main fieldwork to

serve as supervisors, editors, female interviewers, and reserve interviewers. Also trained were field quality control staff, office editors, and office supervisors. The training of interviewers, editors and supervisors was conducted from 26 December 2013 to 8 January 2014. The training consisted of instruction on interviewing techniques and field procedures, a detailed review of the questionnaire content, instruction and practice in weighing and measuring children, mock interviews between participants in the classroom, field practice in anthropometry, and, interviews with real respondents in areas outside the EMDHS sample points. Team supervisors and editors were trained in data quality control procedures and fieldwork coordination. The Amharic questionnaires were mainly used during the training, while the Tigrigna and Oromiffa versions were simultaneously checked against the Amharic questionnaires to ensure accurate translation.

Fieldwork

Twenty-two interviewing teams carried out data collection for the EMDHS. Each team consisted of one team supervisor, one field editor, three female interviewers, one cook, and one driver. Eleven staff members from CSA coordinated and supervised fieldwork activities. World Bank consultants and representatives from other organisations supporting the survey, including EPHI and MOH, also supervised fieldwork. In addition to the field teams, a quality control team was present in each of the 11 regions. Each quality control team had two persons to monitor the quality of the interviews. The quality control teams regularly visited and often stayed with the EMDHS teams throughout the fieldwork period to closely supervise and monitor them. Data collection took place over a four-month period from 10 January 2014 to the end of April 2014.

Data Processing

All questionnaires for the EMDHS were returned to the CSA headquarters in Addis Ababa for data processing, which consisted of office editing, coding of open-ended questions, data entry, and editing computer-identified errors. The data were processed by a team of 18 data entry operators, 2 office editors, 2 data entry supervisors and 3 programmers. Data entry and editing were accomplished using the CSPro software. The processing of data was initiated in January 24, 2014 and completed in May 6, 2014.

1.7 ANTHROPOMETRY

Height and weight measurements were carried out on children under age 5 in all selected households. Weight measurements were obtained using lightweight, SECA mother-infant scales with a digital screen, designed and manufactured under the guidance of UNICEF. Height measurements were carried out using a Shorr measuring board purchased by UNICEF for the survey. Children younger than 24 months were measured for height while lying down, and older children, while standing.

1.8 RESPONSE RATES

Table 1.1 shows household and individual response rates for the EMDHS. A total of 9,135 households were selected for the sample, of which 8,727 were found to be occupied during data collection. Of these, 8,475 were successfully interviewed, yielding a household response rate of 97 percent.

In the interviewed households 8,492 eligible women were identified for individual interview; interviews were completed for 8,070 women age 15-49, yielding an individual response rate of 95 percent. Response rates for women were only marginally higher in urban areas than in rural areas.

Due to the non-proportional allocation of the sample to the different regions and to their urban and rural areas, sampling weights are used for analyzing the EMDHS data to ensure the actual representativeness of the survey results at the national and regional level (for more information on sample weights, see Appendix A). Both weighted and unweighted numbers are shown in the tables of this report.

Table 1.1 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence (unweighted), Ethiopia 2014

Result	Residence		Total
	Urban	Rural	
Household interviews			
Households selected	2,781	6,354	9,135
Households occupied	2,651	6,076	8,727
Households interviewed	2,556	5,919	8,475
Household response rate[1]	96.4	97.4	97.1
Interviews with women age 15-49			
Number of eligible women	2,783	5,709	8,492
Number of eligible women interviewed	2,658	5,412	8,070
Eligible women response rate[2]	95.5	94.8	95.0

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

HOUSING CHARACTERISTICS AND HOUSEHOLD POPULATION 2

Key Findings

- More than half of households in Ethiopia (57 percent) have access to an improved source of drinking water.
- Only 4 percent of households have an improved toilet facility, not shared with other households.
- About one household in every four (24 percent) has access to electricity.
- A large proportion of the Ethiopian population (45 percent) is under age 15.
- More than one household in every four (23 percent) is female-headed.

This chapter summarizes demographic and socioeconomic characteristics of the population in the households sampled in the 2014 Ethiopia Mini Demographic and Health Survey (EMDHS). The survey collected information from all usual residents of a selected household (the *de jure* population) and persons who had stayed in the selected household the night before the interview (the *de facto* population). Since the difference between these two populations is very small, and to maintain comparability with other DHS reports, all tables in this report refer to the *de facto* population unless otherwise specified. As in the DHS surveys, in the EMDHS, a household was defined as a single person or a group of related or unrelated persons who live together in the same dwelling unit(s) or in connected premises, who acknowledge one adult member as head of the household, and who have common arrangements for cooking and eating. The Household Questionnaire (see Appendix E) included a schedule of questions to obtain basic demographic and socioeconomic data (e.g., age, sex, educational attainment, and current school attendance) for all usual residents and for visitors who spent the night preceding the interview in the household. The Household Questionnaire also obtained information on housing characteristics (e.g., source of drinking water and type of sanitation facilities) and household possessions.

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

2.1 HOUSEHOLD ENVIRONMENT

Physical characteristics of a household's environment serve as indicators of the socioeconomic status of households and are important determinants of the health status of household members. The EMDHS asked respondents about the source of drinking water for their household, the type of sanitation facility, access to electricity, and type of flooring material used in the dwelling. The results are presented here in terms of households and of the *de jure* population.

2.1.1 Drinking Water

Increasing access to improved drinking water is one of the Millennium Development Goals that Ethiopia and other nations worldwide have adopted (United Nations General Assembly, 2002). The source of the water is an indicator of whether it is suitable for drinking. 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/standpipe; borehole; a protected well; a protected spring; and rainwater (WHO and UNICEF, 2010).

Table 2.1 presents information on households' access to drinking water. More than half of the households in Ethiopia (57 percent) have access to an improved source of drinking water, with a much higher proportion among urban households (94 percent) than among rural households (46 percent). The most common source of improved drinking water in urban households is piped water, used by 87 percent of urban households. In contrast, only 18 percent of rural households have access to piped water. Sixteen percent of rural households have access to drinking water from a protected well, and 11 percent have access to drinking water from a protected spring.

Nationally, the proportion of Ethiopian households with access to an improved source of drinking water has increased only marginally in the last three years from 54 percent in 2011 to 57 percent in 2014, in contrast to the marked increase in the six years from 2005 to 2011. Access to piped water increased from 24 percent in 2005 to 34 percent in 2011 and changed marginally to 33 percent in 2014.

Table 2.1 Household drinking water

Percent distribution of households and *de jure* population by source of drinking water according to residence, Ethiopia 2014

Characteristic	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Source of drinking water						
Improved source	94.3	46.4	56.9	92.0	44.8	52.7
Piped into dwelling	2.6	0.0	0.6	2.5	0.0	0.5
Piped to yard/plot	52.4	0.9	12.2	48.5	0.7	8.7
Public tap/standpipe	32.0	16.7	20.1	32.3	16.9	19.5
Borehole	0.0	0.3	0.3	0.0	0.4	0.3
Protected well	4.6	16.4	13.8	5.3	15.0	13.4
Protected spring	2.2	11.3	9.3	3.0	11.0	9.6
Rain water	0.0	0.6	0.5	0.1	0.8	0.7
Bottled water	0.5	0.0	0.1	0.2	0.0	0.0
Non-improved source	4.7	53.1	42.5	7.2	54.7	46.8
Unprotected well	1.3	5.0	4.2	2.2	5.4	4.8
Unprotected spring	0.9	31.6	24.8	1.0	32.4	27.1
Tanker truck/cart with small tank	0.6	0.3	0.4	0.7	0.3	0.4
Surface water	1.9	16.3	13.1	3.2	16.7	14.4
Other Source	1.0	0.5	0.6	0.8	0.4	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percentage using any improved source of drinking water	94.3	46.4	56.9	92.0	44.8	52.7
Weighted number	1,861	6,614	8,475	6,720	33,384	40,104
Unweighted number	2,556	5,919	8,475	9,563	30,436	39,999

2.1.2 Household Sanitation Facilities

Ensuring adequate sanitation facilities is another Millennium Development Goal that Ethiopia shares with other countries. At the household level, adequate sanitation facilities include an improved toilet and disposal that separates waste from human contact. A household is classified as having an improved toilet if it is used only by members of one household (that is, it is not shared) and if the facility used by the household separates the waste from human contact (WHO and UNICEF, 2010).

Table 2.2 shows that only 4 percent of households in Ethiopia use improved toilet facilities that are not shared with other households, 11 percent in urban areas and 2 percent in rural areas. Eight percent of households (31 percent in urban areas and 1 percent in rural areas) use shared toilet facilities. The vast majority of households, 88 percent, use non-improved toilet facilities (97 percent in rural areas and 58 percent in urban areas). The most common type of non-improved toilet facility is an open pit latrine or pit latrine without slabs, used by 57 percent of households in rural areas and 44 percent of households in urban areas.

Access to improved toilet facilities appears to have declined over the last ten years from 7 percent in 2005 to 4 percent in 2014. However, there has been a marked increase over the same period in access to non-improved facilities, and particularly in the use of pit latrines without slabs/open pits from 19 percent to 54 percent, with a concomitant decrease in households with no facility.

Table 2.2 Household sanitation facilities

Percent distribution of households and de jure population by type of toilet/latrine facilities, according to residence, Ethiopia 2014

Type of toilet/latrine facility	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Improved, not shared facility	10.8	2.3	4.2	14.5	2.5	4.5
Flush/pour flush to piped sewer system	1.8	0.0	0.4	2.2	0.0	0.4
Flush/pour flush to septic tank	0.9	0.0	0.2	1.0	0.0	0.2
Flush/pour flush to pit latrine	0.6	0.0	0.2	0.8	0.1	0.2
Ventilated improved pit (VIP) latrine	0.3	0.2	0.2	0.3	0.2	0.2
Pit latrine with slab	6.7	1.1	2.3	9.6	1.1	2.5
Composting toilet	0.5	1.0	0.9	0.6	1.2	1.1
Shared facility[1]	31.3	1.1	7.8	26.5	0.9	5.2
Flush/pour flush to piped sewer system	0.3	0.0	0.1	0.2	0.0	0.0
Flush/pour flush to septic tank	0.5	0.0	0.1	0.4	0.0	0.1
Flush/pour flush to pit latrine	0.7	0.0	0.2	0.7	0.0	0.1
Ventilated improved pit (VIP) latrine	0.6	0.0	0.2	0.4	0.0	0.1
Pit latrine with slab	28.2	0.9	6.9	23.9	0.6	4.5
Composting toilet	0.9	0.2	0.4	0.8	0.2	0.3
Non-improved facility	57.9	96.5	88.1	59.0	96.6	90.3
Flush/pour flush not to sewer/septic tank/pit latrine	0.1	0.0	0.0	0.0	0.0	0.0
Pit latrine without slab/open pit	44.4	56.7	54.0	44.5	57.9	55.6
Bucket	0.0	0.0	0.0	0.0	0.0	0.0
Hanging toilet/hanging latrine	1.8	0.0	0.4	1.5	0.0	0.2
No facility/bush/field	11.3	39.8	33.5	12.7	38.7	34.3
Other	0.4	0.1	0.1	0.2	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Weighted number	1,861	6,614	8,475	6,720	33,384	40,104
Unweighted number	2,556	5,919	8,475	9,563	30,436	39,999

[1] Shared facility of an otherwise improved type.

2.1.3 Housing Characteristics

Table 2.3 presents data on a household's access to electricity and the type of flooring material used in the dwelling. These characteristics reflect the household's socioeconomic situation.

Only about one household in every four (24 percent) has electricity, with a very large disparity between urban and rural households (87 percent versus 6 percent). In urban areas the proportion of households with electricity rose from 76 percent in 2000 to 86 percent in 2005, remained virtually unchanged in 2011 at 85 percent, and increased slightly to 87 percent in 2014.

Forty-three percent of houses have dung floors, and 42 percent have earth or sand floor. Rural houses are more likely than urban houses to have dung floors (48 percent), or earth or sand floor (48 percent), while urban houses are more likely to have floors made with vinyl or asphalt strips (34 percent), or with cement (15 percent).

Table 2.3 Household characteristics

Percent distribution of households by housing characteristics, according to residence, Ethiopia 2014

Housing characteristic	Residence		Total
	Urban	Rural	
Electricity			
Yes	87.4	6.0	23.8
No	12.6	94.0	76.2
Total	100.0	100.0	100.0
Flooring material			
Earth, sand	21.7	47.6	41.9
Dung	22.5	48.3	42.6
Wood/planks	0.2	0.1	0.1
Palm/bamboo	0.1	0.7	0.6
Parquet or polished wood	0.6	0.0	0.1
Vinyl or asphalt strips	33.6	1.3	8.4
Ceramic tiles	1.3	0.0	0.3
Cement	14.9	1.3	4.3
Carpet	4.5	0.1	1.1
Other	0.6	0.5	0.5
Total	100.0	100.0	100.0
Weighted number	1,861	6,614	8,475
Unweighted number	2,556	5,919	8,475

2.1.4 Household Possessions

The availability of durable consumer goods is another indicator of a household's socioeconomic status. Moreover, particular goods have specific benefits. For instance, a radio or a television can bring household members information and new ideas; a refrigerator prolongs the wholesomeness of foods; and a means of transport can increase access to many services that are beyond walking distance. More recently, the availability of cell phones has considerably increased the exposure, particularly of rural households, to communication and information. Table 2.4 shows the extent of possession of selected consumer goods by urban or rural residence. Forty-nine percent of households have mobile telephones, 34 percent have radios, 12 percent have televisions, 4 percent have refrigerators, and 3 percent have non-mobile telephones.

Table 2.4 Household possessions

Percentage of households possessing various household effects, means of transportation, agricultural land and livestock/farm animals by residence, Ethiopia 2014

Possession	Residence		Total
	Urban	Rural	
Household effects			
Radio	45.7	30.1	33.5
Television	46.8	1.6	11.5
Mobile telephone	83.7	39.6	49.3
Non-mobile telephone	11.1	0.3	2.6
Refrigerator	16.5	1.0	4.4
Means of transport			
Bicycle	5.2	0.8	1.7
Animal drawn cart	1.2	1.1	1.2
Motorcycle/scooter	1.7	0.6	0.9
Car/truck	2.9	0.0	0.7
Ownership of agricultural land	18.1	86.7	71.7
Ownership of farm animals[1]	26.6	90.1	76.2
Weighted number	1,861	6,614	8,475
Unweighted number	2,556	5,919	8,475

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

In both urban and rural areas only a small percentage of households possess a means of transport. Urban households are slightly more likely than rural households to own bicycles (5 percent versus 1 percent), or a car or truck (3 percent in urban areas only). About three-fourths of households own agricultural land (72 percent), or farm animals (76 percent).

There is noticeable urban-rural variation in the proportion of households owning specific goods. Most electronic goods are considerably more prevalent in urban areas, while farm-oriented possessions are more common in rural areas. For example, 47 percent of urban households own televisions, compared with only 2 percent of rural households. Similarly, 84 percent of urban households own mobile telephones, compared with 40 percent of rural households. As expected, ownership of agricultural land is much more widespread among rural than urban households (87 percent versus18 percent), as is ownership of farm animals (90 percent versus 27 percent).

2.2 WEALTH INDEX

The wealth index used in this survey is a measure that has been used in many DHS and other country-level surveys to indicate inequalities in household characteristics, in the use of health and other services, and in health outcomes (Rutstein et al., 2000). It serves as an indicator of level of wealth that is consistent with expenditure and income measures (Rutstein, 1999). The index was constructed using household asset data via a principal components analysis.

In its current form, which takes better account of urban-rural differences in scores and indicators of wealth, the wealth index is created in three steps. In the first step, a subset of indicators common to urban and rural areas is used to create wealth scores for households in both areas. Categorical variables to be used are transformed into separate dichotomous (0-1) indicators. These indicators and those that are continuous are then examined using a principal components analysis to produce a common factor score for each household. In the second step, separate factor scores are produced for households in urban and rural areas using area-specific indicators. The third step combines the separate area-specific factor scores to produce a nationally applicable combined wealth index by adjusting area-specific scores through a regression on the common factor scores. This three-step procedure permits greater adaptability of the wealth index in both urban and rural areas. The resulting combined 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 obtained by assigning the household score to each *de jure* household member, ranking each person in the population by his or her score, and then dividing the ranking into five equal categories, each comprising 20 percent of the population.

Table 2.5 presents wealth quintiles by residence and administrative regions of the country. Seventy-seven percent of the urban population is in the highest wealth quintile, in sharp contrast to the rural areas, where only 9 percent of the population are in the highest wealth quintile. Among regions the wealth quintile distribution varies greatly. A relatively high percentage of the population in the most urbanized regions in the country is in the highest wealth quintile—Addis Ababa (95 percent), Harari (69 percent), and Dire Dawa (59 percent). In contrast, a significant proportion of the population in the more rural regions are in the lowest wealth quintile, as in Affar (60 percent), and Somali (50 percent).

Table 2.5 also shows the Gini Coefficient of wealth in Ethiopia, which indicates the concentration of wealth, with 0 representing an exactly equal distribution (everyone having the same amount of wealth) and 1 representing a totally unequal distribution (one person having all the wealth).

Table 2.5 Wealth quintiles

Percent distribution of the de jure population by wealth quintiles, and the Gini Coefficient, according to residence and region, Ethiopia 2014

Residence/region	Wealth quintile					Total	Weighted number of population	Unweighted number of population	Gini coefficient
	Lowest	Second	Middle	Fourth	Highest				
Residence									
Urban	1.6	2.1	5.7	14.0	76.5	100.0	6,720	9,563	0.20
Rural	23.7	23.6	22.9	21.2	8.7	100.0	33,384	30,436	0.31
Region									
Tigray	19.2	22.1	22.8	13.4	22.5	100.0	2,606	3,358	0.48
Affar	59.8	12.8	3.7	7.6	16.1	100.0	391	3,668	0.65
Amhara	21.0	24.8	24.9	18.5	10.8	100.0	9,447	4,319	0.45
Oromiya	16.4	18.9	18.2	26.0	20.4	100.0	15,770	4,909	0.39
Somali	49.9	14.1	10.2	7.8	17.9	100.0	1,027	3,849	0.53
Benishangul-Gumuz	27.0	24.8	16.7	16.6	15.0	100.0	386	3,097	0.41
SNNP	23.4	20.8	23.0	17.9	14.9	100.0	8,522	5,257	0.43
Gambela	35.3	13.2	11.7	15.2	24.7	100.0	187	3,209	0.47
Harari	0.7	3.0	8.8	18.3	69.2	100.0	100	2,700	0.30
Addis Ababa	0.0	0.7	0.8	3.7	94.8	100.0	1,495	2,628	0.10
Dire Dawa	14.3	12.8	8.1	5.8	59.1	100.0	173	3,005	0.37
Total	20.0	20.0	20.0	20.0	20.0	100.0	40,104	39,999	0.44

The overall Gini Coefficient for Ethiopia is 0.44. It is higher in rural areas (0.31) than in urban areas (0.20), indicating a more unequal distribution of wealth in the rural population than in the urban population. The lowest Gini Coefficient is seen in Addis Ababa (0.10) where almost the entire population (95 percent) is in the highest wealth quintile. The highest Gini Coefficient—that is, the least equitable distribution of wealth—is observed in Affar (0.65).

2.3 POPULATION BY AGE AND SEX

Age and sex are important variables that are the primary basis for demographic classification in vital statistics, censuses, and surveys. They are also important variables for the study of mortality, fertility, and marriage.

Table 2.6 shows the distribution of the household population in the EMDHS by five-year age groups, according to urban or rural residence and sex. The total population counted in the survey

Table 2.6 Household population by age, sex, and residence

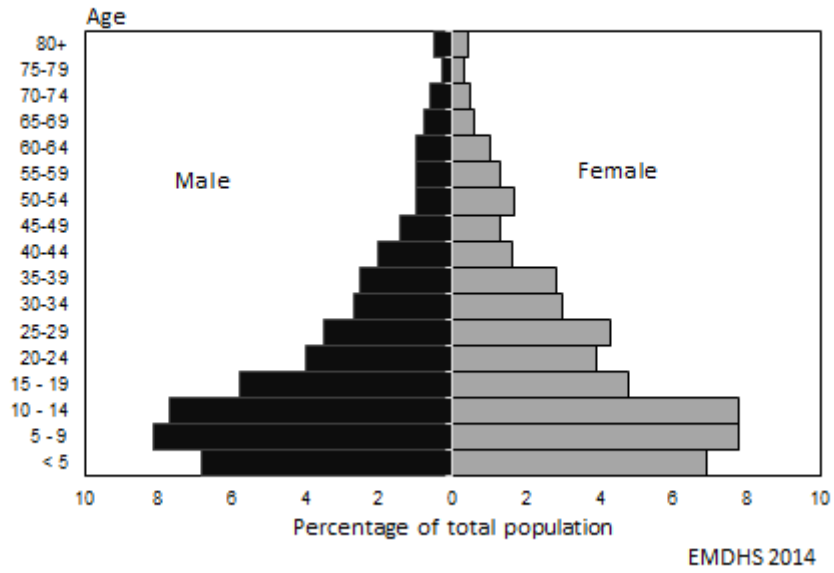
Percent distribution of the de facto household population by five-year age groups, according to sex and residence, Ethiopia 2014

Age	Urban			Rural			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
<5	11.1	9.3	10.2	14.2	14.7	14.4	13.7	13.7	13.7
5-9	11.5	10.1	10.8	17.2	16.8	17.0	16.2	15.6	15.9
10-14	12.0	12.4	12.2	16.1	16.2	16.2	15.5	15.6	15.5
15-19	12.1	14.2	13.2	11.5	8.7	10.1	11.6	9.7	10.6
20-24	11.9	12.7	12.3	7.3	6.7	7.0	8.0	7.8	7.9
25-29	12.1	11.9	12.0	6.0	7.8	6.9	7.0	8.5	7.8
30-34	7.2	6.3	6.8	5.1	5.9	5.5	5.4	6.0	5.7
35-39	6.5	6.3	6.4	4.8	5.3	5.1	5.1	5.5	5.3
40-44	4.5	3.1	3.8	3.9	3.2	3.6	4.0	3.1	3.6
45-49	2.6	2.7	2.6	2.8	2.7	2.7	2.8	2.7	2.7
50-54	1.9	2.6	2.2	2.1	3.7	2.9	2.1	3.5	2.8
55-59	1.4	2.5	2.0	2.1	2.6	2.4	2.0	2.6	2.3
60-64	1.6	2.2	1.9	2.0	2.0	2.0	1.9	2.1	2.0
65-69	1.1	1.5	1.3	1.8	1.2	1.5	1.7	1.2	1.4
70-74	1.3	1.1	1.2	1.3	1.0	1.2	1.3	1.0	1.2
75-79	0.3	0.5	0.4	0.8	0.5	0.6	0.7	0.5	0.6
80 +	0.8	0.7	0.7	1.1	0.9	1.0	1.1	0.9	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Weighted number	3,210	3,414	6,624	16,527	16,310	32,837	19,737	19,724	39,462
Unweighted number	4,518	4,990	9,508	15,257	14,504	29,761	19,775	19,494	39,269

was 39,462, with males slightly outnumbering females (19,737 compared with 19,724). The results indicate an overall sex ratio of 100 males per 100 females. The sex ratio is higher in rural areas (101 males per 100 females) than in urban areas (94 males per 100 females).

The age structure of the household population in Ethiopia is typical of a society with a young population. The population pyramid in Figure 2.1 shows the sex and age distribution of the population. The pyramidal age structure reflects the large number of children under age 15. Children under age 15 account for nearly half (45 percent) of the total population, while only about 4 percent of Ethiopians are over age 65. This population distribution is similar to that observed in the 2000, 2005, and 2011 EDHS surveys.

Figure 2.1 Population Pyramid



2.4 HOUSEHOLD COMPOSITION

Table 2.7 presents information about the composition of households by sex of the household head and size of the household. These characteristics are important because they are associated with household welfare.

About one-fourth (23 percent) of Ethiopian households are headed by women, a slight decrease from 24 percent in 2000. The average household size is 4.7 persons, which is slightly slower than the average of 4.8 persons per household reported in 2000.

Urban households have fewer members than rural households. In urban areas the average household size is 3.6 persons, compared with 5.0 persons in rural areas. Single-person households are more common in urban areas (20 percent) than in rural areas (4 percent). Also, a much lower proportion of urban households (18 percent) have six or more members than do rural households (41 percent).

Table 2.7 Household composition

Percent distribution of households by sex of head of household and by household size; mean size of household, according to residence, Ethiopia 2014

Characteristic	Residence		Total
	Urban	Rural	
Household headship			
Male	64.2	80.7	77.0
Female	35.8	19.3	23.0
Total	100.0	100.0	100.0
Number of usual members			
1	20.4	4.4	7.9
2	17.7	9.4	11.2
3	15.7	14.2	14.5
4	16.6	14.8	15.2
5	11.3	16.1	15.0
6	7.7	15.0	13.4
7	3.8	11.5	9.8
8	2.6	7.6	6.5
9+	4.2	7.0	6.4
Total	100.0	100.0	100.0
Mean size of households	3.6	5.0	4.7
Weighted number	1,861	6,614	8,475
Unweighted number	2,556	5,919	8,475

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

2.5 PRODUCTIVE SAFETY NETS PROGRAMME

The Productive Safety Nets Programme (PSNP) is the largest social protection programme in Sub-Saharan Africa, outside South Africa. Implemented in rural Ethiopia, the PSNP was launched in 2005 to transform the historic food aid system into a more predictable safety net that produces productive assets in poor communities. The PSNP provides cash and food transfers to food-insecure households through labor-intensive public works for households with able-bodied members and direct transfers to households lacking adult able-bodied labor to fulfill a work requirement (i.e. the elderly, disabled, some female heads of households and people with chronic illness). The PSNP is complemented by the Household Asset Building Programme which aims to provide longer term solutions to PSNP households. It helps households to diversify and increase their incomes. It supports them to come up with a plan to improve their livelihoods, trains them in the skills they need to make these improvements and provides them with information on where they can borrow money to fund these changes.

The EMDHS included one question at the household level to obtain data on whether a household was, at the time of the survey, receiving cash or food from the PSNP. Findings from this survey indicate that 11 percent of all households surveyed were PSNP households (Table 2.8). Female-headed households were more likely to receive cash and food from the PSNP than households headed by males (15 percent and 10 percent, respectively). Regional differences are marked, with nearly two in three (66 percent) households in Affar, six in ten (59 percent) households in Dire Dawa, and three in ten (29 percent) households in Tigray receiving support from the program. One in five households (19 percent) in the poorest households benefited from the program. Only 11 percent of PSNP households have access to an improved source of drinking water and just 5 percent have improved sanitation.

Table 2.8 Productive Safety Net Programme Households[1]

Percent distribution of rural households by whether they are Productive Safety Net Programme (PSNP) households or not, by background characteristics, Ethiopia 2014

Background characteristic	Yes	No	Total	Weighted number of households	Unweigted number of households
Household headship					
Male	9.9	90.1	100.0	5,335	4,713
Female	14.8	85.2	100.0	1,279	1,206
Region					
Tigray	28.9	71.1	100.0	429	581
Affar	65.6	34.4	100.0	47	504
Amhara	14.8	85.2	100.0	1,789	860
Oromiya	2.3	97.7	100.0	2,698	829
Somali	12.0	88.0	100.0	109	531
Benishangul-Gumuz	1.1	98.9	100.0	74	615
SNNP	15.0	85.0	100.0	1,412	914
Gambela	4.1	95.9	100.0	34	530
Harari	16.5	83.5	100.0	9	292
Dire Dawa	59.2	40.8	100.0	12	263
Percentage using any improved source of drinking water	11.3	88.7	100.0	3,069	2,823
Improved sanitation	5.2	94.8	100.0	230	309
Wealth quintile					
Lowest	19.0	81.0	100.0	1,666	2,165
Second	12.8	87.2	100.0	1,594	1,294
Middle	9.0	91.0	100.0	1,487	1,121
Fourth	3.5	96.5	100.0	1,325	910
Highest	2.8	97.2	100.0	543	429
Total	10.8	89.2	100.0	6,614	5,919

2.6 EDUCATION OF THE HOUSEHOLD POPULATION

Education is a key determinant of individual opportunities, attitudes, and economic and social status. Studies have consistently shown that educational attainment has a strong effect on reproductive behaviour, fertility, infant and child mortality and morbidity, and attitudes and awareness related to family health, use of family planning, and sanitation. The EMDHS reports educational attainment among household members and school attendance among youth. The current system of formal education in Ethiopia is based on a three-tier system with eight years of primary education, followed by four years of secondary education, and three to seven years of tertiary education, depending on the area of study.

2.6.1 Educational Attainment

Tables 2.9.1 and 2.9.2 show the percent distribution of the *de facto* female and male household population age 6 and older by highest level of education attended or completed, according to background characteristics. The majority of Ethiopians have little or no education, with females even less educated than males. Forty-eight percent of females and 37 percent of males have never attended school.

Four in every ten females (42 percent) and half of all males (48 percent) have only some primary education, while 3 percent of females and 4 percent of males completed primary education and did not attend secondary school. Only 5 percent of females and 6 percent of males have attended but not completed secondary education, and an additional 3 percent of females and 5 percent of

Table 2.9.1 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 years completed, according to background characteristics, Ethiopia 2014

Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Total	Weighted Number	Unweighted Number	Median years completed
Age										
6-9	42.4	57.6	0.0	0.0	0.0	0.0	100.0	1,899	1,883	0.0
10-14	17.9	81.5	0.5	0.1	0.0	0.0	100.0	3,072	2,905	1.7
15-19	13.2	57.2	11.2	16.0	0.5	1.9	100.0	1,910	1,807	5.0
20-24	31.6	34.6	5.9	16.0	1.0	10.8	100.0	1,531	1,544	3.7
25-29	54.5	30.5	3.2	5.2	0.8	5.8	100.0	1,684	1,689	0.0
30-34	68.4	22.0	2.6	2.4	1.3	3.2	100.0	1,184	1,219	0.0
35-39	66.5	24.6	2.4	2.7	2.1	1.8	100.0	1,086	1,087	0.0
40-44	72.5	19.8	2.9	0.8	1.9	2.1	100.0	621	632	0.0
45-49	80.5	13.1	2.1	1.4	2.1	0.9	100.0	524	514	0.0
50-54	88.7	8.1	0.8	0.6	0.4	1.4	100.0	684	748	0.0
55-59	93.3	5.8	0.1	0.5	0.1	0.2	100.0	518	490	0.0
60-64	95.0	4.3	0.3	0.1	0.1	0.2	100.0	405	381	0.0
65+	97.8	1.9	0.2	0.0	0.1	0.0	100.0	720	690	0.0
Residence										
Urban	26.9	40.3	6.1	13.5	3.0	10.3	100.0	2,968	4,304	3.8
Rural	52.8	41.7	2.2	2.5	0.1	0.6	100.0	12,871	11,289	0.0
Region										
Tigray	45.1	40.2	3.7	7.6	0.5	2.8	100.0	1,013	1,301	0.3
Affar	68.4	26.5	1.3	2.8	0.4	0.6	100.0	138	1,260	0.0
Amhara	51.9	38.2	2.6	4.5	0.2	2.6	100.0	3,777	1,704	0.0
Oromiya	48.0	42.8	3.2	3.8	0.6	1.6	100.0	6,253	1,955	0.0
Somali	71.3	23.6	0.5	2.6	0.0	2.0	100.0	347	1,285	0.0
Benishangul-Gumuz	51.6	40.4	2.2	3.7	0.4	1.8	100.0	149	1,194	0.0
SNNP	47.0	46.0	2.2	3.6	0.1	1.1	100.0	3,249	1,991	0.0
Gambela	32.2	50.7	6.6	7.5	0.1	3.0	100.0	78	1,267	2.1
Harari	32.1	39.6	7.0	8.5	3.5	9.3	100.0	43	1,129	2.9
Addis Ababa	22.0	39.7	6.5	11.9	6.5	13.3	100.0	718	1,274	5.2
Dire Dawa	38.4	37.8	3.5	10.3	2.4	7.6	100.0	73	1,233	1.7
Wealth quintile										
Lowest	68.9	29.5	0.9	0.6	0.0	0.1	100.0	3,065	4,201	0.0
Second	57.9	39.1	1.3	1.5	0.0	0.2	100.0	3,118	2,521	0.0
Middle	50.7	43.6	2.7	2.7	0.0	0.3	100.0	3,075	2,244	0.0
Fourth	41.3	48.4	3.7	5.2	0.3	1.1	100.0	3,169	2,163	0.4
Highest	23.7	46.0	5.9	11.9	2.7	9.7	100.0	3,412	4,464	3.7
Total	47.9	41.5	3.0	4.5	0.7	2.4	100.0	15,839	15,593	0.0

Note: Total includes 4 unweighted cases missing information on age
[1] Completed 8 grades at the primary level
[2] Completed 4 grades at the secondary level

males have completed secondary or higher education. The gender gap in education is more obvious at lower levels of education, primarily because the proportion of males and females attending higher levels of education is so small.

The differences in educational attainment by successive age groups indicate the long-term trend of the country's educational achievement. There has been a marked improvement in the educational attainment of women. For example, the proportion of females with no education has declined significantly, from 98 percent among those age 65 and over to just 18 percent among females age 10-14 at the time of the survey. Similarly, among males 88 percent of men age 65 and older had no education, compared with 15-19 percent of males age 10-24.

As expected, educational attainment is much higher among the urban population than among the rural population. For example, in urban areas 27 percent of females and 15 percent of males have no education, compared with 53 percent of females and 41 percent of males in rural areas. Among regions, the proportion of females and males with no education is highest in the Somali region (71 and 56 percent, respectively), and lowest in Addis Ababa (22 and 12 percent, respectively). The highest percentages of females and males who have completed secondary or more than secondary education live in the urbanized regions, such as Harari, Dire Dawa and Addis Ababa.

Table 2.9.2 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 years completed, according to background characteristics, Ethiopia 2014

Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Don't know/ missing	Total	Weighted Number	Unweighted Number	Median years completed
Age											
6-9	49.4	50.6	0.0	0.0	0.0	0.0	0.0	100.0	2,036	2,054	0.0
10-14	18.8	80.3	0.8	0.1	0.0	0.0	0.0	100.0	3,053	2,877	1.3
15-19	15.1	64.6	7.9	10.8	0.3	1.2	0.0	100.0	2,282	2,182	4.3
20-24	19.2	40.1	10.2	19.2	1.1	10.2	0.0	100.0	1,586	1,474	5.7
25-29	26.6	32.7	7.8	17.2	1.7	14.0	0.0	100.0	1,378	1,443	5.0
30-34	43.7	33.6	3.9	8.5	2.3	8.1	0.0	100.0	1,068	1,098	1.7
35-39	44.6	38.2	5.0	5.5	2.2	4.5	0.0	100.0	1,003	1,015	1.3
40-44	44.1	37.4	4.3	3.9	4.1	6.1	0.0	100.0	796	864	2.0
45-49	58.4	27.2	5.4	2.6	3.3	3.2	0.0	100.0	549	603	0.0
50-54	62.8	25.5	2.9	5.0	1.8	2.1	0.0	100.0	408	442	0.0
55-59	68.3	26.7	2.4	1.3	0.3	1.0	0.0	100.0	389	388	0.0
60-64	73.2	22.7	0.7	1.4	0.8	1.2	0.0	100.0	380	439	0.0
65+	88.3	10.2	0.6	0.3	0.1	0.6	0.0	100.0	933	756	0.0
Residence											
Urban	14.9	40.2	8.3	16.1	4.3	16.2	0.0	100.0	2,709	3,835	6.2
Rural	41.1	49.7	3.3	4.4	0.3	1.2	0.0	100.0	13,158	11,803	0.4
Region											
Tigray	32.3	51.2	3.5	8.1	0.4	4.5	0.0	100.0	946	1,208	1.8
Affar	59.7	30.9	1.9	4.8	0.8	1.9	0.0	100.0	159	1,470	0.0
Amhara	45.4	44.0	2.2	4.7	0.1	3.7	0.0	100.0	3,726	1,716	0.0
Oromiya	36.7	47.7	5.3	6.2	0.8	3.2	0.0	100.0	6,265	1,952	1.2
Somali	55.5	32.8	1.7	6.6	0.6	2.9	0.0	100.0	384	1,446	0.0
Benishangul-Gumuz	35.7	49.6	3.9	5.9	0.8	4.1	0.0	100.0	152	1,219	1.2
SNNP	30.1	56.9	3.9	6.3	1.0	1.7	0.0	100.0	3,455	2,116	1.6
Gambela	22.3	54.6	5.5	9.5	1.2	7.0	0.0	100.0	72	1,235	3.5
Harari	16.8	45.8	7.8	11.8	5.5	12.3	0.0	100.0	40	1,073	4.8
Addis Ababa	12.3	34.7	8.5	15.7	8.2	20.5	0.0	100.0	603	1,050	7.3
Dire Dawa	24.7	39.8	6.9	12.7	3.4	12.4	0.0	100.0	67	1,153	4.0
Wealth quintile											
Lowest	56.7	40.8	1.4	0.9	0.0	0.2	0.0	100.0	2,909	4,408	0.0
Second	47.8	46.7	2.0	2.6	0.3	0.6	0.0	100.0	3,113	2,536	0.0
Middle	38.2	52.5	3.3	4.7	0.2	1.0	0.0	100.0	3,133	2,356	0.6
Fourth	30.0	55.7	4.7	7.2	0.4	2.0	0.0	100.0	3,399	2,296	1.8
Highest	13.7	43.6	8.9	15.6	3.7	14.5	0.0	100.0	3,314	4,042	5.8
Total	36.6	48.0	4.2	6.4	1.0	3.8	0.0	100.0	15,867	15,638	1.1

Total includes 3 unweighted cases missing information on age
[1] Completed 8 grades at the primary level
[2] Completed 4 grades at the secondary level

Substantial variation in educational attainment also occurs across wealth quintiles. Only 24 percent of females in the wealthiest households have no education, compared with 69 percent in the poorest households. Similarly, 14 percent of males in the wealthiest households have no education, compared with 57 percent in the poorest households.

2.6.2 School Attendance Ratios

Table 2.10 shows data on net attendance ratios (NARs) and gross attendance ratios (GARs) for the *de facto* household population by school level and sex, according to residence, region, and wealth index. The NAR for primary school is the total number of students of primary school age (age 7-14) expressed as the percentage of the population of primary school age. The NAR for secondary school is the percentage of the population of secondary school age (age 15-18) that attends secondary school. By definition, the NAR cannot exceed 100 percent.

The GAR for primary school is the total number of primary school students of any age, expressed as a percentage of the official primary-school-age population. The GAR for secondary school is the total number of secondary school students of any age, expressed as a percentage of the

Table 2.10 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, Ethiopia 2014

Background characteristic	Net attendance ratio[1]				Gross attendance ratio[2]			
	Male	Female	Total	Gender Parity Index[3]	Male	Female	Total	Gender Parity Index[3]
	PRIMARY SCHOOL							
Residence								
Urban	80.4	79.8	80.1	0.99	106.1	100.1	103.0	0.94
Rural	61.2	65.2	63.1	1.07	86.8	81.8	84.3	0.94
Region								
Tigray	73.9	85.1	79.2	1.15	101.6	106.5	103.9	1.05
Affar	53.4	46.4	50.1	0.87	79.6	63.7	72.1	0.80
Amhara	68.4	75.1	71.6	1.10	89.8	92.2	91.0	1.03
Oromiya	57.1	62.6	59.9	1.10	80.5	75.9	78.2	0.94
Somali	49.2	40.4	44.9	0.82	77.9	53.7	66.0	0.69
Benishangul-Gumuz	75.8	71.3	73.5	0.94	106.2	87.0	96.5	0.82
SNNP	65.7	64.2	65.0	0.98	98.0	86.8	92.7	0.89
Gambela	83.7	84.2	84.0	1.00	128.0	108.6	117.6	0.85
Harari	79.8	77.6	78.8	0.97	92.8	94.6	93.6	1.02
Addis Ababa	92.6	85.8	88.8	0.93	119.5	115.8	117.5	0.97
Dire Dawa	78.1	71.7	74.9	0.92	100.1	88.5	94.4	0.88
Wealth quintile								
Lowest	48.6	48.8	48.7	1.00	68.0	58.5	63.3	0.86
Second	53.6	61.4	57.4	1.15	76.2	80.8	78.4	1.06
Middle	68.7	67.8	68.3	0.99	93.2	81.3	87.3	0.87
Fourth	71.2	77.1	73.9	1.08	101.5	100.4	101.0	0.99
Highest	79.6	83.2	81.5	1.04	112.5	103.7	107.8	0.92
Total	63.5	67.0	65.2	1.06	89.1	84.1	86.6	0.94
	SECONDARY SCHOOL							
Residence								
Urban	39.5	37.5	38.4	0.95	66.1	55.1	60.0	0.83
Rural	7.4	11.9	9.3	1.60	13.6	18.2	15.6	1.34
Region								
Tigray	17.8	31.1	24.4	1.74	29.9	38.4	34.1	1.28
Affar	18.4	2.0	12.1	0.11	21.3	7.2	15.9	0.34
Amhara	10.5	25.4	17.7	2.42	20.0	36.9	28.1	1.85
Oromiya	13.5	15.7	14.4	1.16	22.4	24.8	23.5	1.11
Somali	20.2	6.4	15.1	0.32	32.5	20.4	28.0	0.63
Benishangul-Gumuz	14.6	24.5	18.8	1.67	23.8	34.4	28.3	1.45
SNNP	7.3	7.3	7.3	1.00	16.0	12.4	14.5	0.77
Gambela	12.8	15.6	14.1	1.22	33.5	35.7	34.6	1.07
Harari	40.0	23.3	31.1	0.58	54.8	31.8	42.5	0.58
Addis Ababa	41.5	26.3	32.0	0.63	57.2	37.8	45.0	0.66
Dire Dawa	24.5	28.5	26.5	1.16	34.2	46.0	40.0	1.35
Wealth quintile								
Lowest	4.0	4.8	4.3	1.18	5.3	8.2	6.5	1.54
Second	3.4	7.7	5.4	2.29	9.2	10.3	9.7	1.11
Middle	9.4	17.0	12.5	1.81	16.3	29.9	22.0	1.83
Fourth	10.3	23.2	16.1	2.26	18.3	35.0	25.7	1.91
Highest	32.3	28.2	30.2	0.87	54.7	40.2	47.3	0.73
Total	12.7	18.1	15.2	1.42	22.2	27.2	24.5	1.23

[1] The NAR for primary school is the percentage of the primary-school age (7-14 years) population that is attending primary 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 secondary school is the total number of secondary school students, expressed as a percentage of the official secondary-school-age population. If there are significant numbers of overage and underage students at a given level of schooling, the GAR can exceed 100 percent.

[3] The Gender Parity Index for primary school is the ratio of the primary school NAR (GAR) for females to the NAR (GAR) for males. The Gender Parity Index for secondary school is the ratio of the secondary school NAR (GAR) for females to the NAR (GAR) for males.

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. Persons are considered to be currently attending school if they attended formal academic school at any point during the school year. The NAR and GAR remained virtually unchanged between 2011 and 2014 at both the primary and secondary levels.

As Table 2.10 shows, 65 percent of children of primary school age in Ethiopia attend primary school (64 percent of males and 67 percent of females). At the same time, only 15 percent of young people of secondary school age are attending school (13 percent of males and 18 percent of females). Attendance ratios at the primary school level are much lower in rural areas than in urban areas; they are lowest in the poorest households. By region, primary school attendance is lowest in Somali, while secondary school attendance is lowest in SNNP.

At the primary level the GAR is higher among males (89) than females (84), but at the secondary level, it is higher among females (27) than males (22). Although the overall GAR at the primary level is 87, there are significant levels of over-age and/or under-age participation among males in the urban areas (103) as well as in Addis Ababa and Gambela (118 for each).

There is a strong relationship between household economic status and schooling at both the primary and secondary levels. For example, at the primary education level the NAR increases from 49 percent in the lowest wealth quintile to 82 percent in the highest wealth quintile. Similarly, at the secondary level the NAR rises from 4 percent in the lowest wealth quintile to 30 percent in the highest wealth quintile.

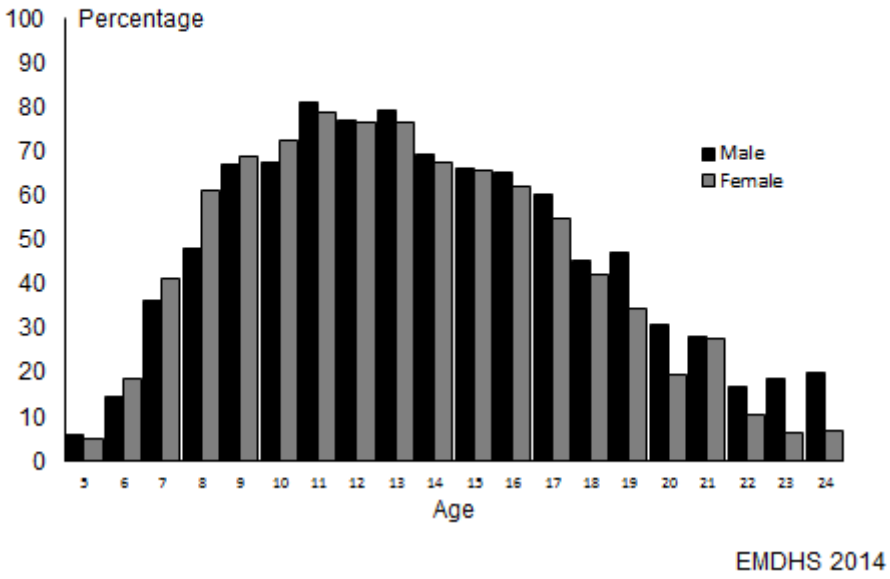
The Gender Parity Index (GPI) measures sex-related differences in school attendance ratios. It is the ratio of female to male attendance. A GPI of 1 indicates parity, or equality, between the school participation ratios for males and females. A GPI that is lower than 1 indicates a gender disparity in favour of males—that is, a higher proportion of males than females attend that level of schooling. A GPI that is higher than 1 indicates a gender disparity in favour of females.

In Ethiopia, the GPI for primary school attendance is slightly higher than 1 (1.06) for NAR, but lower than 1 (0.94) for GAR. For secondary school attendance, it is higher than 1 (1.42) for NAR, and GAR (1.23). These data indicate that the gender gap is slightly smaller at the primary level than at the secondary level of schooling. There are some differences in the GPI for NAR and for GAR by place of residence and by region. For primary education, the GPI for NAR is higher in rural than in urban areas but the GPI for the GAR is identical in both areas. For secondary education, the GPI for both NAR and GAR is higher in rural areas than in urban areas. The primary school and secondary school GPI for both NAR and GAR is lowest in the Somali and Affar regions.

Figure 2.2 shows the age-specific attendance rates (ASARs) for the population age 5-24, by sex. The ASAR indicates participation in schooling at any level, from primary to higher levels of education. Although the official minimum age for schooling in Ethiopia is age 7, some children are enrolled at younger ages. Nevertheless, only 36-41 percent of children age 7 are attending school, indicating that a large majority of children age 7 in Ethiopia have not entered the school system. However, enrolment at age 7 has increased markedly over the last 15 years from 15 percent of children in 2000 to 38 percent of children in 2014.

There are some differences in the proportion of males and females attending school. Between ages 7-10, the proportion of females attending school is somewhat higher than the proportion of males, while for ages 11-24 the proportion of males attending school is higher than the proportion of females.

Figure 2.2 Age-Specific Attendance Rates of the *de facto* Population 5 to 24 Years



EMDHS 2014

CHARACTERISTICS OF RESPONDENTS 3

Key Findings

- About half of women 15-49 (48 percent) have no formal education. There has been a 35 percent decline in the proportion of women with no formal education over the last 15 years.
- Forty-one percent of women 15-49 are literate. Literacy among women in the reproductive age group has doubled in the last fifteen years.
- Sixty-four percent of women are currently married.

This chapter provides a demographic and socioeconomic profile of respondents interviewed in the 2014 Ethiopia Mini Demographic and Health Survey (EMDHS). 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, literacy and marital status.

3.1 CHARACTERISTICS OF SURVEY RESPONDENTS

Table 3.1 shows the percent distribution of women age 15-49 by their background characteristics. About six in every ten women (60 percent) are under age 30. Beyond age 30, the proportion of women in each age group declines, reflecting the relatively young age structure of the female population in Ethiopia.

The majority of women (64 percent) are married or living together. One in four women (26 percent) has never married. Eleven percent of women are divorced/separated, or widowed.

A person's place of residence, whether rural or urban, determines access to services and information about reproductive health and other aspects of life. Three in four women live in rural areas (77 percent) and one in four women (23 percent) live in urban areas.

The vast majority of women (83 percent) live in three major regions: Amhara, Oromiya, and the Southern Nations Nationalities and People's **(**SNNP) region. Seven percent of women live in Tigray, 6 percent live in Addis Ababa and 2 percent live in the Somali region. Less than 1 percent of women each live in the remaining 5 regions.

Education is an important factor influencing an individual's attitudes and opportunities. Educational attainment among women in Ethiopia is low. About half of women age 15-49 (48 percent) have no formal education. Nevertheless, data from the three previous EDHS surveys show that there has been a 36 percent decline in the proportion of women age 15-49 with no education, from 75 percent in 2000 to 48 percent in 2014, evidence that education has become more widespread over the past fifteen years.

Table 3.1 Background characteristics of women

Percent distribution of women age 15-49 by selected background characteristics, Ethiopia 2014

Background characteristic	Weighted percent	Weighted number	Unweighted number
Age			
15-19	22.1	1,782	1,689
20-24	17.7	1,427	1,445
25-29	19.9	1,606	1,621
30-34	14.0	1,130	1,178
35-39	12.8	1,033	1,038
40-44	7.4	601	603
45-49	6.1	491	496
Marital status			
Never married	25.6	2,065	2,011
Married	60.3	4,866	4,797
Living together	3.5	279	376
Divorced/separated	8.0	646	629
Widowed	2.6	214	257
Residence			
Urban	22.9	1,850	2,658
Rural	77.1	6,220	5,412
Region			
Tigray	6.6	536	702
Affar	0.9	74	668
Amhara	24.6	1,986	880
Oromiya	37.7	3,045	973
Somali	2.0	158	544
Benishangul-Gumuz	0.9	73	571
SNNP	20.2	1,629	1,001
Gambela	0.6	45	609
Harari	0.3	24	645
Addis Ababa	5.7	460	818
Dire Dawa	0.5	40	659
Education			
No education	48.0	3,877	3,907
Primary	38.1	3,077	2,792
Secondary	9.6	772	890
More than secondary	4.3	344	481
Wealth quintile			
Lowest	17.6	1,421	1,882
Second	18.6	1,500	1,230
Middle	18.1	1,462	1,113
Fourth	20.1	1,618	1,099
Highest	25.6	2,069	2,746
Total 15-49	100.0	8,070	8,070

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

3.2 EDUCATIONAL ATTAINMENT BY BACKGROUND CHARACTERISTICS

Table 3.2 shows the relationship between women's level of education and their other background characteristics. The percentage of women with no education declines steadily by age group, from 80 percent among women age 45-49 to 13 percent among women age 15-19, yet another indication of an improvement in women's education over time. About six rural women in every ten (56 percent) have no education, compared with about two urban women in every ten (22 percent). The urban-rural difference is also pronounced at the secondary or higher levels. For example, only 7 percent of women in rural areas have secondary or higher education, compared with 38 percent of urban women. Women's educational attainment also differs among regions. The highest proportions of women with no education are in the Somali and Affar regions (75 and 74 percent, respectively), and the lowest is in Addis Ababa (14 percent).

Table 3.2 Educational attainment

Percent distribution of women age 15-49 by highest level of schooling attended or completed, and median years completed, according to background characteristics, Ethiopia 2014

Background characteristic	Highest level of schooling						Total	Median years completed	Weighted number of women	Unweighted number of women
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary				
Age										
15-24	21.5	46.9	8.7	16.4	0.7	5.8	100.0	4.7	3,209	3,134
..15-19	13.3	56.5	10.3	17.2	0.5	2.2	100.0	5.1	1,782	1,689
..20-24	31.6	34.9	6.7	15.3	1.0	10.4	100.0	3.6	1,427	1,445
25-29	55.8	29.4	3.3	5.1	0.9	5.5	100.0	0.0	1,606	1,621
30-34	68.2	22.7	1.9	3.0	1.4	2.9	100.0	0.0	1,130	1,178
35-39	68.3	22.7	2.3	2.8	2.0	1.9	100.0	0.0	1,033	1,038
40-44	70.3	21.5	3.6	0.7	1.8	2.1	100.0	0.0	601	603
45-49	80.2	14.2	1.9	1.5	1.4	0.9	100.0	0.0	491	496
Residence										
Urban	22.3	30.7	8.7	19.9	4.2	14.2	100.0	6.5	1,850	2,658
Rural	55.7	33.8	4.0	5.0	0.2	1.3	100.0	0.0	6,220	5,412
Region										
Tigray	46.8	27.8	5.5	14.0	0.9	5.0	100.0	1.2	536	702
Affar	73.5	18.2	2.3	4.8	0.7	0.5	100.0	0.0	74	668
Amhara	56.8	25.7	4.2	8.3	0.4	4.6	100.0	0.0	1,986	880
Oromiya	48.4	34.1	5.6	7.6	1.0	3.2	100.0	0.1	3,045	973
Somali	74.9	17.0	0.7	4.2	0.0	3.3	100.0	0.0	158	544
Benishangul-Gumuz	56.1	28.9	4.1	5.9	0.8	4.1	100.0	0.0	73	571
SNNP	43.6	44.3	4.2	6.1	0.2	1.6	100.0	1.4	1,629	1,001
Gambela	31.9	40.9	9.1	13.2	0.1	4.9	100.0	3.9	45	609
Harari	27.0	29.0	10.7	13.5	5.4	14.4	100.0	6.2	24	645
Addis Ababa	14.0	33.1	8.8	17.5	8.2	18.4	100.0	7.3	460	818
Dire Dawa	34.5	27.1	4.8	17.1	4.2	12.2	100.0	5.0	40	659
Wealth quintile										
Lowest	73.8	23.0	1.6	1.3	0.0	0.2	100.0	0.0	1,421	1,882
Second	61.3	33.2	2.1	3.1	0.0	0.3	100.0	0.0	1,500	1,230
Middle	56.8	32.2	4.8	5.5	0.1	0.6	100.0	0.0	1,462	1,113
Fourth	42.0	39.2	6.2	10.2	0.5	2.0	100.0	1.7	1,618	1,099
Highest	19.3	35.7	8.9	17.9	4.0	14.3	100.0	6.3	2,069	2,746
Total	48.0	33.1	5.1	8.4	1.1	4.3	100.0	0.4	8,070	8,070

[1] Completed 8 grades at the primary level
[2] Completed 4 grades at the secondary level

Access to education increases with household wealth. About three-fourths of women in the lowest wealth quintile (74 percent) have no education, compared with just two women in every ten in the highest wealth quintile (19 percent). Furthermore, women in the highest wealth quintile have had substantially more opportunity to move beyond the primary level of education than other women. More than one-third of women in the highest wealth quintile (36 percent) have attended or completed secondary or higher levels of education, compared with 2-13 percent of women in the lowest four wealth quintiles.

3.3 LITERACY

The ability to read and write is an important asset, enabling women to have more opportunities in life. Knowing the distribution of the literate female population can help managers of social programmes strategically design health and family planning messages.

In the EMDHS, 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 five of the major languages spoken in Ethiopia. Only women who had never been to school and those who had not completed primary level education were asked to read the cards, in the language they were most likely able to read; those who had attained middle school or above were assumed to be literate.

Table 3.3 Literacy

Percent distribution of women age 15-49 by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Ethiopia 2014

Background characteristic	Secondary school or higher	No schooling or primary school: Can read a whole sentence	Can read part of a sentence	Cannot read at all	No card with required language	Blind/ visually impaired	Missing	Total	Percentage literate[1]	Weighted number of women	Unweighted number of women
Age											
15-24	22.9	24.5	17.1	32.2	3.2	0.0	0.0	100.0	64.6	3,209	3,134
..15-19	19.9	30.7	19.9	25.9	3.7	0.0	0.0	100.0	70.4	1,782	1,689
..20-24	26.7	16.9	13.7	40.2	2.6	0.0	0.0	100.0	57.2	1,427	1,445
25-29	11.5	7.6	12.8	66.6	1.5	0.0	0.0	100.0	31.9	1,606	1,621
30-34	7.2	5.6	9.9	76.4	0.7	0.2	0.0	100.0	22.7	1,130	1,178
35-39	6.7	7.0	11.0	74.0	1.0	0.4	0.0	100.0	24.7	1,033	1,038
40-44	4.6	7.7	12.2	74.2	1.2	0.0	0.0	100.0	24.5	601	603
45-49	3.8	3.7	10.0	82.5	0.0	0.0	0.0	100.0	17.5	491	496
Residence											
Urban	38.3	19.4	13.7	27.4	0.9	0.3	0.0	100.0	71.4	1,850	2,658
Rural	6.6	12.0	13.7	65.5	2.2	0.0	0.0	100.0	32.3	6,220	5,412
Region											
Tigray	19.9	16.9	10.6	52.4	0.0	0.1	0.0	100.0	47.5	536	702
Affar	6.0	12.3	4.6	77.1	0.0	0.0	0.0	100.0	22.9	74	668
Amhara	13.2	16.6	10.1	56.5	3.3	0.2	0.0	100.0	40.0	1,986	880
Oromiya	11.8	12.3	16.2	59.6	0.1	0.0	0.0	100.0	40.3	3,045	973
Somali	7.5	0.7	8.5	77.1	6.3	0.0	0.0	100.0	16.6	158	544
Benishangul-Gumuz	10.9	8.7	13.7	65.8	0.5	0.0	0.4	100.0	33.3	73	571
SNNP	7.9	10.4	15.8	62.0	3.9	0.0	0.0	100.0	34.1	1,629	1,001
Gambela	18.2	14.8	15.5	38.8	12.7	0.0	0.0	100.0	48.4	45	609
Harari	33.3	20.5	10.6	35.2	0.5	0.0	0.0	100.0	64.3	24	645
Addis Ababa	44.1	24.3	12.1	18.7	0.5	0.2	0.0	100.0	80.5	460	818
Dire Dawa	33.6	8.8	12.8	40.8	4.0	0.0	0.0	100.0	55.2	40	659
Wealth quintile											
Lowest	1.6	6.9	8.5	81.5	1.4	0.0	0.0	100.0	17.0	1,421	1,882
Second	3.4	11.6	11.3	71.3	2.1	0.2	0.0	100.0	26.4	1,500	1,230
Middle	6.2	11.2	14.5	65.5	2.6	0.0	0.0	100.0	31.9	1,462	1,113
Fourth	12.6	16.2	16.9	51.2	3.0	0.0	0.0	100.0	45.7	1,618	1,099
Highest	36.1	19.8	15.9	27.4	0.7	0.0	0.0	100.0	71.8	2,069	2,746
Total	13.8	13.7	13.7	56.8	1.9	0.1	0.0	100.0	41.3	8,070	8,070

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

As Table 3.3 indicates, 41 percent of women are literate. Literacy among women in the reproductive age group has doubled in the last fifteen years. Literacy among women varies widely by age, increasing sharply from 18 percent among women age 45-49 to 70 percent among women age 15-19. Literacy is much higher in urban areas than rural areas. About seven in ten urban women (71 percent) are literate compared with about one-third of rural women (32 percent).

Regional differences in literacy are also marked, with literacy levels highest among women in predominantly urban Addis Ababa (81 percent) and lowest in the Somali region, where less than one in ten women is literate. There is also a marked difference in literacy by wealth, ranging from 17 percent among women living in the poorest household to 72 percent among women living in the wealthiest household.

3.4 MARITAL STATUS

For most Ethiopian women marriage marks the onset of exposure to the risk of pregnancy. Populations in which age at first marriage is low tend to have early childbearing and high fertility.

Table 3.4 presents the percent distribution of women by current marital status, according to age group. 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. Respondents who are currently married, widowed, divorced, or separated are referred to as 'ever married'.

Twenty-six percent of women age 15-49 have never married, 60 percent are currently married, 4 percent are living together with a man, and 11 percent are divorced, separated, or widowed. The low proportion (less than 1 percent) of women age 45-49 who have never been married indicates that marriage is nearly universal in Ethiopia. Over the past fifteen years the proportion of Ethiopian women who have never married has not changed much.

Table 3.4 Current marital status

Percent distribution of women age 15-49 by current marital status, according to age, Ethiopia 2014

	Marital status									
Age	Never married	Married	Living together	Divorced	Separated	Widowed	Total	Percentage of women currently in union	Weighted number of women	Unweighted number of women
15-19	76.8	17.3	3.1	1.9	0.9	0.0	100.0	20.4	1,782	1,689
20-24	31.3	54.6	3.7	7.1	3.0	0.3	100.0	58.3	1,427	1,445
25-29	10.0	75.6	3.3	7.3	2.5	1.3	100.0	78.9	1,606	1,621
30-34	4.6	82.5	3.5	4.6	2.8	1.9	100.0	86.0	1,130	1,178
35-39	2.4	77.9	3.4	8.2	2.2	5.9	100.0	81.3	1,033	1,038
40-44	1.6	77.8	3.2	7.6	1.8	8.0	100.0	81.0	601	603
45-49	0.7	73.2	4.8	7.6	2.1	11.6	100.0	78.0	491	496
Total 15-49	25.6	60.3	3.5	5.8	2.2	2.6	100.0	63.8	8,070	8,070

FERTILITY LEVELS, TRENDS, AND DIFFERENTIALS 4

Key Findings

- The total fertility rate for the three years preceding the survey is 4.1 children per women. Rural women have twice as many children as urban women.
- Fertility declined between 2005 and 2011, from 5.4 children per woman to 4.8, and then decreased further to 4.1 children in 2014.

Fertility is one of the three principal components of population dynamics that determine the size and structure of the population of a country. Chapter 4 looks at a number of fertility indicators, including levels, patterns, and trends in both current and cumulative fertility.

Data on fertility were collected in several ways. First, each woman was asked the number of sons and daughters who live with her, the number who live elsewhere, and the number born alive and later died. Next, a complete history of all 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 a woman was pregnant at the time of the survey.

4.1 CURRENT FERTILITY

The level of current fertility is one of the most important topics in this report because of its direct relevance to population policies and programmes. Current fertility can be measured using the age-specific fertility rate (ASFR), the total fertility rate (TFR), the general fertility rate (GFR), and the crude birth rate (CBR). The ASFR provides the age pattern of fertility, while the TFR refers to the number of live births that a woman would have had if she were subject to the current ASFRs throughout her reproductive years (15-49 years). The GFR is expressed as the number of live births per 1,000 women of reproductive age, and the CBR is expressed as the number of live births per 1,000 persons in the population. The measures of fertility presented in this chapter refer to the three-year period preceding the survey. This time period generates a sufficient number of births to provide reliable, current estimates.

As Table 4.1 shows, the TFR for Ethiopia for the three-year period preceding the survey is 4.1 children per woman. This means that an Ethiopian woman who is at the beginning of her childbearing years would give birth to about four children by the end of her reproductive period if fertility levels remained constant over the childbearing years. The TFR in rural areas exceeds the TFR in urban areas by more than two children per woman (4.6 and 2.3 children per woman, respectively).

The crude birth rate in Ethiopia is 28 births per 1,000 population. As is the case with other fertility measures, there is a substantial difference in the CBR by urban-rural residence. The CBR is 29 percent higher in rural areas (29 per 1,000 population) than in urban areas (23 per 1,000 population). The GFR in Ethiopia is 138 live births per 1,000 women age 15-44. The rate is twice as high in rural areas (156) as in urban areas (79).

Table 4.1 Current fertility

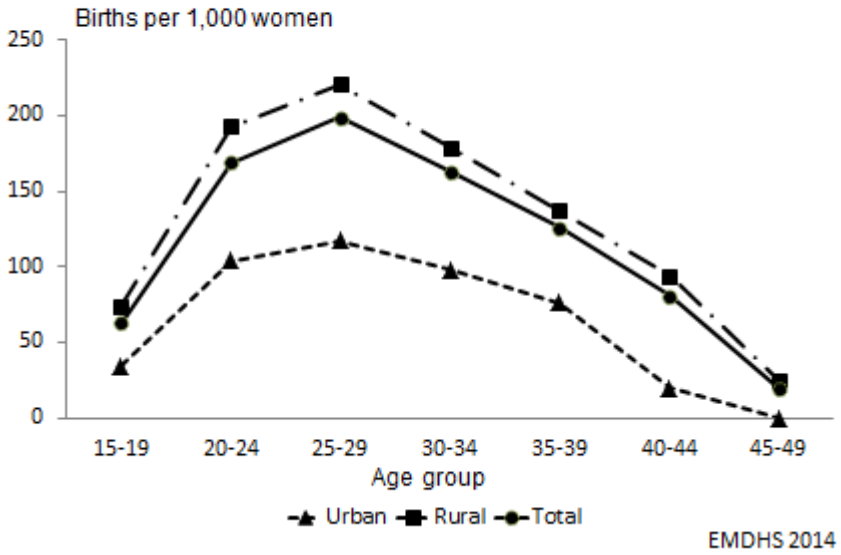
Age-specific and total fertility rates, the general fertility rate, and the crude birth rate for the three years preceding the survey, by residence, Ethiopia 2014

Age group	Residence		Total
	Urban	Rural	
15-19	34	74	63
20-24	104	193	169
25-29	117	221	199
30-34	98	179	163
35-39	76	137	126
40-44	20	94	81
45-49	0	25	20
TFR(15-49)	2.3	4.6	4.1
GFR	79	156	138
CBR	22.5	29.0	28.0

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

Figure 4.1 presents the age-specific fertility rate for urban and rural areas. For the country as a whole, the age-specific fertility rate rises from 63 births per 1,000 women age 15-19 to 169 births among women age 20-24, reaches a peak of 199 births for women age 25-29, and then falls steadily to 20 births among women age 45-49.

Figure 4.1 Age-Specific Fertility Rates by Urban-Rural Residence



4.2 FERTILITY DIFFERENTIALS BY BACKGROUND CHARACTERISTICS

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

There are substantial differentials in the TFR among the regions, ranging from 1.7 children per woman in Addis Ababa (below the replacement level of fertility) to 6.4 children per woman in Somali. Fertility levels are higher than the national average in Somali, Benishangul-Gumuz, Affar, Tigray, Oromiya and SNNP. The level of fertility is inversely related to women's educational attainment, decreasing from 5.0 children among women with no education to about 2 children each among women who have secondary or higher education. Fertility is also strongly associated with household wealth. Women in the lowest wealth quintile have a TFR of 5.4, more than twice as high as women in the highest wealth quintile, at 2.5.

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, Ethiopia 2014

Background characteristic	Total fertility rate	Percentage of women age 15-49 currently pregnant	Mean number of children ever born to women age 40-49
Residence			
Urban	2.3	4.4	5.2
Rural	4.6	8.2	7.0
Region			
Tigray	4.5	6.2	6.6
Affar	5.2	14.0	7.0
Amhara	3.8	6.2	6.9
Oromiya	4.4	6.8	7.0
Somali	6.4	12.9	6.7
Benishangul-Gumuz	5.5	9.1	7.2
SNNP	4.3	10.4	6.7
Gambela	3.0	8.8	5.0
Harari	3.2	6.5	4.3
Addis Ababa	1.7	2.9	2.8
Dire Dawa	3.4	8.1	4.7
Education			
No education	5.0	9.7	7.1
Primary	3.7	5.8	6.0
Secondary	2.0	2.3	3.6
More than secondary	2.2	4.7	(2.2)
Wealth quintile			
Lowest	5.4	10.1	6.8
Second	4.8	9.7	7.0
Middle	4.4	7.8	7.1
Fourth	3.9	6.1	7.4
Highest	2.5	4.3	5.4
Total	4.1	7.3	6.7

Note: Total fertility rates are for the period 1-36 months prior to interview. Figures in parentheses are based on 25-49 unweighted cases.

Table 4.2 also presents a crude assessment of trends in the various subgroups by comparing current fertility with a measure of completed fertility—the mean number of children ever born to women age 40-49. The mean number of children ever born to older women, who are nearing the end of their reproductive period, is an indicator of average completed fertility of women who began childbearing 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 of children ever born to 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. The comparison of current fertility at the country level with completed fertility suggests that fertility has fallen by almost three children per woman during the past few decades, from 6.7 children to 4.1. The table also reveals that substantial declines in fertility have taken place in both rural areas (from 7.0 to 4.6) and urban areas (from 5.2 to 2.3). The differences between the levels of current and completed fertility are highest in Amhara (3.1 children), in urban areas (2.9 children), and among women in the fourth wealth quintile (3.5 children).

The percentage of women currently pregnant is a useful measure of current fertility, although not all women who are pregnant are likely to be included because they may not be aware that they are pregnant or may be reluctant to disclose a pregnancy in the early stages. Seven percent of women reported that they were pregnant at the time of the survey. Rural women were much more likely to be pregnant (8 percent) than urban women (4 percent). The highest proportion of women who were pregnant is in Affar (14 percent), while the lowest proportion was in Addis Ababa (3 percent). The percentage of women currently pregnant decreases with increasing level of education, from 10 percent among women with no education to 2 percent among those with secondary education. Similarly, current pregnancy decreases as household wealth increases.

4.3 FERTILITY TRENDS

Table 4.3 uses information from the retrospective birth histories obtained from the EMDHS respondents to examine trends in age-specific fertility rates for successive five-year periods before the survey. To calculate these rates, births were classified according to the period of time in which the birth occurred and the mother's age at the time of birth. Because birth histories have not been collected for women age 50 and over, the rates for older age groups become progressively more truncated for periods more distant from the survey date. For example, rates cannot be calculated for women age 45-49 for the periods 5-9 years or more prior to the survey because women in those age groups would have been 50 years or older at the time of the survey.

Table 4.3 shows that there was no consistent change in fertility from 15-19 years preceding the survey to 10-14 years preceding the survey. However, there has been a fertility decline in every age group in the subsequent three periods, 10-14 years, 5-9 years and 0-4 years preceding the survey. The decline has been particularly rapid between the periods 5-9 years and 0-4 years preceding the survey.

Table 4.3 Trends in age-specific fertility rates

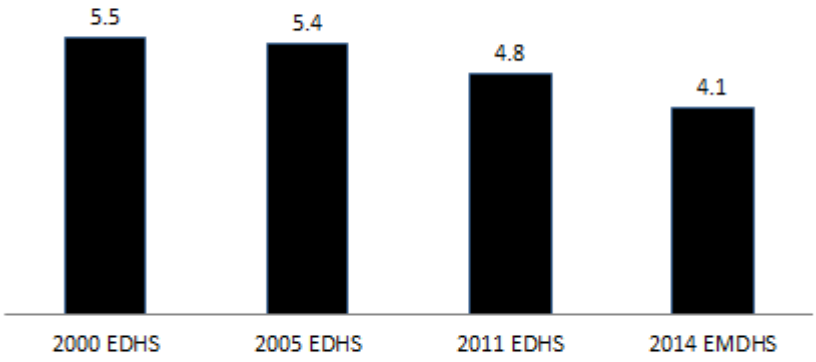
Age-specific fertility rates for five-year periods preceding the survey, by mother's age at the time of the birth, Ethiopia 2014

Mother's age at birth	Number of years preceding survey			
	0-4	5-9	10-14	15-19
15-19	76	133	172	186
20-24	195	259	294	294
25-29	209	264	300	291
30-34	175	255	276	[271]
35-39	146	201	[271]	
40-44	84	[146]		
45-49	[23]			

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

Another way to examine fertility trends is to compare current estimates with estimates from the three earlier EDHS surveys (Figure 4.2). These estimates show fertility trends over the last fifteen years. The data show that the TFR decreased only slightly from 5.5 children in 2000 to 5.4 children in 2005, with a more pronounced decline to 4.8 children in 2011. This trend continues between 2011 and 2014 with fertility declining by 0.7 children per women.

Figure 4.2 Trends in Fertility Rates, 2000-2014



Total Fertility Rate for the 3 years preceding the survey

EMDHS 2014

FAMILY PLANNING 5

Key Findings

- Knowledge of contraceptive methods is nearly universal in Ethiopia.
- Four in every ten currently married women (42 percent) are using a method of contraception, mostly modern methods (40 percent).
- By far the most popular modern method, used by 31 percent of currently married women, is injectables.
- Use of modern methods among currently married women has increased from 6 percent in 2000 to 40 percent in 2014—largely due to the sharp increase in the use of injectables, from 3 percent to 31 percent.

This chapter presents information from the 2014 Ethiopia Mini Demographic and Health Survey (EMDHS) on contraceptive knowledge and behaviour. Women's knowledge of family planning methods provides a measure of the level of awareness of contraception in the population and indicates the success of existing information, education, and communication programmes. Knowledge of at least one family planning method and a positive attitude toward contraception are prerequisites for the use of contraception.

Although information is presented for all women, the focus of this chapter is on currently married women, since within the Ethiopian context this group is the most susceptible to pregnancy. Comparisons are made with findings from the previous three EDHS surveys conducted in 2000, 2005 and 2011 to evaluate trends in Ethiopia over the last fifteen years to gauge the country's success towards achieving its health sector goals.

5.1 KNOWLEDGE OF CONTRACEPTIVE METHODS

Knowledge of family planning is a prerequisite to obtaining access to and using a suitable contraceptive method in a timely and effective manner. Interviewers collected information regarding knowledge of contraceptive methods by describing each method and asking female respondents if she had heard of it. Using this approach, interviewers collected information on 11 modern family planning methods: female and male sterilisation, the pill, the IUD, injectables, implants, male and female condoms, lactational amenorrhea method (LAM), emergency contraception, and the standard days method. Two traditional methods were also included in the survey: periodic abstinence (or rhythm) and withdrawal. Interviewers recorded any other traditional methods that respondents mentioned spontaneously.

Table 5.1 shows the percentage of all women and currently married women, age 15-49, who know any contraceptive method, by specific type. Knowledge of at least one method of contraception is nearly universal among currently married women in Ethiopia. A currently married woman knows on average more than five methods of contraception. Women are much more familiar with modern contraceptive methods than with traditional methods.

About nine in every ten currently married women have heard about the pill and injectables. LAM is the least known modern method. Only 2 percent of currently married women have heard of this method.

Table 5.1 Knowledge of contraceptive methods

Percentage of all women and currently married women age 15-49 who know any contraceptive method, by specific method, Ethiopia 2014

Method	Women	
	All women	Currently married women
Any method	96.7	97.5
Any modern method	96.5	97.3
Female sterilisation	39.9	40.1
Male sterilisation	10.6	10.4
Pill	87.8	90.1
IUD	38.9	37.8
Injectables	93.4	95.0
Implants	73.5	76.5
Male condom	75.5	72.3
Female condom	25.9	22.9
Lactational amenorrhoea (LAM)	1.4	1.6
Emergency contraception	18.5	16.1
Standard days method	3.8	3.8
Any traditional method	53.2	51.8
Rhythm	49.1	47.0
Withdrawal	27.2	25.9
Other	2.2	2.8
Mean number of methods known by respondents 15-49	5.5	5.4
Weighted number of respondents	8,070	5,145
Unweighted number of respondents	8,070	5,173

The overall knowledge of contraceptive methods among currently married women has increased from 86 percent in 2000 to its current level, a 13 percent increase over the last fifteen years. Knowledge has remained steady at 97 percent in the last three years. However, knowledge about IUD and implants has increased by 43 percent and 11percent, respectively, while knowledge about male condoms decreased by 6 percent, over the same period.

5.2 CURRENT USE OF CONTRACEPTIVE METHODS

Current use of contraceptive methods is one of the indicators most frequently used to assess the success of family planning programmes. This section focuses on the levels, differentials, and trends in current use of family planning.

5.2.1 Current Use of Contraceptive Methods by Age

Table 5.2 presents current use of contraceptive methods among all women and currently married women age 15-49, by age group. The contraceptive prevalence rate is 29 percent for all women and 42 percent for currently married women. The vast majority of women use modern methods than traditional methods. Table 5.2 shows that 40 percent of currently married women are using a modern method compared with just 2 percent using a traditional method. The most commonly used modern method is injectables, currently used by 31 percent of currently married women. Five percent of currently married women use implants and 3 percent use the pill.

Current contraceptive use is lower among currently married women age 40 and above (some of whom are no longer fecund) than younger women. For example, 22 percent of currently married women age 45-49 report current use of a contraceptive method compared with 40 percent or more of currently married women below 40 years of age. Contraceptive use is highest among currently married women age 20-24 (48 percent). Current use of contraceptive methods is much lower among

Table 5.2 Current use of contraceptive methods by age

Percent distribution of all women and currently married women age 15-49 by contraceptive method currently used, according to age, Ethiopia 2014

Age	Any method	Any modern method	Modern method							Any traditional method	Traditional method			Not currently using	Total	Weighted number of women	Unweighted number of women
			Female sterilisation	Pill	IUD	Injectables	Implants	Male condom	Other		Rhythm	Withdrawal	Other				
							ALL WOMEN										
Age																	
15-19	9.3	9.2	0.0	0.9	0.3	7.3	0.6	0.1	0.0	0.1	0.1	0.0	0.0	90.7	100.0	1,782	1,689
20-24	31.9	31.0	0.0	2.2	1.0	23.2	4.5	0.1	0.0	0.9	0.7	0.0	0.2	68.1	100.0	1,427	1,445
25-29	39.5	37.9	0.0	2.5	0.4	28.9	5.1	0.5	0.5	1.5	1.2	0.1	0.2	60.5	100.0	1,606	1,621
30-34	39.6	38.4	0.0	2.1	0.8	28.4	6.4	0.6	0.2	1.2	0.5	0.3	0.4	60.4	100.0	1,130	1,178
35-39	36.5	34.6	0.7	1.7	1.0	27.9	2.7	0.7	0.0	1.9	1.0	0.6	0.2	63.5	100.0	1,033	1,038
40-44	26.5	24.9	0.1	1.1	2.2	18.6	2.9	0.0	0.0	1.6	0.5	0.6	0.5	73.5	100.0	601	603
45-49	17.9	17.2	0.6	1.8	0.5	13.4	0.5	0.3	0.0	0.8	0.0	0.7	0.0	82.1	100.0	491	496
Total	28.8	27.8	0.1	1.8	0.8	21.2	3.4	0.3	0.1	1.1	0.6	0.2	0.2	71.2	100.0	8,070	8,070
							CURRENTLY MARRIED WOMEN										
Age																	
15-19	40.1	39.6	0.0	4.3	0.8	32.3	2.1	0.0	0.0	0.6	0.4	0.0	0.1	59.9	100.0	364	405
20-24	48.2	46.8	0.0	3.5	1.1	35.1	7.1	0.0	0.0	1.5	1.1	0.0	0.3	51.8	100.0	832	837
25-29	46.2	44.4	0.0	3.0	0.4	34.0	5.8	0.5	0.6	1.9	1.5	0.2	0.2	53.8	100.0	1,267	1,289
30-34	44.2	42.9	0.0	2.4	0.9	31.8	6.9	0.6	0.3	1.3	0.5	0.3	0.5	55.8	100.0	972	996
35-39	42.8	40.5	0.8	1.8	1.2	32.7	3.3	0.7	0.0	2.3	1.2	0.8	0.3	57.2	100.0	840	838
40-44	31.6	29.6	0.1	1.4	2.8	22.2	3.2	0.0	0.0	1.9	0.6	0.7	0.6	68.4	100.0	487	466
45-49	21.7	20.8	0.0	2.3	0.7	17.2	0.6	0.0	0.0	1.0	0.0	0.9	0.0	78.3	100.0	382	342
Total	42.0	40.4	0.1	2.7	1.0	31.1	4.9	0.4	0.2	1.6	0.9	0.4	0.3	58.0	100.0	5,145	5,173

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

all women, and particularly among those age 15-19, than among currently married women, primarily because the all women category includes unmarried women and women who are separated, divorced or widowed, for whom use is relatively low.

5.2.2 Current Use of Contraceptive Methods By Background Characteristics

Table 5.3 shows substantial variations by background characteristics in the current use of contraceptive methods among currently married women. Currently married women in urban areas are more likely than their rural counterparts to use a contraceptive method (59 and 38 percent, respectively), to use any modern method (56 and 37 percent, respectively), and to use any traditional method (4 and 1 percent, respectively).

The pattern in the relationship between contraceptive use and number of living children is an inverted U-shape. Contraceptive use is highest among women with 1-2 children and lowest among women with five or more children.

Use of any contraceptive method varies notably by region, ranging from 64 percent in Addis Ababa to 3 percent in the Somali region. Similarly use of any modern contraceptive method is highest in Addis Ababa (57 percent) and lowest in the Somali region (2 percent).

Current contraceptive use increases with women's education. Thirty-five percent of women with no education report current use of any method, compared with 70 percent of women with more than secondary education. Similarly, current use of any contraceptive method increases with wealth. Currently married women in the wealthiest household are twice as likely as women in the poorest household to use any contraceptive method (57 and 28 percent, respectively).

Table 5.3 Current use of contraceptive methods by background characteristics

Percent distribution of currently married women age 15-49 by contraceptive method currently used, according to background characteristics, Ethiopia 2014

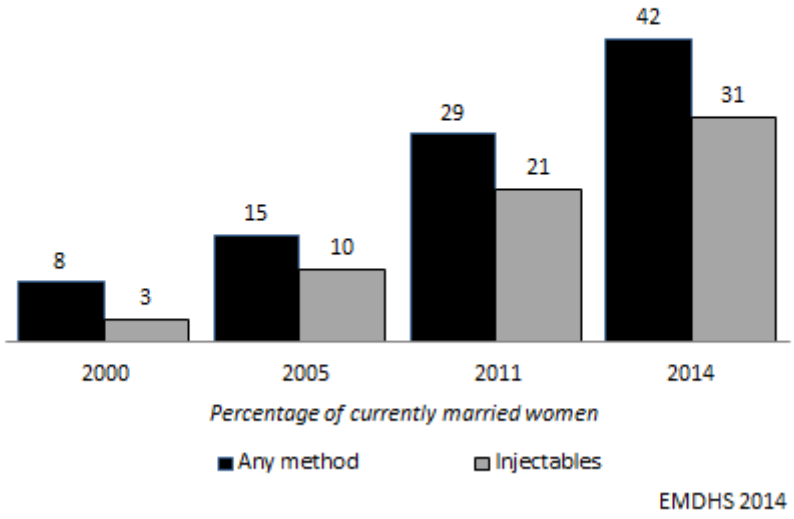
Background characteristic	Any method	Any modern method	Modern method							Any traditional method	Traditional method			Not currently using	Total	Weighted number of women	Unweighted number of women
			Female sterilization	Pill	IUD	Injectables	Implants	Male condom	Other		Rhythm	Withdrawal	Other				
Number of living children																	
0	36.7	35.7	0.0	5.5	0.5	26.5	2.5	0.7	0.0	0.9	0.9	0.0	0.0	63.3	100.0	556	601
1-2	50.2	47.8	0.0	3.1	1.5	35.2	6.9	0.4	0.5	2.4	1.7	0.5	0.3	49.8	100.0	1,537	1,632
3-4	43.5	42.0	0.1	2.6	0.9	32.9	4.7	0.5	0.2	1.5	0.7	0.3	0.5	56.5	100.0	1,406	1,399
5+	34.8	33.6	0.4	1.3	0.8	27.2	3.9	0.1	0.0	1.2	0.4	0.5	0.3	65.2	100.0	1,646	1,541
Residence																	
Urban	59.1	55.6	0.1	6.1	3.3	37.6	6.2	1.6	0.6	3.6	2.4	0.6	0.6	40.9	100.0	882	1,261
Rural	38.4	37.2	0.2	1.9	0.6	29.7	4.6	0.1	0.1	1.2	0.6	0.3	0.3	61.6	100.0	4,263	3,912
Region																	
Tigray	33.3	29.6	0.0	2.3	0.2	24.4	2.7	0.0	0.0	3.7	1.8	0.2	1.7	66.7	100.0	316	419
Affar	19.0	13.7	0.1	1.1	0.2	11.0	0.8	0.0	0.5	5.3	0.0	0.0	5.3	81.0	100.0	56	517
Amhara	49.1	48.0	0.0	1.3	0.2	38.6	7.7	0.2	0.0	1.1	0.5	0.4	0.2	50.9	100.0	1,240	570
Oromiya	40.2	39.1	0.3	3.8	1.0	28.9	4.6	0.0	0.5	1.1	0.5	0.5	0.0	59.8	100.0	2,046	643
Somali	3.0	1.6	0.0	0.0	0.0	0.9	0.7	0.0	0.0	1.4	0.4	0.0	0.9	97.0	100.0	104	395
Benishangul-Gumuz	39.9	38.8	0.4	0.8	0.3	32.5	4.8	0.0	0.0	1.1	0.8	0.0	0.3	60.1	100.0	54	434
SNNP	40.5	39.2	0.0	1.2	1.4	33.1	2.8	0.8	0.0	1.3	1.2	0.1	0.0	59.5	100.0	1,077	675
Gambela	50.5	50.4	0.0	2.6	0.3	46.7	0.7	0.1	0.0	0.1	0.1	0.0	0.0	49.5	100.0	30	418
Harari	48.5	42.9	0.3	4.6	2.8	26.3	7.4	1.2	0.3	5.7	5.0	0.0	0.6	51.5	100.0	14	400
Addis Ababa	64.1	57.4	0.4	10.7	7.5	26.5	8.5	3.7	0.0	6.7	5.5	0.9	0.3	35.9	100.0	184	316
Dire Dawa	50.9	34.6	0.5	4.3	4.5	16.0	8.7	0.0	0.6	16.3	3.9	0.0	12.3	49.1	100.0	22	386
Education																	
No education	35.4	34.6	0.2	1.9	0.5	27.5	4.4	0.2	0.0	0.8	0.2	0.2	0.3	64.6	100.0	3,121	3,140
Primary	48.3	46.0	0.0	2.8	1.0	35.5	5.8	0.6	0.3	2.3	1.5	0.6	0.3	51.7	100.0	1,586	1,472
Secondary	64.1	58.9	0.2	5.9	3.9	43.7	4.6	0.5	0.1	5.2	4.3	0.4	0.5	35.9	100.0	282	362
More than secondary	69.6	64.7	0.2	10.4	7.0	35.5	7.1	1.0	2.4	4.9	4.1	0.8	0.0	30.4	100.0	156	199
Wealth quintile																	
Lowest	28.1	27.1	0.0	1.6	0.4	22.9	2.2	0.0	0.0	0.9	0.6	0.0	0.4	71.9	100.0	1,001	1,441
Second	36.6	36.3	0.3	2.3	0.6	27.0	6.2	0.0	0.0	0.4	0.1	0.1	0.1	63.4	100.0	1,046	872
Middle	38.6	37.3	0.0	1.3	0.4	30.0	5.4	0.2	0.0	1.3	0.8	0.0	0.4	61.4	100.0	1,009	775
Fourth	47.8	46.3	0.4	2.7	1.0	35.7	6.1	0.4	0.0	1.5	0.6	0.8	0.2	52.2	100.0	970	711
Highest	57.4	53.6	0.1	5.1	2.6	39.2	4.6	1.0	0.9	3.8	2.4	1.0	0.4	42.6	100.0	1,119	1,374
Total	42.0	40.4	0.1	2.7	1.0	31.1	4.9	0.4	0.2	1.6	0.9	0.4	0.3	58.0	100.0	5,245	5,173

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

5.3 TRENDS IN CONTRACEPTIVE USE

Figure 5.1 shows trends in contraceptive use among currently married women over the last fifteen years from 2000 to 2014. There is a five-fold increase in the use of a method of contraception by currently married women, from 8 percent in 2000 to 42 percent in 2014. Much of this increase is attributable to the sharp increase in the use of injectables. Use of injectables increased from 3 percent in 2000 to 31 percent in 2014. In addition, although the overall use of implants continues to be low, its use has increased in the last 10 years from less than one percent (0.2 percent) in 2005 to 5 percent in 2014.

Figure 5.1 Trends in Current Use of Contraceptive Methods, 2000-2014



5.4 SOURCE OF MODERN CONTRACEPTIVE METHODS

Information on where women obtain their contraceptive methods is important from a programme and policy perspective. Women who were currently using a method of contraception were asked for the most recent source of the method they were using. Table 5.4 shows that the public sector continues to be the major source of modern contraceptive methods in Ethiopia and serves 87 percent of users. In contrast, only 12 percent of users reported that their source of a modern method was the private medical sector. The vast majority of women obtained their method from a government health centre (44 percent), and government health post or HEW (39 percent).

Table 5.4 Source of modern contraceptive methods

Percent distribution of users of modern contraceptive methods age 15-49 by most recent source of method, according to method, Ethiopia 2014

Source	Pill	IUD	Injectables	Implants	Total
Public sector	**71.1**	**73.7**	**88.4**	**93.1**	**87.0**
Government hospital	2.3	10.7	4.2	1.5	4.1
Government health centre	33.0	53.5	39.5	71.3	43.5
Government health station/clinic	1.1	0.1	2.6	0.0	2.1
Government health post/HEW	33.2	9.5	42.1	19.1	36.9
Other public	1.4	0.0	0.0	1.1	0.2
Private medical sector	**26.3**	**26.3**	**11.4**	**6.9**	**12.4**
Private hospital	0.0	8.5	0.2	0.4	0.6
Private clinic	9.8	5.6	6.8	1.8	6.2
Pharmacy	11.5	0.0	0.0	0.0	0.8
NGO health facility	3.2	6.4	2.3	2.3	2.4
Other NGO	1.8	5.8	1.7	2.4	2.1
Voluntary community health workers	0.0	0.0	0.2	0.0	0.1
Other private medical	0.0	0.0	0.2	0.0	0.2
Other source	**2.7**	**0.0**	**0.0**	**0.0**	**0.4**
Drug vendor/store	2.7	0.0	0.0	0.0	0.3
Shop	0.0	0.0	0.0	0.0	0.0
Friend/relative	0.0	0.0	0.0	0.0	0.1
Missing	0.0	0.0	0.2	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0
Weighted number of women	144	61	1,712	278	2,237
Unweighted number of women	147	86	1,365	237	1,893

Note: Total includes male condom and diaphragm but excludes lactational amenorrhea method (LAM) and standard days method.
HEW = Health Extension Worker

MATERNAL HEALTH 6

Key Findings

- Forty-one percent of women who gave birth in the five years preceding the survey received antenatal care from a skilled provider, that is, from a doctor, nurse, or midwife for their most recent birth. This is a 52 percent increase over the last fifteen years.
- One woman in every three (32 percent) made four or more antenatal visits during the course of her pregnancy, up from 10 percent in 2000. The median duration of pregnancy at the time of the first antenatal visit is 4.9 months.
- Even though the percentage of facility births continues to be low in Ethiopia (16 percent), there has been remarkable progress in the last fifteen years from 5 percent in 2000.
- Only 13 percent of women received postnatal care within the first two days of delivery. Nevertheless, this is an improvement from fifteen years ago when only 2 percent received postnatal care during the same period.

Millennium Development Goal 5 (MDG5), calls for the improvement in maternal health, with a target of reducing the maternal mortality ratio (MMR) by three-quarters over the period 1990-2015. Accordingly, the Federal Ministry of Health (FMOH) has applied a multi-pronged approach to reduce maternal and newborn morbidity and mortality by improving access to and strengthening facility-based maternal and newborn services.

This chapter presents findings from the 2014 Ethiopia Mini Demographic and Health Survey (EMDHS) on maternal health, including antenatal, delivery, and postnatal care. The data presented in this chapter will assist policymakers, planners, and other collaborators in the health sector to monitor the progress achieved thus far in improving maternal health.

6.1 ANTENATAL CARE

The quality of antenatal care (ANC) is dependent on the qualifications of health providers and the number and frequency of ANC visits. The content of services received and the kinds of information given to women during their ANC visits are also important components of quality care. These services raise awareness of the danger signs during the pregnancy, delivery, and postnatal period, improve the health-seeking behaviour of women, orient them to birth preparedness issues, and provide basic preventive and therapeutic care. The EMDHS obtained information on ANC coverage 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, the EMDHS data refer to the most recent birth only.

6.1.1 Coverage of Antenatal Care

Table 6.1 shows the percent distribution of mothers in the five years preceding the survey by source of antenatal care received during pregnancy, according to background characteristics of the women. For women who reported receiving antenatal care from more than one provider, only the provider with the highest qualification is considered.

Forty-one percent of pregnant women who gave birth in the five years preceding the survey received antenatal care from a skilled provider, that is, from a doctor, nurse, or midwife, for their most recent birth—35 percent from a nurse or midwife, and 6 percent from a doctor. Another 17 percent of

Table 6.1 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, Ethiopia 2014

Background characteristic	Antenatal care provider									Total	Percentage receiving antenatal care from a skilled provider[1]	Weighted number of women	Unweighted number of women
	Doctor	Nurse/ midwife	Other health worker	HEW	Traditional birth attendant	Community health worker (VCHW)	Other	Missing	No ANC				
Mother's age at birth													
<20	4.2	40.4	0.6	14.1	0.0	0.1	0.1	0.0	40.5	100.0	45.3	384	427
20-34	6.4	36.7	0.0	17.4	0.0	0.1	0.0	0.1	39.3	100.0	43.1	2,650	2,690
35-49	3.6	27.7	0.0	18.1	0.0	0.0	0.0	0.1	50.4	100.0	31.3	645	595
Birth order													
1	9.5	47.7	0.4	12.0	0.0	0.0	0.0	0.0	30.3	100.0	57.6	654	694
2-3	8.5	38.0	0.0	15.1	0.0	0.2	0.1	0.0	38.2	100.0	46.5	1,142	1,112
4-5	3.3	31.0	0.0	21.1	0.1	0.0	0.0	0.1	44.4	100.0	34.3	895	926
6+	2.0	28.6	0.0	19.5	0.0	0.0	0.0	0.3	49.6	100.0	30.6	988	980
Residence													
Urban	24.7	55.5	0.1	2.2	0.0	0.0	0.0	0.0	17.5	100.0	80.3	521	745
Rural	2.5	32.2	0.1	19.7	0.0	0.1	0.0	0.1	45.3	100.0	34.8	3,157	2,967
Region													
Tigray	8.2	60.3	0.2	10.0	0.3	0.0	0.3	0.5	20.2	100.0	68.7	227	309
Affar	12.1	18.1	0.8	2.3	0.0	0.6	0.8	0.0	65.4	100.0	31.0	39	374
Amhara	1.5	44.7	0.0	16.8	0.0	0.0	0.0	0.0	37.0	100.0	46.2	837	390
Oromiya	4.5	28.2	0.0	18.1	0.0	0.0	0.0	0.0	49.1	100.0	32.7	1,471	460
Somali	9.2	9.8	0.0	2.2	0.3	0.0	0.0	0.5	77.9	100.0	19.1	98	348
Benishangul-Gumuz	5.3	33.5	0.0	17.4	0.0	0.5	0.0	0.0	43.3	100.0	38.8	39	308
SNNP	5.0	33.9	0.2	23.1	0.0	0.2	0.0	0.2	37.5	100.0	39.0	819	515
Gambela	7.8	46.3	0.0	8.9	0.0	0.8	1.6	0.0	34.6	100.0	54.2	19	302
Harari	28.0	41.6	0.0	8.0	0.0	0.0	0.0	0.0	22.3	100.0	69.7	9	257
Addis Ababa	44.9	48.8	0.5	0.4	0.0	0.0	0.0	0.0	5.4	100.0	94.2	103	179
Dire Dawa	26.7	51.7	0.0	6.2	0.0	0.0	0.0	0.5	15.0	100.0	78.4	15	270
Mother's education													
No education	2.6	29.3	0.0	17.8	0.0	0.1	0.0	0.1	49.9	100.0	32.0	2,302	2,383
Primary	6.0	44.4	0.1	18.2	0.0	0.0	0.0	0.1	31.1	100.0	50.5	1,137	1,008
Secondary	22.9	58.6	0.4	8.2	0.0	0.0	0.1	0.0	9.9	100.0	81.9	168	217
More than secondary	58.6	37.7	0.0	0.7	0.0	0.0	0.0	0.0	3.0	100.0	96.3	71	104
Wealth quintile													
Lowest	0.5	23.2	0.0	20.0	0.0	0.0	0.0	0.2	55.9	100.0	23.7	836	1,164
Second	1.7	27.3	0.3	18.7	0.0	0.0	0.1	0.1	51.8	100.0	29.3	778	676
Middle	4.0	36.7	0.0	20.2	0.1	0.0	0.0	0.0	38.9	100.0	40.6	726	573
Fourth	3.8	38.3	0.0	18.7	0.0	0.3	0.0	0.0	38.9	100.0	42.2	680	485
Highest	20.7	56.6	0.1	6.9	0.0	0.0	0.0	0.0	15.7	100.0	77.3	657	814
Safety Net Program Households[2]													
Yes	0.7	27.4	0.0	19.2	0.0	0.0	0.1	0.2	52.4	100.0	28.1	366	583
No	2.8	32.8	0.1	19.7	0.0	0.1	0.0	0.1	44.4	100.0	35.6	2,791	2,384
Total	5.7	35.5	0.1	17.2	0.0	0.1	0.0	0.1	41.4	100.0	41.2	3,678	3,712

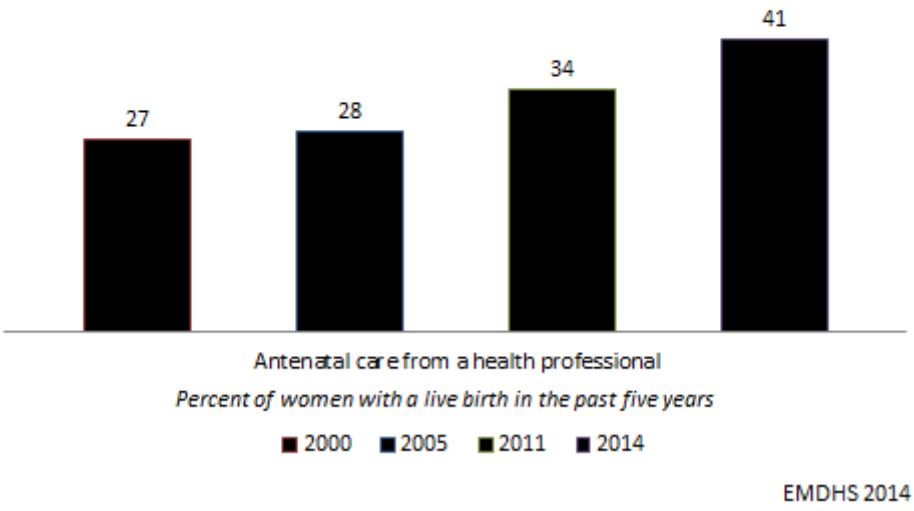
Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation.
PSNP = Productive Safety Nets Programme
[1] Skilled provider includes doctor, nurse, midwife, and auxiliary nurse/midwife
[2] Includes women in rural households only

women received ANC from a health extension worker (HEW). Trend data on the percentage receiving antenatal care from a skilled health provider shows that there was an impressive 52 percent increase in skilled antenatal care over the last fifteen years (Figure 6.1)

About four in every ten Ethiopian women (41 percent) did not receive any antenatal care for their last birth in the five years preceding the survey. This represents a marked decline from fifteen years ago when almost three in four (73 percent) pregnant women did not receive any antenatal care.

Antenatal care from a skilled provider is more common among women less than 20 years and those age 20-34 (45 percent and 43 percent, respectively) than among women age 35-49 (31 percent). Women are almost twice as likely to receive antenatal care from a skilled provider for first births (58 percent) as for births of order six and higher (31 percent).

Figure 6.1 Trends in Antenatal Care, 2000-2014



Urban women are more than twice as likely as rural women to receive ANC from a skilled provider. Eighty percent of women residing in urban areas received ANC services from a skilled provider for their last birth compared with 35 percent of women in rural areas. Urban women are eight times more likely, at 25 percent, than rural women, at 3 percent, to receive antenatal care from a doctor. Conversely, 20 percent of rural women received antenatal care from a HEW compared with 2 percent of urban woman. Antenatal care from a skilled provider ranges from a low of 19 percent in the Somali region to a high of 94 percent in Addis Ababa.

Education has a direct impact on whether pregnant women receive skilled antenatal care. Skilled antenatal care increases from 32 percent among women with no education to 96 percent among women with more than secondary education. Similarly, the proportion of women who received ANC rises from 24 percent among women in the lowest wealth quintile to 77 percent among women in the highest wealth quintile.

Twenty-eight percent of women in Productive Safety Nets Programme (PSNP) households received ANC from a skilled provider compared with 36 percent of women in non-PSNP households.

6.1.2 Number of ANC Visit and Timing of First Visit

Adverse pregnancy outcomes can be minimised or avoided altogether if antenatal care is received early in the pregnancy and continued through delivery. The World Health Organization (WHO) recommends that a woman without complications should have at least four antenatal visits, the first of which should take place during the first trimester. Table 6.2 presents information on the number of visits and the timing of the first visit.

Thirty-two percent of women with a live birth in the five years before the survey made four or more ANC visits during the length of their pregnancy, a marked improvement from 10 percent reported in the 2000 EDHS. Urban women are more likely than rural women to have made four or more visits (66 percent versus 27 percent).

Table 6.2 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, Ethiopia 2014

Number and timing of ANC visits	Residence		Total
	Urban	Rural	
Number of ANC visits			
None	17.5	45.3	41.4
1	0.3	5.5	4.7
2-3	15.5	22.3	21.3
4+	65.7	26.5	32.1
Don't know/missing	1.0	0.4	0.5
Total	100.0	100.0	100.0
Number of months pregnant at time of first ANC visit			
No antenatal care	17.5	45.3	41.4
<4	38.5	14.0	17.5
4-5	33.7	20.8	22.6
6-7	9.4	15.3	14.5
8+	0.3	3.9	3.4
Don't know/missing	0.7	0.7	0.7
Total	100.0	100.0	100.0
Weighted number of women	521	3,157	3,678
Unweighted number of women	745	2,967	3,712
Median months pregnant at first visit (for those with ANC)	4.1	5.2	4.9
Weighted number of women with ANC	430	1,724	2,154
Unweighted number of women with ANC	631	1,473	2,104

Eighteen percent of women made their first ANC visit before the fourth month of pregnancy, a three-fold increase from 6 percent in the 2000 EDHS. The median duration of pregnancy at the first visit is 4.9 months. Urban women made their first ANC visit more than a month earlier (4.1 months) than rural women (5.2 months).

6.1.3 Components of Antenatal Care

In order to assess the quality of antenatal services, respondents were asked whether they had been advised of complications or received certain screening tests during at least one of their antenatal visits. Table 6.3 shows the percentage of women who took iron tablets, who were informed of the signs of pregnancy complications, and who received selected services during ANC visits for their most recent birth in the last five years.

Among women with a live birth in the five years preceding the survey, 34 percent took iron tablets during their last pregnancy. Consumption of iron tablets by pregnant women doubled from 15 percent in 2011 to 34 percent in 2014. There are substantial variations in the percentage of women who took iron tablets by age, birth order, residence, region, education and household wealth. The consumption of iron tablets is higher among urban women (41 percent) than among rural women (33 percent). Nevertheless, there has been a more than two-fold increase in iron tablet consumption among rural women in the last three years from 15 percent in 2011.

About one in every four (24 percent) women reported that they were informed of signs of pregnancy complications during their ANC visit. Women are more likely to be informed of signs of pregnancy complications while pregnant with their first birth compared with pregnancies of birth

Table 6.3 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 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, Ethiopia 2014

	Among women with a live birth in the past five years, the percentage who during the pregnancy of their last birth:			Among women who received antenatal care for their most recent birth in the past five years, the percentage with selected services					
Background characteristic	Took iron tablets	Weighted number of women with a live birth in the past five years	Unweighted number of women with a live birth in the past five years	Informed of signs of pregnancy complications	Blood pressure measured	Urine Sample taken	Blood sample taken	Weighted number of women with ANC for their most recent birth	Unweighted number of women with ANC for their most recent birth
Mother's age at birth									
<20	26.6	384	427	22.5	56.7	53.0	64.8	228	236
20-34	36.5	2,650	2,690	24.3	73.8	53.1	68.8	1,606	1,574
35-49	30.0	645	595	24.8	64.1	46.1	56.7	319	294
Birth order									
1	33.9	654	694	28.2	70.0	64.5	73.6	456	484
2-3	37.8	1,142	1,112	25.9	76.9	57.3	71.8	705	680
4-5	33.8	895	926	22.0	68.4	43.2	61.5	497	489
6+	31.1	988	980	20.1	64.2	41.7	58.0	495	451
Residence									
Urban	40.5	521	745	41.8	91.1	77.9	90.9	430	631
Rural	33.3	3,157	2,967	19.7	65.4	45.5	60.6	1,724	1,473
Region									
Tigray	61.2	227	309	25.1	77.7	65.7	74.9	181	242
Affar	24.1	39	374	30.7	69.5	64.5	78.7	14	113
Amhara	42.3	837	390	17.3	67.4	37.3	59.8	527	243
Oromiya	24.7	1,471	460	21.6	69.5	57.6	65.7	748	232
Somali	11.6	98	348	29.6	77.3	62.7	73.0	21	59
Benishangul-Gumuz	29.6	39	308	27.6	60.9	53.8	69.8	22	153
SNNP	37.8	819	515	24.5	68.1	43.5	64.8	510	314
Gambela	34.0	19	302	26.7	60.4	57.8	77.1	12	161
Harari	43.5	9	257	33.2	86.2	87.4	87.5	7	194
Addis Ababa	45.0	103	179	72.9	95.0	95.3	95.6	98	170
Dire Dawa	49.1	15	270	25.8	82.3	83.5	86.2	13	223
Mother's education									
No education	30.7	2,302	2,383	18.4	66.2	42.9	59.6	1,152	1,078
Primary	38.3	1,137	1,008	27.4	72.7	58.3	71.2	782	724
Secondary	45.1	168	217	28.7	79.4	69.9	82.4	151	200
More than secondary	64.6	71	104	73.8	99.7	94.0	98.4	69	102
Wealth quintile									
Lowest	27.8	836	1,164	19.6	57.0	35.1	53.5	367	376
Second	31.7	778	676	14.5	63.1	40.1	53.7	375	353
Middle	40.7	726	573	20.7	70.1	42.3	61.5	443	356
Fourth	33.5	680	485	22.1	72.7	55.5	70.4	416	311
Highest	39.6	657	814	38.1	83.3	76.4	85.3	554	708
Total	34.3	3,678	3,712	24.1	70.6	52.0	66.6	2,154	2,104

order six or higher. Urban women (42 percent) are more than twice as likely as rural women (20 percent) to be informed of signs of pregnancy complications. The proportion of women informed of signs of pregnancy complications varies widely by region from a low of 17 percent in Amhara to 73 percent in Addis Ababa. The proportion of women informed of signs of pregnancy complications increases with education and household wealth.

Among the various ANC components, 71 percent of women had their blood pressure measured, 67 percent had a blood sample taken and 52 percent had a urine sample taken. For all three services, women below age 35, urban residents, highly educated women, and women in the highest wealth quintile were more likely than other women to have received each of the specified services.

Table 6.4 shows that among women with antenatal care, 17 percent received all four components of ANC services, that is, they were informed of pregnancy complications, had their blood pressure measured, blood sample taken and urine sample taken. Sixteen percent of women received only one component of ANC services, 20 percent received two components and 31 percent received three components.

Table 6.4 Antenatal care by number of components

Among women age 15-49 receiving antenatal care (ANC) for the most recent live birth in the five years preceding the survey, the percentage distribution receiving specific antenatal services by number of components received, according to background characteristics, Ethiopia 2014

	Among women who received antenatal care for their most recent birth in the past five years, the percentage who received antenatal care by number of components								
Background characteristic	Received none of the components	Received one component	Received two components	Received three components	Received all four components	Missing on number of components	Total	Weighted number of women with ANC for their most recent birth	Unweighted number of women with ANC for their most recent birth
Mother's age at birth									
<20	25.3	12.2	18.8	27.6	16.1	0.0	100.0	228	236
20-34	15.1	15.6	20.1	32.1	16.9	0.2	100.0	1,606	1,574
35-49	23.7	17.4	18.2	25.0	15.7	0.0	100.0	319	294
Birth order									
1	16.3	8.7	19.7	33.2	22.2	0.0	100.0	456	484
2-3	12.6	16.0	17.3	33.9	19.9	0.3	100.0	705	680
4-5	19.9	17.8	21.2	29.4	11.7	0.0	100.0	497	489
6+	22.9	18.7	21.6	24.6	12.0	0.2	100.0	495	451
Residence									
Urban	3.0	4.4	15.8	40.9	35.7	0.2	100.0	430	631
Rural	21.1	18.2	20.7	28.0	11.9	0.1	100.0	1,724	1,473
Region									
Tigray	11.6	13.5	13.0	43.6	18.2	0.0	100.0	181	242
Affar	10.2	10.4	21.2	42.3	16.0	0.0	100.0	14	113
Amhara	19.0	21.6	26.7	22.5	9.9	0.4	100.0	527	243
Oromiya	21.5	11.3	15.1	35.6	16.6	0.0	100.0	748	232
Somali	6.6	16.8	16.8	36.5	19.8	3.6	100.0	21	59
Benishangul-Gumuz	19.0	12.1	21.5	32.6	14.8	0.0	100.0	22	153
SNNP	16.2	19.4	25.0	25.9	13.4	0.0	100.0	510	314
Gambela	14.1	16.8	16.8	37.8	14.5	0.0	100.0	12	161
Harari	11.8	0.3	1.1	55.4	31.5	0.0	100.0	7	194
Addis Ababa	0.0	1.4	5.2	26.6	66.8	0.0	100.0	98	170
Dire Dawa	9.6	3.1	8.2	58.3	20.8	0.0	100.0	13	223
Mother's education									
No education	21.9	18.5	21.2	26.5	11.6	0.2	100.0	1,152	1,078
Primary	14.1	13.8	18.8	35.0	18.3	0.0	100.0	782	724
Secondary	8.5	7.9	21.1	38.5	23.6	0.5	100.0	151	200
More than secondary	0.0	0.3	1.6	30.0	68.1	0.0	100.0	69	102
Wealth quintile									
Lowest	27.1	21.0	22.3	19.0	10.7	0.0	100.0	367	376
Second	26.1	20.2	19.5	24.7	9.6	0.0	100.0	375	353
Middle	18.3	20.1	22.4	27.0	12.1	0.0	100.0	443	356
Fourth	15.0	14.5	18.0	37.9	14.1	0.5	100.0	416	311
Highest	6.4	5.6	17.3	39.6	31.0	0.1	100.0	554	708
Total	17.4	15.5	19.7	30.6	16.7	0.1	100.0	2,154	2,104

6.1.4 Informed of Signs of Pregnancy Complications During Pregnancy

Table 6.5 presents the specific pregnancy complications that women were informed of during ANC visits. Fifty-three percent of women were informed during an ANC visit of severe headache as a possible sign of pregnancy complications, 38 percent of abdominal pain, 22 percent of vaginal bleeding, 21 percent of fever, 16 percent of vaginal gush or fluid, and 6 percent of blurred vision.

Table 6.5 Informed of signs of pregnancy complications

Among women age 15-49 with a live birth in the five years preceding the survey who were informed of signs of pregnancy complications at an antenatal care visit, the percentage who were informed of a specific pregnancy complication, according to background characteristics, Ethiopia 2014

Background characteristic	Vaginal bleeding	Vaginal gush or fluid	Severe headache	Blurred vision	Fever	Abdominal pain	Other	Weighted number of women	Unweighted number of women
Age									
15-19	(31.4)	(10.5)	(43.8)	(10.6)	(22.8)	(58.1)	(0.0)	28	28
20-34	22.0	17.3	54.1	5.6	21.6	37.6	0.0	375	452
35-49	21.0	13.4	53.1	5.9	19.1	36.2	0.0	117	110
Residence									
Urban	26.7	24.5	49.7	6.3	22.9	32.2	0.0	180	266
Rural	19.9	11.6	55.2	5.8	20.2	41.6	0.0	340	324
Region									
Tigray	26.7	26.0	39.3	4.5	34.2	45.7	0.0	45	58
Affar	(4.9)	(7.0)	(73.0)	(6.0)	(67.1)	(32.1)	(0.0)	4	31
Amhara	(15.6)	(18.1)	(40.4)	(2.1)	(19.9)	(33.5)	(0.0)	91	40
Oromiya	(11.4)	(5.3)	(72.7)	(5.8)	(19.7)	(29.6)	(0.0)	162	46
Somali	*	*	*	*	*	*	*	6	18
Benishangul-Gumuz	(12.1)	(13.2)	(54.7)	(12.2)	(19.1)	(21.2)	(0.0)	6	44
SNNP	34.2	19.5	43.7	6.2	17.6	51.9	0.0	125	71
Gambela	(9.5)	(20.8)	(36.2)	(2.7)	(4.6)	(20.7)	(0.0)	3	42
Harari	16.6	8.0	74.1	4.1	19.6	33.3	0.0	2	63
Addis Ababa	36.8	27.4	50.1	12.3	23.6	39.3	0.0	71	126
Dire Dawa	6.8	1.3	68.5	1.5	14.0	23.3	0.0	3	51
Education									
No education	13.8	11.3	58.1	4.0	13.7	36.2	0.0	212	232
Primary	28.7	17.1	52.3	8.2	26.1	42.5	0.0	214	215
Secondary	33.6	14.3	36.0	3.7	24.5	46.9	0.0	43	83
More than secondary	20.7	33.3	52.5	6.4	28.4	23.0	0.0	51	60
Wealth quintile									
Lowest	9.5	12.6	52.7	6.0	12.9	43.5	0.0	72	85
Second	17.9	6.2	52.2	4.3	23.2	37.2	0.0	54	55
Middle	27.0	17.2	51.4	2.5	30.8	49.6	0.0	92	83
Fourth	23.2	16.2	56.8	8.3	4.9	42.2	0.0	92	83
Highest	25.2	19.2	53.1	6.8	26.3	30.5	0.0	211	284
Total	22.2	16.1	53.3	6.0	21.1	38.4	0.0	520	590

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

6.2 PLACE OF DELIVERY

An important component of efforts to reduce health risks to mothers and children is increasing the proportion of babies that are delivered in health facilities. Table 6.6 shows the percent distribution of all live births in the five years preceding the survey by place of delivery.

Sixteen percent of births in Ethiopia are delivered at a health facility—15 percent in a public facility and 1 percent in a private facility. Even though the percentage of facility births continues to be low in Ethiopia, there has been remarkable progress in the last fifteen years. The percentage of births delivered in a health facility is three times higher, from 5 percent reported in 2000. First births are much more likely than births of order six or higher to be delivered in a health facility (36 percent versus 8 percent). Delivery in a health facility is more common among births to mothers below age 35, births to mothers who had at least four ANC visits, and births to highly educated mothers and mothers in the highest wealth quintile. Urban births are six times more likely than rural births to be delivered in a health facility (59 percent versus 10 percent). The percentage of births delivered in a health facility ranges from 10 percent in Affar to 87 percent in Addis Ababa.

The percent of births to women in PSNP households delivered in a health facility is similar to the percent of births to women in non-PSNP households (10 percent each).

Table 6.6 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, Ethiopia 2014

Background characteristic	Health facility		Home	Other	Missing	Total	Percentage delivered in a health facility	Weighted number of births	Unweighted number of births
	Public sector	Private sector							
Mother's age at birth									
<20	17.3	1.9	79.9	0.7	0.1	100.0	19.2	608	678
20-34	15.8	1.6	81.5	0.8	0.3	100.0	17.3	3,880	4,108
35-49	9.2	0.9	89.6	0.2	0.1	100.0	10.1	826	793
Birth order									
1	32.0	3.9	63.1	1.0	0.0	100.0	35.9	982	1,040
2-3	16.5	0.9	81.5	1.0	0.1	100.0	17.3	1,675	1,711
4-5	7.9	1.1	90.1	0.7	0.2	100.0	9.0	1,293	1,423
6+	7.4	1.0	90.9	0.2	0.6	100.0	8.3	1,364	1,405
Antenatal care visits[1]									
None	4.6	0.1	95.1	0.0	0.1	100.0	4.8	1,524	1,608
1-3	16.4	1.6	80.4	1.6	0.0	100.0	18.0	958	867
4+	37.0	3.6	57.8	1.6	0.0	100.0	40.6	1,180	1,219
Residence									
Urban	52.0	6.5	39.5	2.1	0.0	100.0	58.5	681	974
Rural	9.5	0.8	88.9	0.5	0.3	100.0	10.2	4,634	4,605
Region									
Tigray	26.5	0.2	72.6	0.2	0.4	100.0	26.7	333	459
Affar	9.1	0.8	90.1	0.0	0.0	100.0	9.9	64	633
Amhara	11.2	0.8	87.1	0.8	0.0	100.0	12.0	1,120	526
Oromiya	12.4	0.9	85.8	0.6	0.4	100.0	13.3	2,215	685
Somali	15.2	0.7	83.2	0.3	0.5	100.0	15.9	188	665
Benishangul-Gumuz	20.8	0.2	78.1	0.5	0.4	100.0	21.0	59	474
SNNP	13.5	1.4	83.7	1.1	0.3	100.0	14.9	1,151	731
Gambela	25.4	6.5	66.4	1.7	0.0	100.0	31.9	25	421
Harari	36.3	8.9	54.5	0.2	0.0	100.0	45.3	12	363
Addis Ababa	65.9	20.7	13.5	0.0	0.0	100.0	86.5	125	217
Dire Dawa	44.7	14.4	39.6	1.3	0.0	100.0	59.2	22	405
Mother's education									
No education	8.2	0.6	90.4	0.5	0.3	100.0	8.8	3,452	3,780
Primary	21.0	1.5	76.2	1.1	0.2	100.0	22.5	1,582	1,415
Secondary	59.3	9.7	29.9	1.2	0.0	100.0	69.0	194	259
More than secondary	72.8	18.9	8.3	0.0	0.0	100.0	91.7	87	125
Wealth quintile									
Lowest	5.0	0.1	94.4	0.1	0.4	100.0	5.1	1,276	1,903
Second	5.6	0.8	92.9	0.7	0.0	100.0	6.4	1,146	1,050
Middle	10.4	0.6	87.9	1.1	0.1	100.0	11.0	1,103	891
Fourth	13.7	1.4	83.3	0.7	0.8	100.0	15.1	961	702
Highest	50.5	6.0	42.3	1.2	0.0	100.0	56.5	829	1,033
PSNP households[2]									
Yes	9.3	0.4	89.7	0.5	0.1	100.0	9.7	561	954
No	9.5	0.8	88.8	0.5	0.3	100.0	10.3	4,073	3,651
Total	14.9	1.5	82.6	0.7	0.3	100.0	16.4	5,315	5,579

Note: Total includes 18 unweighted cases missing information on antenatal care visits. PSNP = Productive Safety Nets Programme.
[1] Includes only the most recent birth in the five years preceding the survey.
[2] Includes births in rural households only

6.3 ASSISTANCE DURING DELIVERY

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 towards safe motherhood.

Table 6.7 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. Sixteen percent of births were assisted by a skilled provider: 5 percent by a doctor and 11 percent by a nurse or midwife. About 2 percent of births were assisted by a HEW, and 51 percent of births were assisted by a relative, or some other person. Twenty-seven percent of births were assisted by a traditional birth attendant, while 5 percent of births were unattended. Skilled assistance at delivery increased from 6 percent to 16 percent in the last fifteen years (Figure 6.2).

Table 6.7 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, Ethiopia 2014

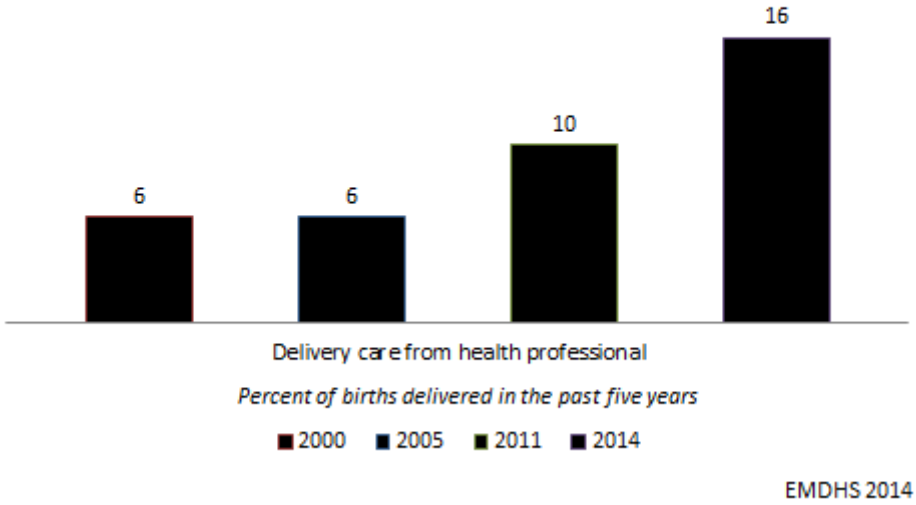
Background characteristic	Person providing assistance during delivery								Total	Percentage delivered by a skilled provider[1]	Percentage delivered by C-section	Weighted number of births	Unweighted number of births
	Doctor	Nurse/ midwife	HEW	Traditional birth attendant	VCHW/ Other	Relative/ Other	No one	Missing					
Mother's age at birth													
<20	4.5	14.6	0.8	31.3	0.0	46.6	2.1	0.1	100.0	19.1	2.1	608	678
20-34	5.1	11.1	1.7	26.7	0.2	49.9	5.0	0.2	100.0	16.3	2.3	3,880	4,108
35-49	2.1	6.7	1.4	25.2	0.4	56.1	8.1	0.0	100.0	8.8	1.3	826	793
Birth order													
1	12.4	23.6	0.9	23.2	0.0	38.6	1.3	0.0	100.0	36.0	6.3	982	1,040
2-3	5.0	11.7	1.2	30.8	0.1	45.9	5.2	0.0	100.0	16.7	1.9	1,675	1,711
4-5	1.8	5.8	2.1	26.8	0.3	57.1	6.0	0.0	100.0	7.6	1.0	1,293	1,423
6+	1.2	5.4	1.8	25.2	0.5	58.4	7.0	0.6	100.0	6.5	0.4	1,364	1,405
Place of delivery													
Health facility	27.9	64.4	6.5	0.1	1.1	0.0	0.0	0.0	100.0	92.3	12.8	873	1,207
Elsewhere	0.0	0.3	0.6	32.4	0.1	60.5	6.2	0.0	100.0	0.3	0.0	4,428	4,361
Residence													
Urban	21.7	36.7	0.7	19.7	0.2	19.5	1.6	0.0	100.0	58.4	10.7	681	974
Rural	2.1	7.0	1.7	28.1	0.2	55.0	5.7	0.2	100.0	9.1	0.8	4,634	4,605
Region													
Tigray	5.6	20.6	2.1	9.1	0.4	60.9	1.1	0.2	100.0	26.2	4.6	333	459
Affar	3.3	6.7	0.0	82.4	0.0	7.5	0.0	0.0	100.0	10.0	1.4	64	633
Amhara	2.3	9.4	1.1	28.3	0.0	57.9	1.0	0.0	100.0	11.7	0.5	1,120	526
Oromiya	3.0	10,1	0.5	31.2	0.0	49.8	5.2	0.2	100.0	13.1	0.7	2,215	685
Somali	2.4	12.8	0.8	57.1	0.7	25.9	0.2	0.0	100.0	15.3	0.9	188	665
Benishangul-Gumuz	3.2	13.1	6.9	23.9	0.0	25.3	27.2	0.4	100.0	16.3	2.9	59	474
SNNP	4.8	6.9	3.7	17.4	0.8	55.4	10.6	0.3	100.0	11.7	3.2	1,151	731
Gambela	3.6	25.5	3.5	10.5	0.5	46.8	9.6	0.0	100.0	29.1	4.3	25	421
Harari	19.5	26.0	0.8	48.9	0.0	1.0	3.8	0.0	100.0	45.5	12.9	12	363
Addis Ababa	50.1	36.0	0.4	6.0	0.0	7.0	0.4	0.0	100.0	86.1	22.9	125	217
Dire Dawa	22.4	36.8	0.0	33.8	0.0	5.9	1.1	0.0	100.0	59.2	11.7	22	405
Mother's education													
No education	1.6	5.9	1.4	29.2	0.1	56.1	5.6	0.2	100.0	7.5	0.7	3,581	3,780
Primary	6.3	15.3	2.2	26.1	0.2	47.0	3.5	0.0	100.0	21.0	2.9	1,542	1,415
Secondary	25.2	45.4	0.8	13.3	0.5	14.5	1.6	0.0	100.0	69.4	6.8	170	259
More than secondary	47.2	40.4	3.6	0.1	0.0	2.9	2.8	0.0	100.0	90.7	29.5	77	125
Wealth quintile													
Lowest	0.7	3.8	1.0	35.2	0.0	52.0	7.1	0.2	100.0	4.5	0.7	1,276	1,903
Second	0.8	4.7	1.6	34.0	0.3	52.6	6.0	0.0	100.0	5.5	0.7	1,146	1,050
Middle	2.0	7.1	2.5	26.4	0.6	56.9	4.4	0.1	100.0	9.1	0.6	1,103	891
Fourth	3.6	10.9	1.0	19.7	0.2	62.0	2.2	0.5	100.0	14.5	0.7	961	702
Highest	20.4	35.1	1.6	14.2	0.0	23.4	5.3	0.0	100.0	55.6	9.6	829	1,033
PSNP Household[2]													
Yes	2.2	5.3	3.6	30.9	0.6	53.5	3.4	0.0	100.0	7.5	1.0	561	954
No	2.1	7.3	1.4	27.7	0.2	55.2	5.0	0.2	100.0	9.4	0.8	4,073	3,651
Total	4.6	10.8	1.5	27.0	0.2	50.5	4.8	0.2	100.0	15.5	2.1	5,315	5,579

Note: If the respondent mentioned more than one person attending during delivery, only the most qualified person is considered in this tabulation. Total includes 11 unweighted cases missing information on place of delivery. HEW = Health extension worker; VCHW = Voluntary Community Health Worker; PSNP = Productive Safety Nets Programme.

[1] Skilled provider includes doctor, nurse or midwife

[2] Includes births in rural households only.

Figure 6.2 Trends in Delivery Care, 2000-2014



Not surprisingly, skilled providers attended an overwhelming majority of births delivered in a health facility compared with births delivered elsewhere. Urban births were more than six times as likely to be attended by skilled providers as rural births. Regional differences in delivery assistance are large. The proportion of births assisted by a skilled provider ranged from 10 percent in Affar to 86 percent in Addis Ababa. Skilled attendance at delivery increases with mother's education and household wealth.

Eight percent of births to women in PSNP households was attended by skilled birth attendants compared with 9 percent of births to women in non-PSNP households.

Two percent of births were delivered by caesarean section. All C-sections took place in a health facility. C-sections were most likely to take place in urban areas, among highly educated mothers, and in the wealthiest quintiles.

6.4 Reasons for Not Delivering in a Health Facility

Women who did not deliver at a health facility were asked for the reasons they chose not to do so. Table 6.8 shows that 46 percent of births did not take place in a health facility because mothers did not think it was necessary, and for 33 percent of births, mothers stated that it was not customary. Women said that the health facility was either too far or that they did not have transportation in the case of 21 percent of births. Urban woman were more likely than rural women to report that health facility deliveries are not necessary (64 percent versus 45 percent). But rural women were more likely to report that facility deliveries are not customary (33 percent versus 21 percent), or that health facilities were too far or they had no transportation (22 percent versus 15 percent). Regional differences are marked. It is surprising to note that nearly seven in ten births in Dire Dawa did not take place in a health facility because mothers felt that it was too far or that they lacked transportation. Upon further investigation, it was found that the vast majority of women in the selected rural clusters in Dire Dawa cited this as a reason for not delivering in a health facility.

Table 6.8 Reasons for not delivering in a health facility

Percent distribution of live births in the five years preceding the survey by reason for not delivering in a health facility, according to background characteristics, Ethiopia 2014

Background characteristic	Cost too much	Facility not open	Too far/No transportation	Poor quality service	No female provider	Husband/ Family did not allow	Not necessary	Not customary	Other	Weighted number of births	Unweighted number of births
Age											
15-19	0.7	9.4	16.9	0.0	1.3	2.7	42.4	33.6	0.0	122	136
20-34	2.4	3.8	20.7	1.3	0.3	1.7	45.7	32.4	0.7	1,963	1,838
35-49	2.9	3.8	22.8	0.8	0.4	0.4	46.9	32.5	0.4	827	740
Residence											
Urban	4.2	4.3	15.2	0.1	0.5	0.5	63.7	21.1	0.6	177	175
Rural	2.4	4.0	21.6	1.1	0.4	1.4	44.8	33.2	0.6	2,736	2,539
Region											
Tigray	0.8	7.6	28.5	0.9	0.0	1.5	49.9	31.9	0.0	149	213
Affar	9.0	0.2	30.8	1.1	3.4	5.7	40.8	44.3	0.0	34	343
Amhara	0.0	4.9	14.0	1.3	0.6	0.9	48.5	32.9	0.3	711	337
Oromiya	2.8	2.3	21.3	0.7	0.0	1.1	47.5	31.0	0.4	1,222	380
Somali	11.2	9.2	50.1	0.9	2.6	0.5	25.5	49.2	1.7	79	298
Benishangul-Gumuz	1.3	5.6	22.2	0.4	0.7	5.0	35.9	31.8	3.3	30	246
SNNP	3.6	5.2	21.8	1.8	0.5	2.2	42.5	33.7	0.9	653	424
Gambela	3.6	1.5	42.7	0.0	0.0	0.5	37.9	13.8	0.0	12	211
Harari	0.0	1.9	22.2	1.0	1.7	2.9	73.5	8.6	0.0	4	132
Addis Ababa	*	*	*	*	*	*	*	*	*	15	24
Dire Dawa	1.0	0.0	68.8	0.0	0.0	1.7	11.4	18.3	0.0	5	106
Education											
No education	2.5	4.0	22.3	0.9	0.4	1.5	43.7	35.0	0.5	2,039	2,035
Primary	2.5	3.6	18.9	1.6	0.5	1.3	49.9	27.7	0.8	821	629
Secondary	(0.4)	(9.7)	(10.7)	(0.0)	(0.0)	(0.0)	(74.5)	(7.6)	(0.0)	46	42
More than secondary	*	*	*	*	*	*	*	*	*	7	8
Wealth quintile											
Lowest	2.9	4.7	31.1	0.3	0.8	2.1	36.9	36.5	0.6	779	1,081
Second	2.0	5.6	23.3	0.8	0.4	1.8	38.3	36.7	0.8	706	579
Middle	1.8	3.7	13.6	1.6	0.0	0.6	50.8	32.7	0.7	617	463
Fourth	3.2	2.7	16.3	1.8	0.0	0.6	54.7	26.9	0.1	555	368
Highest	2.7	1.4	14.1	1.5	0.7	1.5	63.7	20.2	0.4	256	223
Total	2.5	4.1	21.2	1.1	0.4	1.4	45.9	32.5	0.6	2,913	2,714

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 cases and has been suppressed.

6.5 POSTNATAL CARE

A large proportion of maternal and neonatal deaths occur during the 48 hours after delivery, and these first two days following delivery are critical for monitoring complications arising from the delivery. To assess the extent of postnatal care utilization, the EMDHS asked respondents whether they had received a health checkup after the delivery, the timing of the first check, and the type of health provider for their last birth in the five years preceding the survey. Table 6.9 presents this information by women's background characteristics.

The level of postnatal care coverage is extremely low in Ethiopia. Only 13 percent of women received postnatal care within two days, as recommended. Nevertheless, this is an improvement from fifteen years ago when only 2 percent received postnatal care during the first two days of delivery. The great majority of women (82 percent) with a live birth in the preceding five years did not receive a postnatal checkup at all. Among women who received a postnatal checkup, 8 percent were examined within 4 hours of delivery, 3 percent within 4-23 hours, 2 percent within 1-2 days, and 5 percent within 3-41 days of delivery.

Table 6.9 Timing of first postnatal checkup for the mother

Among women age 15-49 giving birth in the two years preceding the survey, the percent distribution of the mother's first postnatal check-up for the last live birth by time after delivery, and the percentage of women with a live birth in the two years preceding the survey who received a postnatal checkup in the first two days after giving birth, according to background characteristics, Ethiopia 2014

Background characteristic	Time after delivery of mother's first postnatal checkup								Percentage of women with a postnatal checkup in the first two days after birth	Number of women	Unweighted number of women
	Less than 4 hours	4-23 hours	1-2 days	3-6 days	7-41 days	Don't know/ missing	No postnatal checkup[1]	Total			
Mother's age at birth											
<20	6.9	2.9	1.1	0.7	4.8	0.4	83.4	100.0	10.8	193	228
20-34	9.2	3.7	1.4	1.1	3.5	0.6	80.5	100.0	14.3	1,359	1,416
35-49	5.8	1.3	2.7	0.0	4.3	0.3	85.6	100.0	9.8	315	301
Birth order											
1	11.3	5.5	2.8	1.9	4.4	0.4	73.8	100.0	19.6	355	382
2-3	12.4	2.8	1.2	1.0	3.8	1.1	77.8	100.0	16.4	597	584
4-5	2.9	2.6	0.3	0.8	3.7	0.4	89.3	100.0	5.8	453	476
6+	6.4	2.5	2.3	0.0	3.5	0.1	85.1	100.0	11.2	462	503
Place of delivery											
Health facility	33.8	12.9	5.4	1.8	3.3	1.6	41.2	100.0	52.1	445	561
Elsewhere	0.5	0.1	0.4	0.6	4.0	0.2	94.3	100.0	1.0	1,421	1,382
Residence											
Urban	32.6	10.3	4.9	3.4	4.7	1.2	42.9	100.0	47.8	260	373
Rural	4.5	2.0	1.0	0.5	3.7	0.4	87.9	100.0	7.5	1,607	1,572
Region											
Tigray	13.9	7.8	1.8	0.5	6.4	1.6	68.0	100.0	23.5	129	177
Affar	6.3	0.0	1.7	1.4	0.5	0.2	89.9	100.0	8.0	22	212
Amhara	8.4	0.0	0.5	0.2	2.5	0.5	87.9	100.0	8.9	396	181
Oromiya	6.7	2.0	2.2	0.8	4.7	0.4	83.2	100.0	10.9	784	243
Somali	1.2	0.0	2.5	0.0	1.0	0.2	95.0	100.0	3.7	62	220
Benishangul-Gumuz	8.1	9.3	2.3	2.9	5.1	0.0	72.3	100.0	19.8	22	172
SNNP	7.1	4.0	0.0	1.3	3.0	0.0	84.6	100.0	11.1	379	243
Gambela	4.9	4.2	6.7	3.0	3.1	0.6	77.6	100.0	15.8	8	128
Harari	16.0	16.2	7.1	1.0	1.9	0.0	57.8	100.0	39.3	5	131
Addis Ababa	37.6	25.7	6.8	3.3	3.8	5.6	17.2	100.0	70.1	53	92
Dire Dawa	22.0	20.5	6.7	5.7	2.9	0.9	41.2	100.0	49.3	8	146
Education											
No education	5.0	2.0	1.1	0.0	3.2	0.4	88.3	100.0	8.1	1,137	1,242
Primary	9.0	3.9	2.1	1.8	3.7	0.8	78.7	100.0	15.0	597	535
Secondary	29.0	8.4	4.6	2.5	11.9	1.5	42.1	100.0	42.0	85	109
More than secondary	45.2	13.6	1.1	6.2	4.0	0.2	29.8	100.0	59.9	48	59
Wealth quintile											
Lowest	2.4	0.7	0.3	0.0	2.7	1.3	92.6	100.0	3.4	456	639
Second	1.3	2.0	1.1	0.0	4.4	0.0	91.2	100.0	4.5	365	345
Middle	7.7	4.3	0.7	0.1	2.2	0.0	84.9	100.0	12.7	383	308
Fourth	9.0	0.6	0.3	0.2	4.1	0.4	85.5	100.0	9.9	340	247
Highest	25.2	9.3	6.2	4.6	6.2	0.9	47.6	100.0	40.6	325	406
Total	8.4	3.2	1.6	0.9	3.8	0.5	81.6	100.0	13.2	1,868	1,945

Note: Total includes 2 unweighted cases missing information on place of delivery
[1] Includes women who received a checkup after 41 days

Differences by women's background characteristics are pronounced. Women below age 35, first order births, mothers who delivered in a health facility, urban mothers, those residing in Addis Ababa, mothers with secondary education or higher, and those in the highest wealth quintile were most likely to have received a postnatal checkup in the first two days after childbirth.

Table 6.10 shows the type of health care provider of the first postnatal checkup according to women's background characteristics. Twelve percent of women received postnatal care from a doctor, nurse, or midwife. One percent of women received care from a HEW. Differentials by background characteristics of the mother are similar to the differences for postnatal care coverage in general.

Table 6.10 Type of provider of first postnatal checkup for the mother and vitamin A coverage

Among women age 15-49 giving birth in the two years preceding the survey, the percent distribution by type of provider of the mother's first postnatal health check in the two days after the last live birth, and the proportion who received a vitamin A dose in the first two months after delivery, according to background characteristics, Ethiopia 2014

Background characteristic	Type of health provider of mother's first postnatal checkup				No postnatal checkup in the first two days after birth	Total	Percentage who received vitamin A dose in the first two months after delivery	Weighted number of women	Unweighted number of women
	Doctor/ nurse/ midwife	HEW	VCHW	Traditional birth attendant					
Mother's age at birth									
<20	10.8	0.0	0.0	0.0	89.2	100.0	6.4	193	228
20-34	13.3	0.8	0.1	0.0	85.7	100.0	11.1	1,359	1,416
35-49	7.3	2.5	0.0	0.0	90.2	100.0	9.9	315	301
Birth order									
1	19.2	0.4	0.0	0.0	80.4	100.0	9.4	355	382
2-3	15.4	1.0	0.0	0.1	83.6	100.0	10.2	597	584
4-5	5.3	0.5	0.0	0.0	94.2	100.0	11.7	453	476
6+	8.9	2.0	0.3	0.0	88.8	100.0	10.3	462	503
Place of delivery									
Health facility	48.8	3.0	0.4	0.0	47.9	100.0	19.3	445	561
Elsewhere	0.5	0.4	0.0	0.0	99.0	100.0	7.7	1,421	1,382
Residence									
Urban	47.8	0.1	0.0	0.0	52.2	100.0	10.3	260	373
Rural	6.2	1.2	0.1	0.0	92.5	100.0	10.4	1,607	1,572
Region									
Tigray	22.2	0.7	0.0	0.5	76.5	100.0	28.7	129	177
Affar	8.0	0.0	0.0	0.0	92.0	100.0	0.2	22	212
Amhara	8.2	0.7	0.0	0.0	91.1	100.0	3.5	396	181
Oromiya	10.1	0.8	0.0	0.0	89.1	100.0	11.5	784	243
Somali	3.0	0.7	0.0	0.0	96.3	100.0	3.0	62	220
Benishangul-Gumuz	15.3	4.4	0.0	0.0	80.2	100.0	13.7	22	172
SNNP	8.7	2.0	0.4	0.0	88.9	100.0	10.1	379	243
Gambela	15.8	0.0	0.0	0.0	84.2	100.0	16.1	8	128
Harari	39.3	0.0	0.0	0.0	60.7	100.0	6.0	5	131
Addis Ababa	70.1	0.0	0.0	0.0	29.9	100.0	15.1	53	92
Dire Dawa	49.3	0.0	0.0	0.0	50.7	100.0	14.3	8	146
Education									
No education	6.9	1.1	0.0	0.0	91.9	100.0	8.3	1,137	1,242
Primary	14.2	0.4	0.3	0.1	85.0	100.0	13.5	597	535
Secondary	38.0	4.1	0.0	0.0	58.0	100.0	10.6	85	109
More than secondary	59.9	0.0	0.0	0.0	40.1	100.0	21.7	48	59
Wealth quintile									
Lowest	2.1	1.2	0.0	0.1	96.6	100.0	8.4	456	639
Second	3.0	1.5	0.0	0.0	95.5	100.0	6.7	365	345
Middle	11.9	0.4	0.4	0.0	87.3	100.0	9.4	383	308
Fourth	9.4	0.4	0.0	0.0	90.1	100.0	10.8	340	247
Highest	39.1	1.6	0.0	0.0	59.4	100.0	18.2	325	406
Total	12.0	1.0	0.1	0.0	86.8	100.0	10.4	1,868	1,945

Note: Total includes 2 unweighted cases missing information on place of delivery. HEW = Health extension worker; VCHW = Voluntary community health worker.

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

NUTRITION OF CHILDREN 7

Key Findings

- There has been a substantial decline in the proportion of children stunted and underweight in the last 15 years and a smaller decline in the prevalence of wasting.
- Forty percent of children under age five were stunted, 9 percent were wasted and 25 percent underweight in 2014.
- Three percent of children in Ethiopia are classified as overweight or obese.

The poor nutritional status of children and women continues to be a serious problem in Ethiopia. The health sector has increased its efforts to enhance good nutritional practices through health education, treatment of extremely malnourished children, and provision of micronutrients to mothers and children. The government's Health Sector Development Plan IV (2010/11-2014/15) continues to improve the nutritional status of mothers and children through the following programmes: Enhanced Outreach Strategy (EOS) with Targeted Supplementary Food (TSF) and Transitioning of EOS into the Health Extension Programme (HEP), Health Facility Nutrition Services, Community Based Nutrition (CBN), and Micronutrient Interventions and Essential Nutrition Actions/Integrated Infant and Young Feeding Counselling Services.

The 2014 Ethiopia Mini Demographic and Health Survey (EMDHS) measured the height and weight of children under the age of 5 in all selected households to assess the nutritional status of the child.

7.1 NUTRITIONAL STATUS OF CHILDREN

The nutritional status of children was assessed in the EMDHS by weighing and measuring the height of all children in the household under age five. The evaluation of this data allows identification of subgroups of the child population that are vulnerable to faltered growth, disease, impaired mental development, and death.

7.1.1 Measurement of Nutritional Status among Young Children

Anthropometric data collected in the EMDHS are used to calculate three indices of nutritional status— height-for-age, weight-for-height, and weight-for-age.

These indices are based on the growth standards published by the World Health Organization (WHO) in 2006. These growth standards were generated using data collected in the WHO Multicentre Growth Reference Study (WHO, 2006). The findings of the study, whose sample included 8,440 children in six countries (Brazil, Ghana, India, Norway, Oman, and the United States), describe how children should grow under optimal conditions. Therefore, the WHO Child Growth Standards can be used to assess children all over the world, regardless of ethnicity, social and economic influences, and feeding practices. The WHO child growth standards replace the previously used reference standards of the U.S. National Center for Health Statistics, accepted by the U.S. Centers for Disease Control and Prevention (NCHS/CDC/WHO).

The three indices are expressed as standard deviation units from the median for the reference group. Children who fall below minus two standard deviations (−2 SD) from the median of the reference population are regarded as moderately malnourished, while those who fall below minus three standard deviations (−3 SD) from the median of the reference population are considered severely malnourished.

The height-for-age index provides an indicator of linear growth retardation and cumulative growth deficits in children. Children whose height-for-age Z-score is below minus two standard deviations (−2 SD) 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 (−3 SD) 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 (−2 SD) 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 (+2 SD) above the median weight-for-height are considered overweight, or obese.

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 he or 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.

7.1.2 Data Collection

Interviewing teams measured the height and weight of all children born in the five years preceding the survey who are 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 measuring boards especially for use in survey settings were purchased by UNICEF for use in the EMDHS. The weighing scales and height boards were identical to those used in the 2011 EDHS. Interviewers measured the recumbent length, that is, length while lying down, of children younger than 24 months and measured the standing height of older children. In a few cases the team measured recumbent length—when the child's age was not known and the child was less than 85 centimetres 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 5,401 children under age five were eligible to be weighed and measured. Data are presented for 4,893 (4,921 children weighted) of these children: 5 percent had missing values for height or weight and 4 percent had height or weight measures considered to be out of the range for their ages. Table 7.1 and Figure 7.1 show the percentage of children under age 5 classified as malnourished according to the three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age.

7.1.3 Measures of Children's Nutritional Status

Height-for-age

Nationally, 40 percent of children under age five are stunted, and 19 percent of children are severely stunted. In general, the prevalence of stunting increases as the age of a child increases, with the highest prevalence of chronic malnutrition found in children age 24-35 months (52 percent) and lowest in children between age six and eight months (9 percent). With the exception of first births, 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 lower the proportion of children stunted.

The percentage of children stunted is higher in rural areas (42 percent) than in urban areas (27 percent). There is regional variation in the prevalence of stunting in children. Stunting levels are above the national average in Tigray and Affar (46 percent each), SNNP (44 percent) and Amhara (42 percent), and relatively low in Gambela and Addis Ababa (22 and 23 percent, respectively).

The mother's level of education has an inverse relationship with stunting levels. For example, children of mothers with more than secondary education are the least likely to be stunted (8 percent), while children whose mothers have no education are the most likely to be stunted (43 percent). A similar inverse relationship is observed between household wealth and stunting levels of children. Stunting among children in PSNP households is higher (47 percent) than among children in non-PSNP households (42 percent).

Weight-for-height

Overall, 9 percent of Ethiopian children are wasted, and 3 percent are severely wasted. Wasting, or acute malnutrition, is highest in children less than 6 months of age and children age 12-17 months (15 percent and 14 percent, respectively) and lowest in children age 36-47 months (5 percent). Male children are slightly more likely to be wasted (10 percent) than female children (7 percent). Wasting is high in children from the Somali region (28 percent), in children whose mothers have no education (11 percent), and in children from the poorest households (11 percent). Wasting is similar among children in PSNP households as among children in non-PSNP households (9 percent each).

A small proportion of children in Ethiopia are classified as overweight or obese. Overall, 3 percent of children below age five years are overweight or obese (+2 SD).). Obesity is relatively higher among children in Benishangul-Gumuz, Addis Ababa and SNNP (5-6 percent). Children of mothers with more than secondary education are substantially more likely to be overweight (7 percent) than children of mothers with lower levels of education (2-3 percent).

Table 7.1 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, Ethiopia 2014

Background characteristic	Height-for-age[1]			Weight-for-height				Weight-for-age				Weighted number of children	Un-weighted number of children
	Percentage below -3 SD	Percentage below -2 SD[2]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[2]	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[2]	Percentage above +2 SD	Mean Z-score (SD)		
Age in months													
<6	3.0	11.2	0.3	7.7	15.0	2.4	(0.7)	4.4	10.3	3.9	(0.3)	420	422
6-8	3.4	9.3	0.1	2.3	11.0	3.8	(0.6)	1.8	6.7	3.6	(0.5)	252	233
9-11	5.4	21.4	(0.7)	3.9	9.4	0.0	(0.7)	8.3	13.9	0.9	(1.0)	179	162
12-17	14.8	32.0	(1.2)	3.5	14.2	2.8	(0.7)	6.6	22.2	1.4	(1.1)	449	530
18-23	23.4	47.1	(1.9)	2.2	11.6	4.2	(0.6)	6.3	29.8	0.0	(1.4)	384	345
24-35	25.5	51.9	(1.9)	2.0	7.2	2.4	(0.4)	9.8	31.3	0.8	(1.3)	944	987
36-47	24.0	48.1	(2.0)	1.1	5.3	3.1	(0.3)	6.8	27.7	0.5	(1.4)	1,151	1,104
48-59	19.0	44.5	(1.8)	1.9	7.4	2.0	(0.6)	8.0	28.7	0.3	(1.4)	1,142	1,110
Sex													
Male	18.7	41.0	(1.5)	2.8	10.1	2.1	(0.5)	7.1	24.8	1.0	(1.2)	2,451	2,488
Female	18.7	39.7	(1.5)	2.2	7.4	3.2	(0.5)	7.3	25.7	1.1	(1.2)	2,470	2,405
Birth interval in months[3]													
First birth[4]	12.4	33.1	(1.3)	2.2	8.0	2.1	(0.4)	3.5	17.8	0.6	(1.0)	841	853
<24	29.7	52.2	(2.0)	2.1	7.8	3.2	(0.5)	11.4	34.3	1.4	(1.5)	683	818
24-47	19.0	41.7	(1.5)	2.6	10.0	2.6	(0.5)	7.8	27.3	1.1	(1.2)	2,020	1,893
48+	13.3	33.4	(1.2)	2.9	8.8	2.5	(0.5)	6.1	20.4	1.2	(1.1)	1,012	920
Mother's interview status													
Interviewed	18.1	39.8	(1.5)	2.5	9.0	2.6	(0.5)	7.2	25.1	1.1	(1.2)	4,556	4,484
Not interviewed but in household	26.2	46.7	(1.8)	2.2	5.6	3.2	(0.2)	7.3	27.2	0.5	(1.2)	365	409
Residence													
Urban	8.7	26.5	(1.0)	1.9	8.8	3.0	(0.5)	4.7	15.1	1.2	(0.9)	621	887
Rural	20.1	42.4	(1.6)	2.6	8.7	2.6	(0.5)	7.5	26.7	1.0	(1.3)	4,300	4,006
Region													
Tigray	19.1	45.7	(1.8)	4.9	14.3	2.1	(0.8)	7.5	31.3	0.3	(1.6)	321	425
Affar	28.3	46.1	(1.6)	9.3	24.5	2.2	(1.1)	17.7	43.5	0.8	(1.7)	52	500
Amhara	14.8	42.2	(1.6)	2.5	9.4	0.2	(0.7)	6.1	27.6	0.0	(1.4)	1,091	503
Oromiya	18.6	38.2	(1.4)	1.7	7.1	3.0	(0.4)	7.0	22.7	1.0	(1.1)	2,042	619
Somali	18.8	36.5	(1.2)	11.7	27.5	1.6	(1.2)	15.3	38.0	2.7	(1.5)	135	501
Benishangul-Gumuz	22.6	40.3	(1.4)	5.8	16.3	6.3	(0.5)	10.3	29.3	3.6	(1.2)	50	392
SNNP	24.3	44.1	(1.6)	1.7	6.6	4.2	(0.3)	7.9	25.7	2.0	(1.1)	1,047	651
Gambela	10.5	22.4	(0.7)	4.0	14.9	2.0	(0.8)	3.7	18.5	0.4	(1.0)	21	384
Harari	13.4	27.6	(1.1)	0.9	4.9	3.1	(0.2)	4.3	16.1	0.3	(0.8)	11	320
Addis Ababa	3.3	22.9	(0.7)	1.4	3.1	5.2	0.0	0.6	7.3	2.0	(0.4)	130	225
Dire Dawa	14.4	27.1	(0.9)	4.0	11.7	2.7	(0.5)	5.5	20.4	1.7	(0.9)	21	373
Mother's education													
No education	20.0	43.0	(1.6)	3.1	10.8	2.5	(0.6)	8.8	28.8	1.0	(1.3)	2,926	2,970
Primary	16.7	37.3	(1.4)	1.4	5.7	2.6	(0.4)	4.9	20.7	1.2	(1.1)	1,380	1,180
Secondary	4.8	21.1	(0.7)	0.9	5.3	1.6	(0.2)	0.1	6.4	1.4	(0.5)	175	226
More than secondary	1.0	7.7	(0.1)	5.2	9.3	6.6	(0.2)	0.9	5.5	1.7	(0.1)	74	108
Wealth quintile													
Lowest	25.3	46.5	(1.6)	3.5	10.8	2.5	(0.6)	9.9	32.2	1.8	(1.4)	1,125	1,593
Second	19.6	45.3	(1.7)	3.9	9.5	1.8	(0.5)	8.7	27.7	0.6	(1.3)	1,096	930
Middle	20.4	39.6	(1.6)	1.5	7.7	3.0	(0.5)	7.6	26.1	0.5	(1.3)	1,049	792
Fourth	15.3	38.3	(1.4)	1.6	7.6	2.9	(0.5)	3.9	21.7	0.8	(1.1)	877	625
Highest	9.4	27.7	(1.0)	1.4	7.3	3.2	(0.4)	4.3	14.6	1.6	(0.8)	774	953
PSNP households[5]													
Yes	23.5	47.0	(1.7)	3.1	9.2	3.2	(0.6)	7.7	31.4	1.1	(1.4)	486	788
No	19.7	41.8	(1.5)	2.5	8.7	2.5	(0.5)	7.5	26.1	1.0	(1.2)	3,814	3,218
Total	18.7	40.4	(1.5)	2.5	8.7	2.6	(0.5)	7.2	25.2	1.0	(1.2)	4,921	4,893

Note: Table is based on children who stayed in the household on the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the WHO Child Growth Standards adopted in 2006. The indices in this table are NOT comparable to those based on the previously used NCHS/CDC/WHO reference. Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.

PSNP = Productive Safety Nets Programme.

[1] Recumbent length is measured for children under age 2 and less than 85 cm; standing height is measured for all other children.

[2] Includes children who are below -3 standard deviations (SD) from the WHO Child Growth standards population median

[3] Excludes children whose mothers were not interviewed

[4] First-born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval [7] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire

[5] Includes children in rural households only

Figure 7.1 Nutritional Status of Children by Age

Weight-for-age

Table 7.1 shows that 25 percent of children under age five are underweight (have low weight-for-age), and 7 percent are severely underweight. The proportion of underweight children is highest in the age group 24-35 months (31 percent) and lowest among children age 6-8 months (7 percent). This may be explained by the fact that foods for weaning are typically introduced to children in the older age group, thus increasing their exposure to infections and susceptibility to illness. This tendency, coupled with inappropriate or inadequate feeding practices, may contribute to faltering nutritional status among children in these age groups.

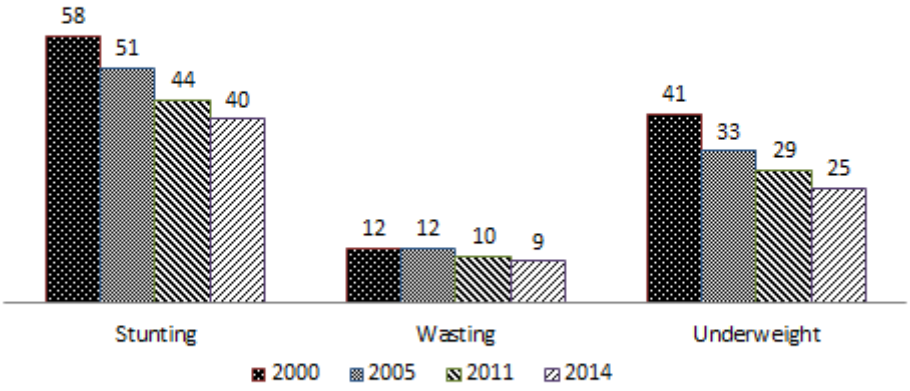
Rural children are more likely to be underweight (27 percent) than urban children (15 percent). The proportion of underweight children varies by region. Addis Ababa has the lowest proportion of underweight children, at 7 percent, while Affar has the highest prevalence of underweight children, at 44 percent. The proportion of underweight children is nearly five times higher for those born to uneducated mothers than for those whose mothers have more than secondary education (29 percent versus 6 percent). The proportion of underweight children decreases as household wealth increases. Children born to mothers in the lowest wealth quintile are more than twice as likely to be underweight as children born to mothers in the highest wealth quintile (15 percent compared with 32 percent). Children in PSNP household are more likely to be underweight (31 percent) than children in non-PSNP households (26 percent).

7.2 TRENDS IN CHILDREN'S NUTRITIONAL STATUS

Trends in the nutritional status of children for the period 2000-2014 are shown in Figure 7.2. For the purpose of comparison, the data for 2000 and 2005 were recalculated using the new WHO standard reference population making it comparable to the results of the 2011 EDHS and the 2014 EMDHS.

Figure 7.2 shows a downward trend in the proportion of children stunted and underweight over the four DHS surveys. The prevalence of stunting decreased by 31 percent (from 58 percent to 40 percent) between 2000 and 2014. The decline in the proportion of stunted Ethiopian children shows improvement in chronic malnutrition over the past fifteen years. The proportion of children underweight declined even more substantially by 39 percent over the same period. There was only a small decline in the prevalence of wasting over the last 15 years.

Figure 7.2 Trends in Nutritional Status of Children Under Age 5, 2000-2014



Note: For comparison purposes, the 2000 and 2005 anthropometric indicators are computed on the basis of the new WHO Standards and as such are different from the published reports. The values in the figure indicate percentage below -2 SD

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REFERENCES

Central Statistical Authority [Ethiopia] and ORC Macro. 2001. *Ethiopia Demographic and Health Survey 2000.* Addis Ababa, Ethiopia, and Calverton, Maryland: Central Statistical Authority and ORC Macro.

Central Statistical Agency [Ethiopia] and ORC Macro. 2006. *Ethiopia Demographic and Health Survey 2005.* Addis Ababa, Ethiopia, and Calverton, Maryland, USA: Central Statistical Agency 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 ORC Macro.

Central Statistical Agency (CSA). [Ethiopia]. 2008. *The 2007 Population and Housing Census of Ethiopia. Statistical Summary Report at National Level*. Addis Ababa, Ethiopia: Central Statistical Agency.

Ministry of Finance and Economic Development (MOFED) [Ethiopia]. 2010. *Growth and Transformation Plan, 20110/11-2014/15.* Addis Ababa, Ethiopia: Ministry of Finance and Economic Development.

Ministry of Health (MOH) [Ethiopia]. November 2010. *Health Sector Development Programme IV, 2010/11-2014/15.* Addis Ababa, Ethiopia: Ministry of Health.

Rutstein S. 1999. *Wealth versus Expenditure: Comparison between the DHS Wealth Index and Household Expenditures in Four Departments of Guatemala.* Calverton, MD: ORC Macro.

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.

United Nations General Assembly. 2002. *Road Map towards the Implementation of the United Nations Millennium Declaration: Report of the Secretary-General*. A/56/326. New York: United Nations General Assembly.

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.

World Health Organization (WHO) and UNICEF. 2010. Joint Monitoring Program for Water Supply and Sanitation. *Progress on Sanitation and Drinking Water: 2010 Update*. Geneva and New York: WHO and UNICEF.

SAMPLE IMPLEMENTATION

Appendix A

A.1 INTRODUCTION

The 2014 Ethiopia Mini Demographic and Health Survey (EMDHS) is an interim survey conducted after the 2011 Ethiopia Demographic and Health Survey (EDHS), the third DHS in Ethiopia, following the 2000 and 2005 EDHS surveys. A nationally representative sample of 9,135 households was selected; 8,727 households were found to be occupied; and, 8,475 households were successfully interviewed. All women 15-49 who were usual residents or who slept in these households the night before the survey were eligible for the survey. In the interviewed households, 8,492 eligible women were identified for individual interview and 8,070 were successfully interviewed.

The survey is designed to produce representative estimates for the country as a whole, for the urban and the rural areas separately, and for each of the eleven regions.

A.2 SAMPLING FRAME

The sampling frame used for the 2014 EMDHS is the Population and Housing Census (PHC) conducted in 2007 provided by the Central Statistical Agency (CSA, 2008). CSA has an electronic file consisting of 81,654 Enumeration Areas (EA) created for the 2007 census in 10 of its 11 geographic regions. An EA is a geographic area consisting of a convenient number of dwelling units which served as counting unit for the census. The frame file contains information about the location, the type of residence, and the number of residential households for each of the 81,654 EAs. Sketch maps are also available for each EA which delineates the geographic boundaries of the EA. The 2007 PHC conducted in the Somali region used a different methodology due to difficulty of access. Therefore, the sampling frame for the Somali region is in a different file and in a different format. Due to security concerns in the Somali region, it was decided that the EMDHS would be conducted only in six of nine zones in the Somali region: Shinile, Jijiga, Liben, Afder, Gode and Warder as done in the 2011 EDHS. The sampling frame for the EMDHS consists of a total of 85,057 EAs. The sampling frame excluded some special EAs with disputed boundaries. These EAs represent only 0.1% of the total population.

Ethiopia is divided into 11 geographical regions. Each region is sub-divided into zones, each zone into Waredas, each Wareda into towns, and each town into Kebeles. Table A.1 shows the distribution of the enumeration areas and average EA size in the sampling frame, by region and by residence. Among the 85,057 EAs, 17,548 (21 percent) are in urban areas and 67,509 (79 percent) are in rural areas. The average size of an urban EA is 169 households, while the average size of a rural EA is 180 households, with an overall average of 178 households per EA. Table A.2 shows the distributions of households in the sampling frame, by region and residence. The data show that 81 % of Ethiopia's households are concentrated in three regions: Amhara, Oromiya and SNNP, while 4 % of all households are in the five smallest regions: Afar, Benishangul-Gumuz, Gambela, Harari and Dire Dawa.

Table A.1 Enumeration areas and average EA size in the sampling frame

Distribution of the enumeration areas (EAs) and average EA size in the sampling frame, by region and by residence, Ethiopia 2014

	Number of EAs in the sample frame			Average EA size		
Region	Urban	Rural	Total	Urban	Rural	Total
Tigray	1,541	4,139	5,680	153	177	171
Affar	260	828	1,088	177	233	219
Amhara	3,391	18,016	21,407	183	182	182
Oromiya	5,030	25,800	30,830	172	179	178
Somali[1]	526	2877	3,403	141	148	147
Benishangul-Gumuz	188	786	974	140	152	150
SNNP	2,124	14,490	16,614	166	184	182
Gambela	133	347	480	145	129	134
Harari	172	98	270	163	180	169
Addis Ababa	3,865	0	3,865	167	0	167
Dire Dawa	318	128	446	163	169	165
Ethiopia	17,548	67,509	85,057	169	180	178

[1]Including six of the nine zones in the Somali region

Table A.2 Distribution of households in the sampling frame

Distribution of households in the sampling frame, by region and by residence, Ethiopia 2014

	Number of households			Proportion	
Region	Urban	Rural	Total	Urban	Region
Tigray	235,530	734,357	969,887	0.243	0.064
Affar	45,910	192,554	238,464	0.193	0.016
Amhara	619,796	3,284,512	3,904,308	0.159	0.259
Oromiya	864,303	4,630,702	5,495,005	0.157	0.364
Somali[1]	74,119	425,150	499,269	0.148	0.033
Benishangul-Gumuz	26,314	119,446	145,760	0.181	0.010
SNNP	353,554	2,667,787	3,021,341	0.117	0.200
Gambela	19,275	44,879	64,154	0.300	0.004
Harari	27,975	17,651	45,626	0.613	0.003
Addis Ababa	646,216	0	646,216	1.000	0.043
Dire Dawa	51,991	21,643	73,634	0.706	0.005
Ethiopia	2,964,983	12,138,681	15,103,664	0.196	1.000

[1]Including six of the nine zones in the Somali region

A.3 SURVEY DESIGN AND IMPLEMENTATION

The EMDHS used a stratified sample selected in two stages from the Population and Housing Census (PHC) frame. Stratification was achieved by separating each region into urban and rural areas. In total, 23 sampling strata were created (Addis Ababa is entirely urban).

The sample points were selected independently in each sampling stratum, by a two-stage selection. In the first stage, 305 EAs were selected with probability proportional to the EA size and with independent selection in each sampling stratum. Because of the time passed since the 2007 PHC, a household listing operation was carried out in all selected EAs before the start of fieldwork. The household listing operation consisted of teams of listers visiting each of the 305 selected EAs. For each selected EA, listers drew a detailed sketch map and recorded in the household listing forms all households in the EA, their address, and the name of the head of the household. The listing of households served as the sampling frame for the selection of households in the second stage.

In the second stage, a fixed number of 30 households were selected for each EA. Table A.3 shows the sample allocation of clusters and households by region, according to residence. Among the 305 selected EAs, 93 are in urban areas and 212 are in rural areas. Of all the selected 9,150 households, 2,790 are in urban areas and 6,360 are in rural areas.

The regional household distribution ranges from less than 1 percent in Harari to 36 percent in Oromiya (Table A.2). Therefore, a proportional allocation provides the best precision for national level indictors, but not for regional level indicators. Regions with especially very small population such as Gambela, Harari and Dire Dawa would be allocated a very small sample size. It is estimated that a minimum number of 500 women 15-49 are necessary to have reliable estimates for most of the EMDHS indicators by region. As a result, the final sample allocation reflected a power allocation that is between the proportional allocation and the equal size allocation. In order for the survey precision in urban areas to be comparable with that in rural areas, urban areas were slightly over sampled.

The cluster and household allocation by region and residence are a function of the average number of women 15-49 per household and of the household and individual response rates (obtained from the 2011 EDHS). According to the 2011 EDHS, the average number of women 15-49 per household was 1.11 in urban areas and 1.01 in rural areas. The household response rates are 97% in urban areas and 99% in rural areas, the eligible woman response rates were 94% in urban areas and 95% in rural areas. With a targeted sample of 9,150 households, it was expected that interviews would be completed for a total of 8,409 women, assuming a similar response rate as in the 2011 EDHS (Table A.4).

Table A.3 Sample allocation of clusters and households

Sample allocation of clusters and households by region, according to residence, Ethiopia 2014

	Allocation of clusters			Allocation of households		
Region	Urban	Rural	Total	Urban	Rural	Total
Tigray	5	20	25	150	600	750
Affar	5	20	25	150	600	750
Amhara	5	30	35	150	900	1050
Oromiya	6	29	35	180	870	1050
Somali	5	20	25	150	600	750
Benishangul-Gumuz	3	22	25	90	660	750
600SNNP	3	32	35	90	960	1050
Gambela	5	20	25	150	600	750
Harari	15	10	25	450	300	750
Addis Ababa	25	0	25	750	0	750
Dire Dawa	16	9	25	480	270	750
Ethiopia	93	212	305	2790	6360	9150

Table A.4 Sample allocation of expected interviews with women

Sample allocation of expected number of completed interviews with women by region, according to residence, Ethiopia 2014

	Women interviewed		
Statistical Region	Urban	Rural	Region
Tigray	143	575	718
Affar	137	550	687
Amhara	144	868	1012
Oromiya	170	824	994
Somali	123	493	616
Benishangul-Gumuz	79	584	663
SNNP	84	903	987
Gambela	124	496	620
Harari	393	262	655
Addis Ababa	806	0	806
Dire Dawa	417	234	651
Ethiopia	2620	5789	8409

A.4 SAMPLE IMPLEMENTATION

Table A.5 presents response rates for women by urban and rural areas, and by region.

Table A.5 Sample implementation

Percent distribution of households and eligible women by results of the household and individual interviews, and household, eligible women and overall women response rates, according to urban-rural residence and region (unweighted), Ethiopia 2014

	Residence		Region											
Result	Urban	Rural	Tigray	Affar	Amhara	Oromiya	Somali	Benishangul-Gumuz	SNNP	Gambela	Harari	Addis Ababa	Dire Dawa	Total
Selected households														
Completed (C)	96.0	96.4	97.9	92.6	97.1	97.1	93.5	95.9	97.6	93.9	98.1	96.8	96.8	96.3
Household present but no competent respondent at home (HP)	1.2	1.0	1.2	1.0	0.7	0.3	1.2	1.5	0.6	4.4	0.0	0.8	1.0	1.1
Postponed (P)	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	0.0
Refused (R)	0.3	0.0	0.1	0.1	0.1	0.0	0.2	0.1	0.0	0.1	0.1	0.4	0.2	0.1
Dwelling not found (DNF)	0.2	0.2	0.0	0.9	0.0	0.1	0.4	0.4	0.0	0.4	0.0	0.2	0.0	0.2
Household absent (HA)	1.1	1.0	0.3	1.0	1.0	1.4	2.7	1.5	0.7	0.6	1.3	0.6	0.8	1.1
Dwelling vacant/address not a dwelling (DV)	1.0	0.3	0.4	0.3	0.7	0.8	0.3	0.4	0.4	0.2	0.4	1.0	0.9	0.6
Dwelling destroy (DD)	0.1	0.7	0.0	3.4	0.1	0.1	1.4	0.1	0.6	0.2	0.1	0.2	0.1	0.5
Other (O)	0.1	0.2	0.2	0.5	0.5	0.1	0.2	0.0	0.1	0.1	0.0	0.0	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	100.0	100.0	100.0
Number of sampled households	5,564	12,063	1,465	1,438	1,970	2,061	1,350	1,357	2,090	1,435	1,402	1,610	1,449	17,627
Household response rate (HRR)[1]	98.3	98.7	98.8	97.8	99.3	99.5	98.1	98.0	99.4	95.1	99.9	98.5	98.7	98.5
Eligible women														
Completed (EWC)	95.5	94.8	98.2	96.1	95.7	96.6	90.7	94.1	96.3	88.9	97.0	95.2	94.3	95.0
Not at home (EWNH)	3.2	3.5	1.4	2.4	1.1	1.6	7.3	3.8	2.4	10.2	2.1	3.5	4.6	3.4
Postponed (EWP)	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Refused (EWR)	0.4	0.1	0.0	0.3	0.4	0.0	0.0	0.2	0.0	0.0	0.2	0.7	0.4	0.2
Partly completed (EWPC)	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.1
Incapacitated (EWI)	0.3	0.7	0.3	1.0	0.7	1.2	0.0	1.5	0.4	0.4	0.3	0.2	0.3	0.6
Other (EWO)	0.4	0.8	0.1	0.1	2.2	0.6	1.7	0.3	0.9	0.4	0.5	0.1	0.1	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	2,783	5,709	715	695	920	1,007	600	607	1,040	685	665	859	699	8,492
Eligible women response rate (EWRR)[2]	95.5	94.8	98.2	96.1	95.7	96.6	90.7	94.1	96.3	88.9	97.0	95.2	94.3	95.0
Overall women response rate (ORR)[3]	93.8	93.5	97.0	94.0	95.0	96.1	88.9	92.2	95.6	84.5	96.9	93.8	93.0	93.6

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + P + R + DNF}$$

[2] The eligible women response rate (EWRR) is equivalent to the percentage of interviews completed (EWC)
[3] The overall women response rate (OWRR) is calculated as:
OWRR = HRR * EWRR/100

A.5 SELECTION PROBABILITIES AND SAMPLE WEIGHTS

Due to the non-proportional allocation of the sample to the different regions and to their urban and rural areas, sampling weights are required for any analysis using 2014 EMDHS data to ensure representativeness of the survey results at the national and regional level. Since the EMDHS sample is a two-stage stratified cluster sample, sampling weights were calculated based on sampling probabilities separately for each sampling stage and for each cluster. We use the following notations:

P_{1hi}: first-stage sampling probability of the i^{th} cluster in stratum h
P_{2hi}: second -stage sampling probability within the i^{th} cluster (household selection)

Let a_h be the number of clusters selected in stratum h, M_{hi} the number of households according to the sampling frame in the i^{th} cluster, and $\sum M_{hi}$ the total number of households in the stratum. The probability of selecting the i^{th} cluster in the EMDHS sample is calculated as follows:

$$\frac{a_h \, M_{hi}}{\sum M_{hi}}$$

Let b_{hi} be the proportion of households in the selected segment compared to the total number of households in the EA i in stratum h if the EA is segmented, otherwise $b_{hi} = 1$. Then the probability of selecting cluster i in the sample is:

$$P_{1hi} = \frac{a_h \, M_{hi}}{\sum M_{hi}} \times b_{hi}$$

Let L_{hi} be the number of households listed in the household listing operation in cluster i in stratum h, let g_{hi} be the number of households selected in the cluster. The second stage's selection probability for each household in the cluster is calculated as follows:

$$P_{2hi} = \frac{g_{hi}}{L_{hi}}$$

The overall selection probability of each household in cluster i of stratum h is therefore the production of the two stages selection probabilities:

$$P_{hi} = P_{1hi} \times P_{2hi}$$

The sampling weight for each household in cluster i of stratum h is the inverse of its overall selection probability:

$$W_{hi} = 1 / P_{hi}$$

Design weights were adjusted for household non-response and as well as for individual non-response to get the sampling weights. The differences of the household sampling weights and the individual sampling weights are introduced by individual non-response. The final sampling weights (both household and individual weights) were normalized in order to give the total number of

unweighted cases equal to the total number of weighted cases at the national level. The normalized weights are relative weights which are valid for estimating means, proportions and ratios, but not valid for estimating population totals and for pooled data.

Sampling errors were calculated for selected indicators for the national sample, for urban and rural areas separately, and for each of the eleven regions.

ESTIMATES OF SAMPLING ERRORS *Appendix* B

The estimates from a sample survey are affected by two types of errors: (1) nonsampling errors, and (2) sampling errors. Nonsampling errors are the results of mistakes made in implementing data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the 2014 Ethiopia Mini Demographic and Health Survey (EMDHS) to minimize this type of error, nonsampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the EMDHS is only one of many samples that could have been selected from the same population, using the same design and identical size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling error is a measure of the variability between all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

A sampling error is usually measured in terms of the *standard error* for a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistic in 95 percent of all possible samples of identical size and design.

If the sample of respondents had been selected as a simple random sample, it would have been possible to use straightforward formulas for calculating sampling errors. However, the EMDHS sample is the result of a multi-stage stratified design, and, consequently, it was necessary to use more complex formulae. Sampling errors for the EMDHS was calculated using the Taylor linearization method for variance estimation for survey estimates that are means or proportions. The Jackknife repeated replication method is used for variance estimation of more complex statistics such as fertility and mortality rates.

The Taylor linearization method treats any percentage or average as a ratio estimate, $r = y/x$, where y represents the total sample value for variable y, and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula given below, with the standard error being the square root of the variance:

$$SE^2(r) = var(r) = \frac{1-f}{x^2}\sum_{h=1}^{H}\left[\frac{m_h}{m_h-1}\left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h}\right)\right]$$

in which

$$z_{hi} = y_{hi} - rx_{hi}\text{, and } z_h = y_h - rx_h$$

where h represents the stratum which varies from 1 to H,
m_h is the total number of clusters selected in the h^{th} stratum,
y_{hi} is the sum of the weighted values of variable y in the i^{th} cluster in the h^{th} stratum,
x_{hi} is the sum of the weighted number of cases in the i^{th} cluster in the h^{th} stratum, and
f_h is the sampling fraction of PSU in the h^{th} stratum which is small and ignored

The Jackknife repeated replication method derives estimates of complex rates from each of several replications of the parent sample, and calculates standard errors for these estimates using simple formulae. Each replication considers *all but one* cluster in the calculation of the estimates. Pseudo-independent replications are thus created. In the EMDHS, there were 305 non-empty clusters. Hence, 305 replications were created. The variance of a rate r is calculated as follows:

$$SE^2(r) = var(r) = \frac{1}{k(k-1)} \sum_{i=1}^{k} (r_i - r)^2$$

in which

$$r_i = kr - (k-1)r_{(i)}$$

where r is the estimate computed from the full sample of 305 clusters,
$r_{(i)}$ is the estimate computed from the reduced sample of 304 clusters (i^{th} cluster excluded), and
k is the total number of clusters.

In addition to the standard error, the program computes the design effect (DEFT) for each estimate, which is defined as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient design, such as multistage and cluster selection. The program also computes the relative standard error and the confidence limits for the estimates.

Sampling errors for the EMDHS are calculated for selected variables considered to be of primary interest. The results are presented in this appendix for the country as a whole, for urban and rural areas separately, and for each of the 11 regions. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table B.1. Tables B.2 to B.14 present the value of the statistic (R), its standard error (SE), the number of unweighted (N) and weighted (WN) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits (R±2SE), for each variable. The DEFT is considered undefined when the standard error considering simple random sample is zero (when the estimate is close to 0 or 1). In the case of the total fertility rate, the number of unweighted cases is not relevant, as there is no known unweighted value for woman-years of exposure to childbearing.

The confidence interval (e.g., as calculated for the proportion of pregnant women age 15-49) can be interpreted as follows: the overall proportion from the national sample is 7.3 percent and its standard error is 0.05 percent. Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate, i.e., 7.3±2×0.005. There is a high probability (95 percent) that the *true* average proportion of pregnant women to all women over age 40 is between 6.4 percent and 8.3 percent.

For the total sample, the value of the design effect (DEFT), averaged over all variables is 2.217. This means that, due to multistage and clustering of the sample, the average standard error is increased by a factor of 2.217 over that in an equivalent simple random sample.

Table B.1 List of selected variables for sampling errors, Ethiopia 2014

Variable	Estimate	Base population
Urban residence	Proportion	All women 15-49
Literate	Proportion	All women 15-49
No education	Proportion	All women 15-49
Secondary education or higher	Proportion	All women 15-49
Net attendance ratio for primary school	Ratio	Children 7-14 years
Never married/in union	Proportion	All women 15-49
Currently married/in union	Proportion	All women 15-49
Married before age 20	Proportion	Women age 20-49
Currently pregnant	Proportion	All women 15-49
Knows any contraceptive method	Proportion	All women 15-49
Knows a modern method	Proportion	All women 15-49
Currently using any contraceptive method	Proportion	Currently married women 15-49
Currently using a modern method	Proportion	Currently married women 15-49
Currently using a traditional method	Proportion	Currently married women 15-49
Currently using pill	Proportion	Currently married women 15-49
Currently using female sterilization	Proportion	Currently married women 15-49
Currently using injectables	Proportion	Currently married women 15-49
Currently using IUD	Proportion	Currently married women 15-49
Currently using male condom	Proportion	Currently married women 15-49
Currently using implant	Proportion	Currently married women 15-49
Currently using withdrawal	Proportion	Currently married women 15-49
Currently using rhythm method	Proportion	Currently married women 15-49
Used public sector source	Proportion	Current users of modern method
Used government health post/HEW	Proportion	Current users of modern method
Mothers received antenatal care from skilled provider	Proportion	Women 15-49 with a live birth in the past 5 years
Mothers received medical assistance at delivery	Proportion	Births in last 5 years
Height-for-age (below -2SD)	Proportion	Children under 5 years who were measured
Weight-for-height (below -2SD)	Proportion	Children under 5 years who were measured
Weight-for-age (below -2SD)	Proportion	Children under 5 years who were measured
Total fertility rate (3 years)	Rate	Women-years of exposure to childbearing

Table B.2 Sampling errors for national sample, Ethiopia 2014

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design Effect DEFT	Relative Error SE/R	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.229	0.015	8070	8070	3.160	0.065	0.200	0.259
Literate	0.413	0.015	8070	8070	2.721	0.036	0.383	0.442
No education	0.480	0.018	8070	8070	3.243	0.038	0.444	0.516
Secondary education or higher	0.138	0.010	8070	8070	2.661	0.074	0.118	0.159
Net attendance ratio for primary school	0.652	0.019	9720	10060	3.418	0.029	0.615	0.690
Never married/in union	0.256	0.010	8070	8070	2.090	0.040	0.236	0.276
Currently married/in union	0.638	0.012	8070	8070	2.151	0.018	0.615	0.661
Currently pregnant	0.073	0.005	8070	8070	1.614	0.064	0.064	0.083
Knows any contraceptive method	0.975	0.005	5173	5145	2.099	0.005	0.965	0.984
Knows any modern method	0.973	0.005	5173	5145	2.071	0.005	0.964	0.982
Currently using any contraceptive method	0.420	0.020	5173	5145	2.929	0.048	0.380	0.460
Currently using modern method	0.404	0.020	5173	5145	2.990	0.051	0.363	0.444
Current using traditional method	0.016	0.003	5173	5145	1.611	0.175	0.011	0.022
Currently using pill	0.027	0.004	5173	5145	1.674	0.141	0.019	0.034
Currently using female sterilisation	0.001	0.001	5173	5145	1.630	0.592	0.000	0.003
Currently using injectables	0.311	0.019	5173	5145	2.977	0.062	0.272	0.349
Currently using IUD	0.010	0.002	5173	5145	1.573	0.215	0.006	0.015
Currently using male condom	0.004	0.001	5173	5145	1.379	0.323	0.001	0.006
Currently using implant	0.049	0.007	5173	5145	2.430	0.149	0.034	0.064
Currently using withdrawal	0.004	0.001	5173	5145	1.694	0.384	0.001	0.007
Currently using rhythm method	0.009	0.002	5173	5145	1.516	0.217	0.005	0.013
Used public sector source	0.870	0.014	1893	2237	1.849	0.016	0.841	0.898
Used government health post/HEW	0.369	0.028	1893	2237	2.482	0.075	0.314	0.425
Antenatal care from skilled provider	0.412	0.023	3712	3678	2.819	0.056	0.366	0.458
Mothers received medical assistance at delivery	0.155	0.013	5579	5315	2.302	0.083	0.129	0.181
Height-for-age (below -2SD)	0.404	0.013	4893	4921	1.858	0.033	0.377	0.430
Weight-for-height (below -2SD)	0.087	0.007	4893	4921	1.783	0.085	0.073	0.102
Weight-for-age (below -2SD)	0.252	0.013	4893	4921	1.996	0.051	0.227	0.278
Total fertility rate (3 years)	4.116	0.208	156604	156764	2.623	0.051	3.699	4.533

Table B.3 Sampling errors for urban sample, Ethiopia 2014

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design Effect DEFT	Relative Error SE/R	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	1.000	0.000	2658	1850	na	0.000	1.000	1.000
Literate	0.714	0.033	2658	1850	3.753	0.046	0.648	0.780
No education	0.223	0.032	2658	1850	4.015	0.145	0.158	0.288
Secondary education or higher	0.383	0.040	2658	1850	4.257	0.105	0.302	0.463
Net attendance ratio for primary school	0.801	0.028	1713	1251	2.479	0.035	0.744	0.857
Never married/in union	0.363	0.028	2658	1850	2.954	0.076	0.308	0.419
Currently married/in union	0.477	0.026	2658	1850	2.680	0.054	0.425	0.529
Currently pregnant	0.044	0.010	2658	1850	2.407	0.219	0.024	0.063
Knows any contraceptive method	0.976	0.007	1261	882	1.687	0.007	0.962	0.991
Knows any modern method	0.975	0.007	1261	882	1.638	0.007	0.961	0.990
Currently using any contraceptive method	0.591	0.044	1261	882	3.209	0.075	0.502	0.680
Currently using modern method	0.556	0.046	1261	882	3.257	0.082	0.464	0.647
Current using traditional method	0.036	0.008	1261	882	1.531	0.225	0.020	0.052
Currently using pill	0.061	0.010	1261	882	1.535	0.169	0.041	0.082
Currently using female sterilisation	0.001	0.001	1261	882	0.788	0.677	0.000	0.003
Currently using injectables	0.376	0.041	1261	882	3.021	0.110	0.294	0.459
Currently using IUD	0.033	0.011	1261	882	2.154	0.331	0.011	0.054
Currently using male condom	0.016	0.006	1261	882	1.669	0.367	0.004	0.028
Currently using implant	0.062	0.014	1261	882	2.074	0.228	0.034	0.090
Currently using withdrawal	0.006	0.004	1261	882	1.929	0.697	-0.002	0.014
Currently using rhythm method	0.024	0.006	1261	882	1.400	0.252	0.012	0.036
Used public sector source	0.685	0.038	714	567	2.173	0.055	0.609	0.760
Used government health post/HEW	0.020	0.009	714	567	1.806	0.474	0.001	0.039
Antenatal care from skilled provider	0.803	0.038	745	521	2.644	0.048	0.726	0.880
Mothers received medical assistance at delivery	0.584	0.064	974	681	3.265	0.110	0.455	0.712
Height-for-age (below -2SD)	0.265	0.032	887	621	2.054	0.121	0.201	0.329
Weight-for-height (below -2SD)	0.088	0.013	887	621	1.279	0.148	0.062	0.114
Weight-for-age (below -2SD)	0.151	0.016	887	621	1.308	0.108	0.119	0.184
Total fertility rate (3 years)	2.348	0.292	52857	34997	2.566	0.124	1.764	2.931

Table B.4 Sampling errors for rural sample, Ethiopia 2014

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design Effect DEFT	Relative Error SE/R	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.000	0.000	5412	6220	na	na	0.000	0.000
Literate	0.323	0.018	5412	6220	2.859	0.056	0.286	0.359
No education	0.557	0.023	5412	6220	3.351	0.041	0.512	0.602
Secondary education or higher	0.066	0.008	5412	6220	2.251	0.115	0.050	0.081
Net attendance ratio for primary school	0.631	0.021	8007	8809	3.352	0.034	0.589	0.674
Never married/in union	0.224	0.011	5412	6220	1.997	0.051	0.201	0.246
Currently married/in union	0.685	0.013	5412	6220	2.095	0.019	0.659	0.712
Currently pregnant	0.082	0.006	5412	6220	1.488	0.068	0.071	0.093
Knows any contraceptive method	0.974	0.005	3912	4263	2.109	0.005	0.964	0.985
Knows any modern method	0.973	0.005	3912	4263	2.080	0.006	0.962	0.983
Currently using any contraceptive method	0.384	0.023	3912	4263	2.945	0.060	0.338	0.430
Currently using modern method	0.372	0.023	3912	4263	2.986	0.062	0.326	0.418
Current using traditional method	0.012	0.003	3912	4263	1.739	0.251	0.006	0.018
Currently using pill	0.019	0.004	3912	4263	1.740	0.198	0.012	0.027
Currently using female sterilisation	0.002	0.001	3912	4263	1.648	0.670	0.000	0.004
Currently using injectables	0.297	0.022	3912	4263	2.964	0.073	0.254	0.340
Currently using IUD	0.006	0.002	3912	4263	1.419	0.302	0.002	0.009
Currently using male condom	0.001	0.001	3912	4263	1.436	0.767	0.000	0.002
Currently using implant	0.046	0.008	3912	4263	2.474	0.179	0.030	0.063
Currently using withdrawal	0.003	0.002	3912	4263	1.649	0.461	0.000	0.006
Currently using rhythm method	0.006	0.002	3912	4263	1.697	0.339	0.002	0.011
Used public sector source	0.932	0.011	1179	1669	1.459	0.011	0.911	0.954
Used government health post/HEW	0.488	0.034	1179	1669	2.368	0.071	0.419	0.557
Antenatal care from skilled provider	0.348	0.026	2967	3157	2.812	0.073	0.297	0.399
Mothers received medical assistance at delivery	0.092	0.012	4605	4634	2.452	0.130	0.068	0.116
Height-for-age (below -2SD)	0.424	0.014	4006	4300	1.729	0.033	0.396	0.452
Weight-for-height (below -2SD)	0.087	0.008	4006	4300	1.763	0.095	0.071	0.104
Weight-for-age (below -2SD)	0.267	0.014	4006	4300	1.919	0.053	0.239	0.295
Total fertility rate (3 years)	4.598	0.292	105525	122010	2.390	0.052	4.118	5.077

Table B.5 Sampling errors for Tigray sample, Ethiopia 2014

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design Effect DEFT	Relative Error SE/R	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.269	0.033	702	536	1.971	0.123	0.203	0.335
Literate	0.475	0.040	702	536	2.126	0.084	0.395	0.555
No education	0.468	0.034	702	536	1.830	0.074	0.399	0.537
Secondary education or higher	0.199	0.038	702	536	2.518	0.191	0.123	0.275
Net attendance ratio for primary school	0.792	0.032	768	590	1.964	0.041	0.727	0.857
Never married/in union	0.287	0.035	702	536	2.077	0.124	0.216	0.358
Currently married/in union	0.590	0.029	702	536	1.571	0.049	0.532	0.648
Currently pregnant	0.062	0.012	702	536	1.308	0.193	0.038	0.085
Knows any contraceptive method	0.984	0.010	419	316	1.578	0.010	0.964	1.003
Knows any modern method	0.982	0.010	419	316	1.478	0.010	0.962	1.001
Currently using any contraceptive method	0.333	0.034	419	316	1.463	0.101	0.266	0.401
Currently using modern method	0.296	0.029	419	316	1.280	0.097	0.239	0.353
Current using traditional method	0.037	0.013	419	316	1.355	0.338	0.012	0.062
Currently using pill	0.023	0.008	419	316	1.101	0.352	0.007	0.039
Currently using female sterilisation	0.000	0.000	419	316	na	na	0.000	0.000
Currently using injectables	0.244	0.027	419	316	1.285	0.111	0.190	0.298
Currently using IUD	0.002	0.002	419	316	0.936	1.001	-0.002	0.006
Currently using male condom	0.000	0.000	419	316	na	na	0.000	0.000
Currently using implant	0.027	0.007	419	316	0.842	0.249	0.013	0.040
Currently using withdrawal	0.002	0.002	419	316	0.933	1.006	-0.002	0.006
Currently using rhythm method	0.018	0.009	419	316	1.356	0.495	0.000	0.035
Used public sector source	0.938	0.025	133	108	1.196	0.027	0.888	0.988
Used government health post/HEW	0.247	0.060	133	108	1.591	0.242	0.127	0.366
Antenatal care from skilled provider	0.687	0.041	309	227	1.510	0.059	0.605	0.768
Mothers received medical assistance at delivery	0.262	0.038	459	333	1.599	0.144	0.186	0.337
Height-for-age (below -2SD)	0.457	0.041	425	321	1.639	0.089	0.376	0.538
Weight-for-height (below -2SD)	0.143	0.023	425	321	1.246	0.160	0.097	0.189
Weight-for-age (below -2SD)	0.313	0.030	425	321	1.251	0.095	0.253	0.373
Total fertility rate (3 years)	4.478	0.424	13595	10302	1.572	0.095	3.631	5.325

Table B.6 Sampling errors for Affar sample, Ethiopia 2014

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design Effect DEFT	Relative Error SE/R	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.356	0.057	668	74	3.064	0.159	0.243	0.470
Literate	0.229	0.031	668	74	1.876	0.133	0.168	0.290
No education	0.735	0.031	668	74	1.841	0.043	0.672	0.798
Secondary education or higher	0.060	0.010	668	74	1.081	0.166	0.040	0.080
Net attendance ratio for primary school	0.501	0.046	868	91	2.023	0.091	0.409	0.593
Never married/in union	0.137	0.017	668	74	1.273	0.124	0.103	0.170
Currently married/in union	0.754	0.025	668	74	1.489	0.033	0.704	0.804
Currently pregnant	0.140	0.016	668	74	1.221	0.117	0.107	0.173
Knows any contraceptive method	0.937	0.027	517	56	2.508	0.029	0.883	0.990
Knows any modern method	0.934	0.028	517	56	2.613	0.030	0.878	0.991
Currently using any contraceptive method	0.190	0.038	517	56	2.194	0.199	0.114	0.266
Currently using modern method	0.137	0.035	517	56	2.329	0.257	0.067	0.208
Current using traditional method	0.053	0.018	517	56	1.863	0.348	0.016	0.089
Currently using pill	0.011	0.007	517	56	1.608	0.680	0.000	0.025
Currently using female sterilisation	0.001	0.001	517	56	0.770	1.021	0.000	0.003
Currently using injectables	0.110	0.023	517	56	1.669	0.209	0.064	0.156
Currently using IUD	0.002	0.002	517	56	1.069	0.994	0.000	0.007
Currently using male condom	0.000	0.000	517	56	na	na	0.000	0.000
Currently using implant	0.008	0.004	517	56	1.136	0.552	0.000	0.017
Currently using withdrawal	0.000	0.000	517	56	na	na	0.000	0.000
Currently using rhythm method	0.000	0.000	517	56	na	na	0.000	0.000
Used public sector source	0.657	0.084	51	9	1.255	0.128	0.489	0.826
Used government health post/HEW	0.048	0.033	51	9	1.111	0.703	0.000	0.115
Antenatal care from skilled provider	0.310	0.052	374	39	2.104	0.167	0.206	0.413
Mothers received medical assistance at delivery	0.100	0.021	633	64	1.434	0.206	0.059	0.141
Height-for-age (below -2SD)	0.461	0.036	500	52	1.458	0.079	0.388	0.534
Weight-for-height (below -2SD)	0.245	0.027	500	52	1.285	0.110	0.192	0.299
Weight-for-age (below -2SD)	0.435	0.026	500	52	1.064	0.060	0.383	0.488
Total fertility rate (3 years)	5.237	0.736	13270	1465	2.026	0.141	3.764	6.709

Table B.7 Sampling errors for Amhara sample, Ethiopia 2014

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design Effect DEFT	Relative Error SE/R	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.211	0.040	880	1986	2.907	0.190	0.131	0.291
Literate	0.400	0.027	880	1986	1.648	0.068	0.345	0.454
No education	0.568	0.022	880	1986	1.339	0.039	0.523	0.613
Secondary education or higher	0.132	0.026	880	1986	2.289	0.198	0.080	0.185
Net attendance ratio for primary school	0.716	0.030	1044	2251	1.883	0.041	0.657	0.776
Never married/in union	0.199	0.020	880	1986	1.490	0.101	0.158	0.239
Currently married/in union	0.624	0.024	880	1986	1.483	0.039	0.576	0.673
Currently pregnant	0.062	0.011	880	1986	1.363	0.179	0.039	0.084
Knows any contraceptive method	0.990	0.004	570	1240	1.072	0.004	0.981	0.999
Knows any modern method	0.988	0.005	570	1240	1.026	0.005	0.979	0.997
Currently using any contraceptive method	0.491	0.040	570	1240	1.888	0.081	0.412	0.570
Currently using modern method	0.480	0.039	570	1240	1.878	0.082	0.401	0.558
Current using traditional method	0.011	0.005	570	1240	1.083	0.429	0.002	0.021
Currently using pill	0.013	0.005	570	1240	1.010	0.369	0.003	0.023
Currently using female sterilisation	0.000	0.000	570	1240	na	na	0.000	0.000
Currently using injectables	0.386	0.037	570	1240	1.813	0.096	0.312	0.460
Currently using IUD	0.002	0.002	570	1240	0.998	0.995	0.000	0.005
Currently using male condom	0.002	0.002	570	1240	1.099	0.979	0.000	0.007
Currently using implant	0.077	0.021	570	1240	1.872	0.272	0.035	0.119
Currently using withdrawal	0.004	0.003	570	1240	1.181	0.803	0.000	0.010
Currently using rhythm method	0.005	0.003	570	1240	1.127	0.658	0.000	0.012
Used public sector source	0.882	0.027	291	665	1.413	0.030	0.829	0.936
Used government health post/HEW	0.403	0.058	291	665	2.008	0.143	0.288	0.519
Antenatal care from skilled provider	0.462	0.044	390	837	1.693	0.095	0.375	0.550
Mothers received medical assistance at delivery	0.117	0.019	526	1120	1.220	0.164	0.079	0.155
Height-for-age (below -2SD)	0.422	0.028	503	1091	1.231	0.066	0.366	0.478
Weight-for-height (below -2SD)	0.094	0.012	503	1091	0.915	0.126	0.070	0.118
Weight-for-age (below -2SD)	0.276	0.024	503	1091	1.160	0.088	0.227	0.324
Total fertility rate (3 years)	3.758	0.333	17555	38898	1.466	0.089	3.093	4.424

Table B.8 Sampling errors for Oromiya sample, Ethiopia 2014

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design Effect DEFT	Relative Error SE/R	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.135	0.028	973	3045	2.545	0.207	0.079	0.191
Literate	0.403	0.031	973	3045	2.000	0.078	0.340	0.466
No education	0.484	0.040	973	3045	2.467	0.082	0.405	0.563
Secondary education or higher	0.118	0.018	973	3045	1.755	0.154	0.082	0.155
Net attendance ratio for primary school	0.599	0.037	1306	4237	2.347	0.062	0.524	0.674
Never married/in union	0.248	0.018	973	3045	1.279	0.072	0.212	0.283
Currently married/in union	0.672	0.023	973	3045	1.511	0.034	0.626	0.717
Currently pregnant	0.068	0.007	973	3045	0.910	0.108	0.053	0.083
Knows any contraceptive method	0.975	0.010	643	2046	1.684	0.011	0.954	0.996
Knows any modern method	0.975	0.010	643	2046	1.684	0.011	0.954	0.996
Currently using any contraceptive method	0.402	0.039	643	2046	2.041	0.098	0.323	0.481
Currently using modern method	0.391	0.040	643	2046	2.069	0.102	0.311	0.471
Current using traditional method	0.011	0.005	643	2046	1.246	0.473	0.001	0.021
Currently using pill	0.038	0.008	643	2046	1.096	0.218	0.021	0.054
Currently using female sterilisation	0.003	0.002	643	2046	0.993	0.705	0.000	0.007
Currently using injectables	0.289	0.038	643	2046	2.126	0.132	0.213	0.365
Currently using IUD	0.010	0.004	643	2046	1.079	0.433	0.001	0.018
Currently using male condom	0.000	0.000	643	2046	na	na	0.000	0.000
Currently using implant	0.046	0.012	643	2046	1.500	0.268	0.022	0.071
Currently using withdrawal	0.005	0.003	643	2046	1.028	0.552	0.000	0.011
Currently using rhythm method	0.005	0.003	643	2046	1.025	0.553	0.000	0.011
Used public sector source	0.878	0.021	266	836	1.025	0.023	0.837	0.919
Used government health post/HEW	0.361	0.045	266	836	1.511	0.123	0.272	0.450
Antenatal care from skilled provider	0.327	0.045	460	1471	2.076	0.137	0.237	0.417
Mothers received medical assistance at delivery	0.131	0.024	685	2215	1.681	0.184	0.083	0.179
Height-for-age (below -2SD)	0.382	0.023	619	2042	1.205	0.061	0.336	0.429
Weight-for-height (below -2SD)	0.071	0.014	619	2042	1.352	0.203	0.042	0.100
Weight-for-age (below -2SD)	0.227	0.023	619	2042	1.361	0.103	0.180	0.274
Total fertility rate (3 years)	4.377	0.43	19112	59758	1.785	0.098	3.518	5.237

Table B.9 Sampling errors for Somali sample, Ethiopia 2014

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design Effect DEFT	Relative Error SE/R	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.438	0.050	544	158	2.341	0.114	0.339	0.538
Literate	0.166	0.051	544	158	3.164	0.304	0.065	0.268
No education	0.749	0.056	544	158	3.005	0.075	0.637	0.860
Secondary education or higher	0.075	0.046	544	158	4.076	0.615	0.000	0.167
Net attendance ratio for primary school	0.449	0.032	1045	266	1.488	0.071	0.385	0.512
Never married/in union	0.222	0.043	544	158	2.391	0.192	0.137	0.307
Currently married/in union	0.660	0.063	544	158	3.101	0.096	0.534	0.786
Currently pregnant	0.129	0.022	544	158	1.513	0.169	0.085	0.172
Knows any contraceptive method	0.613	0.049	395	104	1.979	0.079	0.515	0.710
Knows any modern method	0.599	0.049	395	104	1.979	0.082	0.501	0.697
Currently using any contraceptive method	0.030	0.016	395	104	1.921	0.552	0.000	0.063
Currently using modern method	0.016	0.009	395	104	1.344	0.528	0.000	0.033
Current using traditional method	0.014	0.008	395	104	1.389	0.595	0.000	0.030
Currently using pill	0.000	0.000	395	104	na	na	0.000	0.000
Currently using female sterilisation	0.000	0.000	395	104	na	na	0.000	0.000
Currently using injectables	0.009	0.005	395	104	1.141	0.604	0.000	0.020
Currently using IUD	0.000	0.000	395	104	na	na	0.000	0.000
Currently using male condom	0.000	0.000	395	104	na	na	0.000	0.000
Currently using implant	0.007	0.007	395	104	1.732	1.023	0.000	0.022
Currently using withdrawal	0.000	0.000	395	104	na	na	0.000	0.000
Currently using rhythm method	0.004	0.004	395	104	1.295	1.014	0.000	0.012
Used public sector source	0.841	0.155	4	2	0.733	0.184	0.532	1.150
Used government health post/HEW	0.000	0.000	4	2	na	na	0.000	0.000
Antenatal care from skilled provider	0.191	0.058	348	98	2.710	0.304	0.075	0.307
Mothers received medical assistance at delivery	0.153	0.055	665	188	2.838	0.361	0.042	0.263
Height-for-age (below -2SD)	0.365	0.042	501	135	1.760	0.114	0.281	0.448
Weight-for-height (below -2SD)	0.275	0.026	501	135	1.246	0.093	0.224	0.326
Weight-for-age (below -2SD)	0.380	0.036	501	135	1.538	0.095	0.308	0.452
Total fertility rate (3 years)	6.445	1.185	11329	3122	2.227	0.184	4.075	8.815

Table B.10 Sampling errors for Benishangul-Gumuz sample, Ethiopia 2014

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design Effect DEFT	Relative Error SE/R	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.190	0.016	571	73	0.973	0.084	0.158	0.222
Literate	0.333	0.044	571	73	2.208	0.131	0.246	0.420
No education	0.561	0.042	571	73	2.018	0.075	0.477	0.645
Secondary education or higher	0.109	0.017	571	73	1.304	0.156	0.075	0.143
Net attendance ratio for primary school	0.735	0.036	815	97	1.846	0.049	0.663	0.808
Never married/in union	0.181	0.022	571	73	1.356	0.121	0.137	0.225
Currently married/in union	0.746	0.028	571	73	1.549	0.038	0.690	0.803
Currently pregnant	0.091	0.017	571	73	1.423	0.188	0.057	0.125
Knows any contraceptive method	0.911	0.026	434	54	1.893	0.029	0.859	0.963
Knows any modern method	0.903	0.025	434	54	1.773	0.028	0.853	0.954
Currently using any contraceptive method	0.399	0.051	434	54	2.153	0.127	0.298	0.501
Currently using modern method	0.388	0.049	434	54	2.079	0.126	0.291	0.485
Current using traditional method	0.011	0.005	434	54	1.008	0.450	0.001	0.022
Currently using pill	0.008	0.004	434	54	0.917	0.497	0.000	0.016
Currently using female sterilisation	0.004	0.004	434	54	1.293	0.970	0.000	0.012
Currently using injectables	0.325	0.050	434	54	2.219	0.154	0.225	0.424
Currently using IUD	0.003	0.003	434	54	1.170	1.000	0.000	0.009
Currently using male condom	0.000	0.000	434	54	na	na	0.000	0.000
Currently using implant	0.048	0.018	434	54	1.704	0.363	0.013	0.083
Currently using withdrawal	0.000	0.000	434	54	na	na	0.000	0.000
Currently using rhythm method	0.008	0.005	434	54	1.064	0.562	0.000	0.017
Used public sector source	0.906	0.057	157	22	2.429	0.063	0.792	1.019
Used government health post/HEW	0.593	0.068	157	22	1.718	0.114	0.458	0.728
Antenatal care from skilled provider	0.388	0.053	308	39	1.908	0.137	0.282	0.495
Mothers received medical assistance at delivery	0.163	0.043	474	59	2.082	0.265	0.076	0.249
Height-for-age (below -2SD)	0.403	0.028	392	50	1.145	0.071	0.346	0.460
Weight-for-height (below -2SD)	0.163	0.029	392	50	1.506	0.177	0.106	0.221
Weight-for-age (below -2SD)	0.293	0.035	392	50	1.464	0.120	0.223	0.364
Total fertility rate (3 years)	5.488	0.61	11610	1455	1.516	0.111	4.268	6.707

Table B.11 Sampling errors for SNNP sample, Ethiopia 2014

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design Effect DEFT	Relative Error SE/R	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.152	0.010	1001	1629	0.921	0.069	0.131	0.173
Literate	0.341	0.025	1001	1629	1.691	0.074	0.290	0.391
No education	0.436	0.038	1001	1629	2.397	0.086	0.361	0.511
Secondary education or higher	0.079	0.010	1001	1629	1.124	0.121	0.060	0.099
Net attendance ratio for primary school	0.650	0.030	1393	2205	2.034	0.046	0.590	0.709
Never married/in union	0.280	0.024	1001	1629	1.712	0.087	0.231	0.328
Currently married/in union	0.661	0.020	1001	1629	1.313	0.030	0.622	0.701
Currently pregnant	0.104	0.011	1001	1629	1.184	0.110	0.081	0.127
Knows any contraceptive method	0.991	0.004	675	1077	1.156	0.004	0.983	1.000
Knows any modern method	0.989	0.006	675	1077	1.399	0.006	0.978	1.000
Currently using any contraceptive method	0.405	0.036	675	1077	1.918	0.090	0.333	0.478
Currently using modern method	0.392	0.039	675	1077	2.074	0.099	0.314	0.470
Current using traditional method	0.013	0.006	675	1077	1.467	0.492	0.000	0.026
Currently using pill	0.012	0.004	675	1077	0.960	0.338	0.004	0.020
Currently using female sterilisation	0.000	0.000	675	1077	na	na	0.000	0.000
Currently using injectables	0.331	0.034	675	1077	1.861	0.102	0.263	0.398
Currently using IUD	0.014	0.006	675	1077	1.361	0.448	0.001	0.026
Currently using male condom	0.008	0.004	675	1077	1.264	0.549	-0.001	0.016
Currently using implant	0.028	0.008	675	1077	1.322	0.298	0.011	0.045
Currently using withdrawal	0.001	0.001	675	1077	0.892	1.008	-0.001	0.004
Currently using rhythm method	0.012	0.006	675	1077	1.464	0.514	0.000	0.024
Used public sector source	0.901	0.044	271	438	2.404	0.049	0.813	0.988
Used government health post/HEW	0.488	0.066	271	438	2.168	0.135	0.356	0.620
Antenatal care from skilled provider	0.390	0.041	515	819	1.888	0.105	0.308	0.473
Mothers received medical assistance at delivery	0.120	0.025	731	1151	1.971	0.211	0.069	0.170
Height-for-age (below -2SD)	0.441	0.028	651	1047	1.360	0.063	0.385	0.496
Weight-for-height (below -2SD)	0.066	0.012	651	1047	1.193	0.178	0.042	0.089
Weight-for-age (below -2SD)	0.257	0.028	651	1047	1.568	0.108	0.201	0.312
Total fertility rate (3 years)	4.276	0.425	19992	32076	1.881	0.099	3.426	5.127

Table B.12 Sampling errors for Gambela sample, Ethiopia 2014

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design Effect DEFT	Relative Error SE/R	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.268	0.081	609	45	4.515	0.303	0.106	0.430
Literate	0.484	0.052	609	45	2.583	0.108	0.379	0.589
No education	0.319	0.044	609	45	2.330	0.138	0.230	0.407
Secondary education or higher	0.182	0.023	609	45	1.439	0.124	0.137	0.227
Net attendance ratio for primary school	0.840	0.028	833	43	1.722	0.033	0.785	0.895
Never married/in union	0.159	0.018	609	45	1.242	0.116	0.122	0.196
Currently married/in union	0.674	0.023	609	45	1.186	0.033	0.629	0.720
Currently pregnant	0.088	0.016	609	45	1.416	0.184	0.056	0.121
Knows any contraceptive method	0.916	0.031	418	30	2.257	0.033	0.855	0.978
Knows any modern method	0.914	0.031	418	30	2.241	0.034	0.852	0.976
Currently using any contraceptive method	0.505	0.071	418	30	2.882	0.140	0.364	0.646
Currently using modern method	0.504	0.071	418	30	2.892	0.141	0.362	0.645
Current using traditional method	0.001	0.001	418	30	0.807	1.057	-0.002	0.004
Currently using pill	0.026	0.008	418	30	1.027	0.306	0.010	0.042
Currently using female sterilisation	0.000	0.000	418	30	na	na	0.000	0.000
Currently using injectables	0.467	0.074	418	30	3.037	0.159	0.318	0.615
Currently using IUD	0.003	0.003	418	30	0.902	0.775	-0.002	0.008
Currently using male condom	0.001	0.001	418	30	0.646	1.057	-0.001	0.003
Currently using implant	0.007	0.004	418	30	0.947	0.571	-0.001	0.014
Currently using withdrawal	0.000	0.000	418	30	na	na	0.000	0.000
Currently using rhythm method	0.001	0.001	418	30	0.807	1.057	-0.002	0.004
Used public sector source	0.431	0.138	187	17	3.813	0.321	0.154	0.708
Used government health post/HEW	0.087	0.040	187	17	1.939	0.460	0.007	0.167
Antenatal care from skilled provider	0.542	0.068	302	19	2.170	0.125	0.407	0.677
Mothers received medical assistance at delivery	0.291	0.057	421	25	2.003	0.196	0.177	0.405
Height-for-age (below -2SD)	0.224	0.037	384	21	1.599	0.167	0.149	0.299
Weight-for-height (below -2SD)	0.149	0.027	384	21	1.269	0.185	0.094	0.204
Weight-for-age (below -2SD)	0.185	0.040	384	21	1.681	0.214	0.106	0.264
Total fertility rate (3 years)	3.029	0.397	13955	904	1.274	0.131	2.235	3.823

Table B.13 Sampling errors for Harari sample, Ethiopia 2014

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design Effect DEFT	Relative Error SE/R	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.664	0.026	645	24	1.382	0.039	0.613	0.716
Literate	0.643	0.034	645	24	1.808	0.053	0.575	0.711
No education	0.270	0.025	645	24	1.447	0.094	0.219	0.321
Secondary education or higher	0.333	0.027	645	24	1.464	0.082	0.278	0.387
Net attendance ratio for primary school	0.788	0.022	606	21	1.151	0.028	0.744	0.833
Never married/in union	0.252	0.021	645	24	1.212	0.082	0.210	0.293
Currently married/in union	0.599	0.027	645	24	1.409	0.045	0.545	0.654
Currently pregnant	0.065	0.012	645	24	1.201	0.179	0.042	0.088
Knows any contraceptive method	1.000	0.000	400	14	na	0.000	1.000	1.000
Knows any modern method	1.000	0.000	400	14	na	0.000	1.000	1.000
Currently using any contraceptive method	0.485	0.035	400	14	1.389	0.072	0.416	0.555
Currently using modern method	0.429	0.032	400	14	1.279	0.074	0.365	0.492
Current using traditional method	0.057	0.012	400	14	1.054	0.215	0.032	0.081
Currently using pill	0.046	0.010	400	14	0.946	0.216	0.026	0.066
Currently using female sterilisation	0.003	0.003	400	14	1.116	1.004	0.000	0.009
Currently using injectables	0.263	0.033	400	14	1.505	0.126	0.196	0.329
Currently using IUD	0.028	0.008	400	14	1.008	0.296	0.011	0.045
Currently using male condom	0.012	0.005	400	14	0.966	0.435	0.002	0.023
Currently using implant	0.074	0.012	400	14	0.929	0.165	0.049	0.098
Currently using withdrawal	0.000	0.000	400	14	na	na	0.000	0.000
Currently using rhythm method	0.050	0.012	400	14	1.132	0.246	0.025	0.075
Used public sector source	0.665	0.053	174	7	1.474	0.080	0.559	0.771
Used government health post/HEW	0.051	0.015	174	7	0.926	0.304	0.020	0.082
Antenatal care from skilled provider	0.697	0.039	257	9	1.325	0.056	0.618	0.775
Mothers received medical assistance at delivery	0.455	0.046	363	12	1.445	0.100	0.364	0.546
Height-for-age (below -2SD)	0.276	0.027	320	11	1.066	0.099	0.221	0.331
Weight-for-height (below -2SD)	0.049	0.009	320	11	0.747	0.189	0.031	0.068
Weight-for-age (below -2SD)	0.161	0.020	320	11	0.893	0.122	0.122	0.200
Total fertility rate (3 years)	3.16	0.418	12796	477	1.739	0.132	2.323	3.996

Table B.14 Sampling errors for Addis Ababa sample, Ethiopia 2014

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design Effect DEFT	Relative Error SE/R	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	1.000	0.000	818	460	na	0.000	1.000	1.000
Literate	0.805	0.033	818	460	2.370	0.041	0.740	0.871
No education	0.140	0.030	818	460	2.469	0.214	0.080	0.200
Secondary education or higher	0.441	0.044	818	460	2.538	0.100	0.353	0.529
Net attendance ratio for primary school	0.888	0.027	371	220	1.706	0.031	0.833	0.943
Never married/in union	0.486	0.023	818	460	1.340	0.048	0.439	0.533
Currently married/in union	0.400	0.021	818	460	1.232	0.053	0.358	0.442
Currently pregnant	0.029	0.006	818	460	1.090	0.221	0.016	0.042
Knows any contraceptive method	0.993	0.005	316	184	1.037	0.005	0.983	1.003
Knows any modern method	0.993	0.005	316	184	1.037	0.005	0.983	1.003
Currently using any contraceptive method	0.641	0.024	316	184	0.903	0.038	0.592	0.690
Currently using modern method	0.574	0.026	316	184	0.934	0.045	0.522	0.626
Current using traditional method	0.067	0.012	316	184	0.863	0.181	0.043	0.092
Currently using pill	0.107	0.019	316	184	1.079	0.176	0.070	0.145
Currently using female sterilisation	0.004	0.003	316	184	0.937	0.799	0.000	0.011
Currently using injectables	0.265	0.033	316	184	1.315	0.123	0.200	0.330
Currently using IUD	0.075	0.016	316	184	1.086	0.214	0.043	0.108
Currently using male condom	0.037	0.013	316	184	1.183	0.342	0.012	0.062
Currently using implant	0.085	0.015	316	184	0.947	0.175	0.056	0.115
Currently using withdrawal	0.009	0.005	316	184	0.968	0.569	0.000	0.019
Currently using rhythm method	0.055	0.012	316	184	0.897	0.210	0.032	0.078
Used public sector source	0.664	0.038	213	125	1.163	0.057	0.589	0.740
Used government health post/HEW	0.000	0.000	213	125	na	na	0.000	0.000
Antenatal care from skilled provider	0.942	0.021	179	103	1.197	0.022	0.900	0.983
Mothers received medical assistance at delivery	0.861	0.037	217	125	1.457	0.042	0.788	0.934
Height-for-age (below -2SD)	0.229	0.034	225	130	1.170	0.147	0.162	0.296
Weight-for-height (below -2SD)	0.031	0.012	225	130	1.083	0.399	0.006	0.056
Weight-for-age (below -2SD)	0.073	0.023	225	130	1.347	0.313	0.027	0.118
Total fertility rate (3 years)	1.703	0.186	15813	8864	1.075	0.109	1.332	2.075

Table B.15 Sampling errors for Dire Dawa sample, Ethiopia 2014

Variable	Value (R)	Standard error (SE)	Number of cases Unweighted (N)	Number of cases Weighted (WN)	Design Effect DEFT	Relative Error SE/R	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.764	0.014	659	40	0.857	0.019	0.736	0.793
Literate	0.552	0.046	659	40	2.388	0.084	0.459	0.644
No education	0.345	0.039	659	40	2.086	0.112	0.268	0.423
Secondary education or higher	0.336	0.047	659	40	2.546	0.140	0.242	0.429
Net attendance ratio for primary school	0.749	0.020	671	37	1.026	0.026	0.710	0.789
Never married/in union	0.292	0.022	659	40	1.231	0.075	0.248	0.335
Currently married/in union	0.558	0.025	659	40	1.298	0.045	0.507	0.608
Currently pregnant	0.081	0.010	659	40	0.941	0.123	0.061	0.101
Knows any contraceptive method	0.985	0.010	386	22	1.528	0.010	0.966	1.004
Knows any modern method	0.980	0.010	386	22	1.347	0.010	0.961	0.999
Currently using any contraceptive method	0.509	0.036	386	22	1.415	0.071	0.437	0.581
Currently using modern method	0.346	0.036	386	22	1.505	0.105	0.273	0.419
Current using traditional method	0.163	0.040	386	22	2.113	0.244	0.083	0.242
Currently using pill	0.043	0.017	386	22	1.596	0.382	0.010	0.077
Currently using female sterilisation	0.005	0.003	386	22	0.930	0.696	-0.002	0.011
Currently using injectables	0.160	0.017	386	22	0.909	0.106	0.126	0.194
Currently using IUD	0.045	0.013	386	22	1.254	0.294	0.019	0.072
Currently using male condom	0.000	0.000	386	22	na	na	0.000	0.000
Currently using implant	0.087	0.018	386	22	1.267	0.209	0.051	0.123
Currently using withdrawal	0.000	0.000	386	22	na	na	0.000	0.000
Currently using rhythm method	0.039	0.010	386	22	1.048	0.264	0.019	0.060
Used public sector source	0.801	0.051	146	9	1.540	0.064	0.698	0.903
Used government health post/HEW	0.075	0.034	146	9	1.578	0.462	0.006	0.143
Antenatal care from skilled provider	0.784	0.049	270	15	1.873	0.062	0.686	0.881
Mothers received medical assistance at delivery	0.592	0.057	405	22	1.761	0.097	0.477	0.707
Height-for-age (below -2SD)	0.271	0.029	373	21	1.213	0.107	0.213	0.329
Weight-for-height (below -2SD)	0.117	0.016	373	21	0.911	0.140	0.084	0.149
Weight-for-age (below -2SD)	0.204	0.028	373	21	1.213	0.138	0.148	0.261
Total fertility rate (3 years)	3.421	0.437	12977	790	1.790	0.128	2.546	4.296

DATA QUALITY TABLES

Appendix C

Table C.1 Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Ethiopia 2014

	Men		Women	
Age	Percent	Number	Number	Percent
0	484	2.5	519	2.6
1	462	2.3	411	2.1
2	543	2.8	508	2.6
3	610	3.1	641	3.2
4	609	3.1	622	3.2
5	453	2.3	442	2.2
6	724	3.7	728	3.7
7	666	3.4	740	3.7
8	697	3.5	767	3.9
9	535	2.7	529	2.7
10	742	3.8	793	4.0
11	445	2.3	442	2.2
12	704	3.6	751	3.8
13	648	3.3	490	2.5
14	532	2.7	577	2.9
15	338	1.7	562	2.8
16	447	2.3	498	2.5
17	363	1.8	364	1.8
18	518	2.6	569	2.9
19	244	1.2	288	1.5
20	413	2.1	532	2.7
21	235	1.2	167	0.8
22	326	1.7	325	1.6
23	303	1.5	306	1.5
24	254	1.3	257	1.3
25	543	2.8	446	2.3
26	278	1.4	208	1.1
27	239	1.2	215	1.1
28	414	2.1	363	1.8
29	211	1.1	146	0.7
30	487	2.5	494	2.5
31	140	0.7	134	0.7
32	262	1.3	222	1.1
33	154	0.8	139	0.7
34	141	0.7	79	0.4
35	330	1.7	400	2.0
36	187	0.9	151	0.8
37	165	0.8	148	0.7
38	275	1.4	193	1.0
39	130	0.7	112	0.6
40	223	1.1	422	2.1
41	97	0.5	83	0.4
42	134	0.7	139	0.7
43	96	0.5	100	0.5
44	70	0.4	52	0.3
45	203	1.0	242	1.2
46	98	0.5	93	0.5
47	66	0.3	88	0.4
48	106	0.5	72	0.4
49	52	0.3	53	0.3
50	96	0.5	195	1.0
51	130	0.7	48	0.2
52	211	1.1	51	0.3
53	153	0.8	54	0.3
54	94	0.5	59	0.3
55	193	1.0	121	0.6
56	140	0.7	70	0.4
57	61	0.3	67	0.3
58	71	0.4	87	0.4
59	53	0.3	45	0.2
60	246	1.2	226	1.1
61	34	0.2	47	0.2
62	58	0.3	38	0.2
63	36	0.2	36	0.2
64	32	0.2	32	0.2
65	113	0.6	142	0.7
66	23	0.1	42	0.2
67	34	0.2	69	0.3
68	40	0.2	53	0.3
69	30	0.2	24	0.1
70+	479	2.4	603	3.1
Don't know/missing	0	0.0	6	0.0
Total	19,724	100.0	19,737	100.0

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview.

Table C.2 Age distribution of eligible and interviewed women

De facto household population of women age 10-54, interviewed women age 15-49; and percent distribution and percentage of eligible women who were interviewed (weighted), by five-year age groups, Ethiopia 2014

Age group	Household population of women age 10-54	Interviewed women age 15-49		Percentage of eligible women interviewed
		Number	Percentage	
10-14	3,072	na	na	na
15-19	1,910	1,814	22.1	95.0
20-24	1,531	1,463	17.8	95.5
25-29	1,684	1,641	19.9	97.4
30-34	1,184	1,147	13.9	96.8
35-39	1,086	1,064	12.9	97.9
40-44	621	600	7.3	96.6
45-49	524	499	6.1	95.1
50-54	684	na	na	na
15-49	8,541	8,226	100.0	96.3

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both household population of women and interviewed women are household weights. Age is based on the household questionnaire.
na = Not applicable

Table C.3 Completeness of reporting

Percentage of observations missing information for selected demographic and health questions (weighted), Ethiopia 2014

Subject	Reference group	Percentage with information missing	Number of cases
Birth date			
Month Only	Births in the 15 years preceding the survey	2.31	16,322
Month and Year	Births in the 15 years preceding the survey	0.27	16,322
Respondent's education	All women age 15-49	0.12	8,070
Anthropometry	Living children age 0-59 months (from the Household Questionnaire)		
Height		4.62	5,400
Weight		4.01	5,400
Height or weight		4.62	5,400

[1] Both year and age missing

Table C.4 Births by calendar years

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio by Meskerem calendar year, according to living (L), dead (D), and total (T) children (weighted), Ethiopia 2014

Calendar year (Meskerem)	Number of births			Percentage with complete birth date[1]			Sex ratio at birth[2]			Calendar year ratio[3]		
	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total	Living	Dead	Total
2006	493	30	523	99.9	99.8	99.9	97.5	226.4	102.1	na	na	na
2005	923	78	1,000	98.9	99.0	98.9	101.1	159.3	104.7	na	na	na
2004	905	69	974	99.3	93.8	98.9	101.2	80.4	99.6	92.6	85.5	92.1
2003	1,031	84	1,116	99.5	90.7	98.9	94.0	152.8	97.5	99.8	122.6	101.3
2002	1,161	68	1,230	99.6	98.0	99.5	107.9	341.9	114.2	120.2	93.1	118.3
2001	900	62	962	99.3	92.5	98.9	102.5	133.8	104.3	77.1	62.7	76.0
2000	1,174	130	1,304	97.6	95.7	97.4	113.9	97.8	112.2	117.5	159.5	120.6
1999	1,099	101	1,200	97.3	76.1	95.5	116.7	183.3	121.1	92.1	74.1	90.3
1998	1,212	143	1,354	97.3	92.3	96.8	102.4	101.4	102.3	113.5	126.4	114.7
1997	1,036	125	1,161	97.5	92.0	96.9	110.4	144.9	113.6	93.6	92.3	93.5
2002-2006	4,513	329	4,843	99.4	95.7	99.2	100.7	160.8	103.9	na	na	na
1997-2001	5,421	561	5,981	97.7	90.1	97.0	109.2	124.5	110.5	na	na	na
1992-1996	4,486	609	5,095	96.8	92.4	96.3	100.5	135.9	104.2	na	na	na
1987-1991	2,921	565	3,486	96.9	90.9	95.9	119.1	155.9	124.4	na	na	na
<1987	2,549	782	3,331	96.3	90.6	94.9	115.4	151.8	123.0	na	na	na
All	19,889	2,847	22,736	97.6	91.5	96.8	107.3	144.2	111.3	na	na	na

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

SURVEY PERSONNEL IN THE 2014 ETHIOPIA MINI DEMOGRAPHIC AND HEALTH SURVEY *APPENDIX* **D**

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Mohammed Sied	Supervisor
Temesgen Teshale	Supervisor
Mehretu Gezahegn	Lister
Teshome Mohammed	Lister
Tarekegn Mehretu	Lister
Endalew Ayele	Lister

OROMIYA: Team 9&10

Fantahun Aboma	Supervisor
Genemo Fitala	Supervisor
Martha Asrat	Lister
Mesfin Bekele	Lister
Emebet Hassbu	Lister
Geremew Ajema	Lister
Agered Zenebe	Lister

HARARI: Team 11 & 12

Abel Gezahen	Supervisor
Mohammed Omer	Supervisor
Tewodros Tadesse	Lister
Helen Bekele	Lister
Yednekacew Getachew	Lister
Abrham assefa	Lister

SNNP: Team 13 &14

Selamu Bulado	Supervisor
Bereket Kebede	Supervisor
Liykun Teshale	Lister
Fisum Girma	Lister
Alemayehu Yonnas	Lister
Mesfin Girma	Lister

GAMBELA :Team 15 & 16

Wakweya Bekele	Supervisor
Yohannes Tadele	Supervisor
Tesfahun Ageye	Lister
Adelu Deneke	Lister
Abeya GebreYesus	Lister
Solomon Addis	Lister

SOMALI: Team 17

Ayele Worku	Supervisor
Abebe Genebo	Supervisor
Kassu Eshete	Lister
Shewandang Aschalew	Lister
Godana Korsola	Lister
Admasu Ayele	Lister
Abubeker Ahmed	Lister

SOMALI:Team 18

Bekele Abdi	Supervisor
Alemayeu Ayza	Supervisor
Benyam Kebede	Lister
Andualem Alemayhu	Lister
Tarekegn Berga	Lister

DIRE DAWA: Team 19 & 20

Nejat Zekarias	Supervisor
Mikiyas Belete	Supervisor
Behailu Semon	Lister
Teshale Ayansa	Lister
Ledit Andualem	Lister
Yonas Beyene	Lister

ADDIS ABABA: Team 21 & 22

Teshome Zewde	Supervisor
Mesfin Haileselase	Supervisor
Solomon Alemu	Lister
Abdulahi Jemal	Lister

DATA PROCESSING AND GIS STAFF

Data Processing Programmers

Abbas Shelemew
Asres Abayneh
Etalemahu Gebre

GIS & Sampling Staff

Sisay Guta
Atreshewal Girma
Essayas Muleta

DATA ENTRY TEAM

Mehret Berhae
Hisrut Seifu
Kebebush Dimmesse
Kidist Getachew
Elsabeth Tilahun
Elsabet Eshetu
Solomon Yehualashet
Genet W/Rurael
Firehiwot Masresha
Hagere W/Mariam
Maeza Beyene
Elleni Teklu
Selam Tadese
Hiwoteselam Eshetu
Mekdes Yilma
Belaynesh Fekadu
Yirgalem Delelegn

Data Entry Supervisors

Yeworkwha Mohamed
Zemed Wolde

Office Editors

Berhanu Hailegeorgis
Alemseged Tekletsion

Data Entry Administrators

Ashenafi T/Birhan
Meseret Tegegn

Secretary

Etifwork Yilma
Wisky Gemeda

QUESTIONNAIRES

Appendix E

HOUSEHOLD QUESTIONNAIRE

IMPLEMENTING ORGANIZATION: CSA

IDENTIFICATION

LOCALITY NAME _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBER .....

HOUSEHOLD NUMBER .....

REGION .....

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY / MONTH / YEAR
INTERVIEWER'S NAME				INT. NUMBER
RESULT*				RESULT
NEXT VISIT: DATE				TOTAL NUMBER OF VISITS
TIME				

*RESULT CODES:

1 COMPLETED
2 NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME
4 POSTPONED
5 REFUSED
6 DWELLING VACANT OR ADDRESS NOT A DWELLING
7 DWELLING DESTROYED
8 DWELLING NOT FOUND
9 OTHER _____ (SPECIFY)

TOTAL PERSONS IN HOUSEHOLD

TOTAL ELIGIBLE WOMEN

LINE NO. OF RESPONDENT TO HOUSEHOLD QUESTIONNAIRE

LANGUAGE OF QUESTIONNAIRE: 6 LANGUAGE OF INTERVIEW: LANGUAGE OF RESPONDENT:

LANGUAGE CODES: AMARIGNA = 1, OROMIGNA = 2, TIGRIGNA = 3, OTHER = 6

TRANSLATOR USED: (YES = 1, NO = 2)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

Introduction and Consent

Hello. My name is _____ and I am working with the Central Statistical Agency (CSA). We are conducting a national survey about various health issues. We would very much appreciate your participation in this survey. This information will help the government to plan health services. The survey usually takes between 10 and 15 minutes to complete. As part of the survey we would first like to ask some questions about your household. Whatever information you provide will be kept strictly confidential, and will not be shared with anyone other than members of our survey team.

Participation in this survey is voluntary, and if we should come to any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, we hope you will participate in the survey since your views are important.

At this time, do you want to ask me anything about the survey?
May I begin the interview now?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED . . . 1 ↓

RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . . 2 → END

HOUSEHOLD SCHEDULE

									IF AGE 5 YEARS OR OLDER		IF AGE 5-24 YEARS	
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE			ELIGIBILITY		EVER ATTENDED SCHOOL		CURRENT SCHOOL ATTENDANCE	
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-19 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)? IF '95' OR MORE RECORD '95'.	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF ALL CHILDREN AGE 0-5	Has (NAME) ever attended school?	What is the highest level of school (NAME) has attended? SEE CODES BELOW. What is the highest grade/ number of years (NAME) completed at that level? SEE CODES BELOW.	Did (NAME) attend school at any time during the 2006 E.C. school year?	During this school year, what level and grade/year is (NAME) attending? SEE CODES BELOW.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(9)	(11)	(16)	(17)	(18)	(19)
				M F	Y N	Y N	IN YEARS			Y N	LEVELGRADE	Y N	LEVEL GRADE
01				1 2	1 2	1 2		01	01	1 2 → NEXT LINE		1 2 → NEXT LINE	
02				1 2	1 2	1 2		02	02	1 2 → NEXT LINE		1 2 → NEXT LINE	
03				1 2	1 2	1 2		03	03	1 2 → NEXT LINE		1 2 → NEXT LINE	
04				1 2	1 2	1 2		04	04	1 2 → NEXT LINE		1 2 → NEXT LINE	
05				1 2	1 2	1 2		05	05	1 2 → NEXT LINE		1 2 → NEXT LINE	
06				1 2	1 2	1 2		06	06	1 2 → NEXT LINE		1 2 → NEXT LINE	
07				1 2	1 2	1 2		07	07	1 2 → NEXT LINE		1 2 → NEXT LINE	
08				1 2	1 2	1 2		08	08	1 2 → NEXT LINE		1 2 → NEXT LINE	
09				1 2	1 2	1 2		09	09	1 2 → NEXT LINE		1 2 → NEXT LINE	
10				1 2	1 2	1 2		10	10	1 2 → NEXT LINE		1 2 → NEXT LINE	

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HOUSEHOLD

01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = NIECE/NEPHEW
10 = OTHER RELATIVI
11= ADOPTED/FOSTER/ STEPCHILD
12 = NOT RELATEI
98 = DON'T KNOW

CODES FOR Qs. 17 AND 19: EDUCATION

1 = PRIMARY
2 = SECONDARY
3 = TECHNICAL/VOCATIONAL
4 = HIGHER
8 = DON'T KNOW

GRADE

00 = LESS THAN 1 YEAR COMPLETED (USE '00' FOR Q. 17 ONLY. THIS CODE IS NOT ALLOWED FOR Q. 19
98 = DON'T KNOW

NOTE:
IF PRIMARY OR SECONDARY, RECORD COMPLETED GRADE.
IF TECHNICAL/VOCATIONAL OR HIGHER, RECORD YEARS COMPLETEI

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
102	What is the main source of drinking water for members of your household?	PIPED WATER PIPED INTO DWELLING ..... 11 PIPED TO YARD/PLOT ..... 12 PUBLIC TAP/STANDPIPE ..... 13 BOREHOLE ..... 21 DUG WELL PROTECTED WELL ..... 31 UNPROTECTED WELL ..... 32 WATER FROM SPRING PROTECTED SPRING ..... 41 UNPROTECTED SPRING ..... 42 RAINWATER ..... 51 TANKER TRUCK ..... 61 CART WITH SMALL TANK ..... 71 SURFACE WATER RIVER/LAKE/POND/STREAM/DAM ..... 81 BOTTLED WATER ..... 91 OTHER _____ 96 (SPECIFY)	
107	What kind of toilet facility do members of your household usually use? IF THE RESPONDENT DOES NOT UNDERSTAND WHICH TYPE OF TOILET THEY HAVE, ASK TO OBSERVE THE TOILET FACILITY AND CIRCLE THE APPROPRIATE CODE.	FLUSH OR POUR FLUSH TOILET FLUSH TO PIPED SEWER SYSTEM ..... 11 FLUSH TO SEPTIC TANK ..... 12 FLUSH TO PIT LATRINE ..... 13 FLUSH TO SOMEWHERE ELSE ..... 14 FLUSH, DON'T KNOW WHERE ..... 15 PIT LATRINE VENTILATED IMPROVED PIT LATRINE (VIP) ..... 21 PIT LATRINE WITH SLAB ..... 22 PIT LATRINE WITHOUT SLAB/ OPEN PIT ..... 23 COMPOSTING TOILET ..... 31 BUCKET TOILET ..... 41 HANGING TOILET/HANGING LATRINE ..... 51 NO FACILITY/BUSH/FIELD ..... 61 OTHER _____ 96 (SPECIFY)	→ 110
108	Do you share this toilet facility with other households?	YES ..... 1 NO 2	→ 110
109	How many households use this toilet facility?	NO. OF HOUSEHOLDS IF LESS THAN 10 ..... 0 _ 10 OF MORE HOUSEHOLDS ..... 95 DON'T KNOW 98	
110	Does your household have: Electricity? A watch/clock? A radio? A television? A mobile telephone? A non-mobile telephone? A refrigerator? A table? A chair? A bed with cotton/sponge/spring mattress? An electric mitad? A kerosene lamp/pressure lamp?	YES NO ELECTRICITY ..... 1 2 WATCH/CLOCK ..... 1 2 RADIO ..... 1 2 TELEVISION ..... 1 2 MOBILE TELEPHONE ..... 1 2 NON-MOBILE TELEPHONE ..... 1 2 REFRIGERATOR ..... 1 2 TABLE ..... 1 2 CHAIR ..... 1 2 A BED WITH COTTON/SPONGE/ SPRING MATTRESS ..... 1 2 ELECTRIC MITAD ..... 1 2 KEROSENE LAMP/PRESSURE LAMP 1 2	

114	MAIN MATERIAL OF THE FLOOR. RECORD OBSERVATION.	NATURAL FLOOR EARTH/SAND . . . . . 11 DUNG . . . . . 12 RUDIMENTARY FLOOR WOOD PLANKS . . . . . 21 PALM/BAMBOO . . . . . 22 FINISHED FLOOR PARQUET OR POLISHED WOOD . . . . . 31 VINYL OR ASPHALT STRIPS . . . . . 32 CERAMIC TILES . . . . . 33 CEMENT . . . . . 34 CARPET . . . . . 35 OTHER _____ 96 (SPECIFY)	
115	MAIN MATERIAL OF THE ROOF. RECORD OBSERVATION.	NATURAL ROOFING NO ROOF . . . . . 11 THATCH/LEAF/MUD . . . . . 12 RUDIMENTARY ROOFING RUSTIC MAT/PLASTIC SHEETS . . . . . 21 REED/BAMBOO . . . . . 22 WOOD PLANKS . . . . . 23 CARDBOARD . . . . . 24 FINISHED ROOFING CORRUGATED IRON /METAL . . . . . 31 WOOD . . . . . 32 ASBESTOS/CEMENT FIBER . . . . . 33 CEMENT/CONCRETE . . . . . 34 ROOFING SHINGLES . . . . . 35 OTHER _____ 96 (SPECIFY)	
116	MAIN MATERIAL OF THE EXTERIOR WALLS. RECORD OBSERVATION.	NATURAL WALLS NO WALLS . . . . . 11 CANE/TRUNKS/BAMBOO/REED . . . . . 12 DIRT . . . . . 13 RUDIMENTARY WALLS BAMBOO/WOOD WITH MUD . . . . . 21 STONE WITH MUD . . . . . 22 UNCOVERED ADOBE . . . . . 23 PLYWOOD . . . . . 24 CARDBOARD . . . . . 25 REUSED WOOD . . . . . 26 FINISHED WALLS CEMENT . . . . . 31 STONE WITH LIME/CEMENT . . . . . 32 BRICKS . . . . . 33 CEMENT BLOCKS . . . . . 34 COVERED ADOBE . . . . . 35 WOOD PLANKS/SHINGLES . . . . . 36 OTHER _____ 96 (SPECIFY)	
118	Does any member of this household own: A bicycle? A motorcycle or motor scooter? An animal-drawn cart? A car or truck?	YES NO BICYCLE . . . . . 1 2 MOTORCYCLE/SCOOTER . . . . 1 2 ANIMAL-DRAWN CART . . . . . 1 2 CAR/TRUCK 1 2	

119	Does any member of this household own any agricultural land?	YES . . . . . 1 NO 2	→ 121
120	How many (LOCAL UNITS) of agricultural land do members of this household own? LOCAL UNITS _____ (SPECIFY) IF 95 OR MORE CIRCLE '950'	LOCAL UNITS ☐☐.☐ 95 OR MORE LOCAL UNITS . . . . . 950 DON'T KNOW 998	
121	Does this household own any livestock, herds, other farm animals, or poultry?	YES . . . . . 1 NO 2	→ 123
122	How many of the following animals does this household own? IF NONE, ENTER '00'. IF MORE THAN 95, ENTER '95'. IF UNKNOWN, ENTER '98'. Milk cows, oxen or bulls? Horses, donkeys, or mules? Camels? Goats? Sheep? Chickens? Beehives?	COWS/BULLS/OXEN . . . . . ☐☐ HORSES/DONKEYS/MULES . . . . . ☐☐ CAMELS . . . . . ☐☐ GOATS . . . . . ☐☐ SHEEP . . . . . ☐☐ CHICKENS . . . . . ☐☐ BEEHIVES . . . . . ☐☐	
123	Does any member of this household have a bank or microfinance saving account?	YES . . . . . 1 NO 2	
124	Is your household receiving cash or food from the Safety Net Program?	YES . . . . . 1 NO 2	

WEIGHT AND HEIGHT MEASUREMENT FOR CHILDREN AGE 0-5

201	CHECK COLUMN 2 AND 11 OF HOUSEHOLD QUESTIONNAIRE. RECORD THE LINE NUMBER AND NAME FOR ALL ELIGIBLE CHILDREN 0-5 YEARS IN QUESTION 202. IF MORE THAN SIX CHILDREN, USE ADDITIONAL QUESTIONNAIRE(S).			
		CHILD 1	CHILD 2	CHILD 3
202	LINE NUMBER FROM COLUMN 11 NAME FROM COLUMN 2	LINE NUMBER . . . ☐☐ NAME _____	LINE NUMBER . . . ☐☐ NAME _____	LINE NUMBER . . . ☐☐ NAME _____
203	IF MOTHER INTERVIEWED, COPY MONTH AND YEAR FROM BIRTH HISTORY AND ASK DAY; IF MOTHER NOT INTERVIEWED, ASK: What is (NAME'S) birth date?	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐
204	CHECK 203: CHILD BORN IN MESKEREM 2001 OR LATER?	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, END INTERVIEW)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, END INTERVIEW)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE, END INTERVIEW)
205	WEIGHT IN KILOGRAMS.	KG. ☐☐.☐☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	KG. ☐☐.☐☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	KG. ☐☐.☐☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996
206	HEIGHT IN CENTIMETERS	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996
207	MEASURED LYING DOWN OR STANDING UP?	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED 3	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED 3	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED 3
208	GO BACK TO 203 IN NEXT COLUMN OF THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF THE NEXT PAGE; IF NO MORE CHILDREN, END INTERVIEW.			

		CHILD 4	CHILD 5	CHILD 6
202	LINE NUMBER FROM COLUMN 11 NAME FROM COLUMN 2	LINE NUMBER . . . ☐☐ NAME _____	LINE NUMBER . . . ☐☐ NAME _____	LINE NUMBER . . . ☐☐ NAME _____
203	IF MOTHER INTERVIEWED, COPY MONTH AND YEAR FROM BIRTH HISTORY AND ASK DAY; IF MOTHER NOT INTERVIEWED, ASK: What is (NAME'S) birth date?	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐	DAY . . . . . ☐☐ MONTH . . . . . ☐☐ YEAR ☐☐☐☐
204	CHECK 203: CHILD BORN IN MESKEREM 2001 OR LATER	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, END INTERVIEW)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 FOR NEXT CHILD OR, IF NO MORE CHILDREN, END INTERVIEW)	YES . . . . . 1 NO . . . . . 2 (GO TO 203 IN FIRST COLUMN OF NEW QUESTIONNAIRE; OR IF NO MORE CHILDREN, END INTERVIEW)
205	WEIGHT IN KILOGRAMS.	KG. ☐☐.☐☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	KG. ☐☐.☐☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	KG. ☐☐.☐☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996
206	HEIGHT IN CENTIMETERS	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996	CM. ☐☐☐.☐ NOT PRESENT . . . 9994 REFUSED . . . . . 9995 OTHER 9996
207	MEASURED LYING DOWN OR STANDING UP?	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED 3	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED 3	LYING DOWN . . . . . 1 STANDING UP . . . . . 2 NOT MEASURED 3
208	GO BACK TO 203 IN NEXT COLUMN IN THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF THE ADDITIONAL QUESTIONNAIRE. IF NO MORE CHILDREN, END INTERVIEW.			

CENTRAL STATISTICAL AGENCY 24 November 2013
2014 ETHIOPIA MINI DEMOGRAPHIC AND HEALTH SURVEY
WOMAN'S QUESTIONNAIRE

IMPLEMENTING ORGANIZATION: CSA

IDENTIFICATION

LOCALITY NAME _____

NAME OF HOUSEHOLD HEAD _____

CLUSTER NUMBER . . . . . | | | |

HOUSEHOLD NUMBER . . . . . | | | |

REGION . . . . . | | |

NAME AND LINE NUMBER OF WOMAN _____ | | |

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY / MONTH / YEAR
INTERVIEWER'S NAME				INT. NUMBER
RESULT*				RESULT
NEXT VISIT: DATE				TOTAL NUMBER OF VISITS
TIME				

*RESULT CODES:

1	COMPLETED	4	REFUSED		
2	NOT AT HOME	5	PARTLY COMPLETED	7	OTHER _____ (SPECIFY)
3	POSTPONED	6	INCAPACITATED		

LANGUAGE OF QUESTIONNAIRE: 6 LANGUAGE OF INTERVIEW: | | LANGUAGE OF RESPONDENT: | |

LANGUAGE CODES: AMARIGNA = 1, OROMIGNA = 2, TIGRIGNA = 3, OTHER = 6

TRANSLATOR USED: (YES = 1, NO = 2) | |

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION AND CONSENT

INFORMED CONSENT

Hello. My name is _____ and I am working with the Central Statistical Agency (CSA). We are conducting a survey about health all over Ethiopia. The information we collect will help the government to plan health services. Your household was selected for the survey. The survey usually takes about 15 to 30 minutes. All of the answers you give will be confidential and will not be shared with anyone other than members of our survey team. You don't have to be in the survey, but we hope you will agree to answer the questions since your views are important. If I ask you any question you don't want to answer, just let me know and I will go on to the next question or you can stop the interview at any time.

Do you have any questions?
May I begin the interview now?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED ..... 1 ↓ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED ... 2 → END

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME. MORNING = 1 EVENING = 2	MORNING/EVENING ..... ☐ HOUR ..... ☐☐ MINUTES .... ☐☐	
101A	COLLECT ANY RELEVANT DOCUMENTS THAT MAY HAVE INFORMATION ON THE RESPONDENT AND HER CHILDREN'S AGE.		
102	In what month and year were you born?	MONTH ..... ☐☐ DON'T KNOW MONTH ..... 98 YEAR ..... ☐☐☐☐ DON'T KNOW YEAR 9998	
103	How old were you at your last birthday? COMPARE AND CORRECT 102 AND/OR 103 IF INCONSISTENT.	AGE IN COMPLETED YEARS ☐☐	
104	Have you ever attended school?	YES ..... 1 NO 2	→ 108
105	What is the highest level of school you attended: primary, secondary, technical/vocational or higher?	PRIMARY .... 1 SECONDARY ..... 2 TECHNICAL/VOCATIONAL ..... 3 HIGHER 4	
106	What is the highest grade/number of years you completed at that level? IF COMPLETED PRIMARY OR SECONDARY, RECORD COMPLETED GRADE. IF TECHNICAL/VOCATIONAL OR HIGHER, RECORD YEARS COMPLETED. IF COMPLETED LESS THAN ONE YEAR AT THAT LEVEL RECORD '00'.	GRADE/NUMBER OF YEARS ☐☐	
107	CHECK 105: PRIMARY ☐ ↓ SECONDARY AND ABOVE ☐ →		201
108	Now I would like you to read this sentence to me. SHOW CARD TO RESPONDENT. IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CANNOT READ AT ALL ..... 1 ABLE TO READ ONLY PARTS OF SENTENCE ..... 2 ABLE TO READ WHOLE SENTENCE. . 3 NO CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED 5	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES . . . . . 1 NO 2	→ 206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES . . . . . 1 NO 2	→ 204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME . . . . . [ ][ ] DAUGHTERS AT HOME . . . . . [ ][ ]	
204	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES . . . . . 1 NO 2	→ 206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE . . . . . [ ][ ] DAUGHTERS ELSEWHERE . [ ][ ]	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES . . . . . 1 NO 2	→ 208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD . . . . . [ ][ ] GIRLS DEAD . . . . . [ ][ ]	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL . . . . . [ ][ ]	
209	CHECK 208: Just to make sure that I have this right: you have had in TOTAL _____ births during your life. Is that correct? YES ☐ ↓ NO ☐ → PROBE AND CORRECT 201-208 AS NECESSARY.		
210	CHECK 208: ONE OR MORE BIRTHS ☐ ↓ NO BIRTHS ☐ →		226

211 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had.
RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE ROWS.
(IF THERE ARE MORE THAN 12 BIRTHS, USE AN ADDITIONAL QUESTIONNAIRE, STARTING WITH THE SECOND ROW).

212 What name was given to your (first/next) baby? (NAME)	213 Is (NAME) a boy or a girl?	214 Were any of these births twins?	215 In what month and year was (NAME) born? PROBE: When is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COM-PLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSE-HOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSE-HOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?
01	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (NEXT BIRTH)	DAYS . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . 3 ☐☐	
02	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
03	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
04	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
05	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
06	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
07	BOY 1 GIRL 2	SING 1 MULT 2	MONTH ☐☐ YEAR ☐☐☐☐	YES . . 1 NO . . . 2 → 220	AGE IN YEARS ☐☐	YES . . . 1 NO 2	LINE NUMBER ☐☐ → (GO TO 221)	DAYS . . 1 ☐☐ MONTHS 2 ☐☐ YEARS . 3 ☐☐	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH

212 What name was given to your next baby? (NAME)	213 Is (NAME) a boy or a girl?	214 Were any of these births twins?	215 In what month and year was (NAME) born? PROBE: When is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COM-PLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSE-HOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSE-HOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?
08	BOY 1 GIRL 2	SING 1 MULT 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . 1 MONTHS 2 YEARS . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
09	BOY 1 GIRL 2	SING 1 MULT 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . 1 MONTHS 2 YEARS . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
10	BOY 1 GIRL 2	SING 1 MULT 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . 1 MONTHS 2 YEARS . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
11	BOY 1 GIRL 2	SING 1 MULT 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . 1 MONTHS 2 YEARS . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
12	BOY 1 GIRL 2	SING 1 MULT 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . 1 MONTHS 2 YEARS . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH

222	Have you had any live births since the birth of (NAME OF LAST BIRTH)? IF YES, RECORD BIRTH(S) IN THE ABOVE TABLE.	YES . . . . . 1 NO 2	
223	COMPARE 208 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND MARK: NUMBERS ARE SAME → NUMBERS ARE DIFFERENT → (PROBE AND RECONCILE)		
224	CHECK 215 AND ENTER THE NUMBER OF BIRTHS IN MESKEREM 2001 E.C. OR LATER. IF NONE, CIRCLE '0' .	NONE 0	
226	Are you pregnant now ?	YES . . . . . 1 NO . . . . . 2 UNSURE . . . . . 8 → 301	
227	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS.	MONTHS	

SECTION 3. CONTRACEPTION

301	Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. Have you ever heard of (METHOD)?		
01	**Female sterilization** PROBE: Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
02	**Male sterilization** PROBE: Men can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
03	**IUD** PROBE: Women can have a loop or coil placed inside them by a doctor or a nurse.	YES . . . . . 1 NO 2	
04	**Injectables** PROBE: Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES . . . . . 1 NO 2	
05	**Implants (Implanon/Jadelle/ Norplants)** PROBE: Women can have one or more small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES . . . . . 1 NO 2	
06	**Pill** PROBE: Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2	
07	**Male condom** PROBE: Men can put a rubber sheath on their penis before sexual intercourse.	YES . . . . . 1 NO 2	
08	**Female Condom** PROBE: Women can place a sheath in their vagina before sexual intercourse.	YES . . . . . 1 NO 2	
09	**Standard Days Method** PROBE: Women can use a cycle of beads to count the days they are most likely to get pregnant and avoid sexual intercourse during those days.	YES . . . . . 1 NO 2	
09A	**Lactational Amenorrhea Method (LAM)**	YES . . . . . 1 NO 2	
10	**Rhythm Method** PROBE: Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant.	YES . . . . . 1 NO 2	
11	**Withdrawal** PROBE: Men can be careful and pull out before climax.	YES . . . . . 1 NO 2	
12	**Emergency Contraception** PROBE: As an emergency measure, within three days after they have unprotected sexual intercourse, women can take special pills to prevent pregnancy	YES . . . . . 1 NO 2	
13	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES . . . . . 1 _____ (SPECIFY) _____ (SPECIFY) NO 2	

302	CHECK 226: NOT PREGNANT OR UNSURE ☐ PREGNANT ☐ → 305		
303	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES . . . . . 1 NO . . . . . 2 → 305	
304	Which method are you using? IF MORE THAN ONE METHOD MENTIONED, FOLLOW SKIP INSTRUCTION FOR HIGHEST METHOD IN LIST. CIRCLE ALL MENTIONED.	FEMALE STERILIZATION . . . . . A MALE STERILIZATION . . . . . B IUD . . . . . C INJECTABLES . . . . . D IMPLANTS . . . . . E → 304A PILL . . . . . F MALE CONDOM . . . . . G FEMALE CONDOM . . . . . H DIAPHRAGM/FOAM/JELLY . . . . . I STANDARD DAYS METHOD . . . . . J LACTATIONAL AMEN. METHOD . . . . . K → 304B RHYTHM METHOD . . . . . L WITHDRAWAL . . . . . M OTHER MODERN METHOD . . . . . X → 305 OTHER TRADITIONAL METHOD . . . Y	
304A	Where did you obtain (METHOD FROM Q.304) the last time? IF MORE THAN ONE METHOD CIRCLED IN Q.304 ASK ABOUT THE METHOD THAT IS HIGHEST ON THE LIST. PROBE TO IDENTIFY THE TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT.HOSPITAL . . . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. HEALTH STATION/CLINIC . . . 13 GOVT. HEALTH POST/HEW . . . . . 14 OTHER PUBLIC _____ 15 (SPECIFY) NGO NGO HEALTH FACILITY . . . . . 21 VOLUNTARY COMMUNITY HEALTH WORKERS . . . . . 22 OTHER NGO _____ 26 (SPECIFY)	
304B	Where did you learn how to use the standard days method/ rhythm method/lactational amenorhea method?	PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL . . . . . 31 PRIVATE CLINIC . . . . . 32 PHARMACY . . . . . 33 OTHER PRIVATE MEDICAL _____ 36 (SPECIFY) OTHER SOURCE DRUG VENDOR/STORE . . . . . 41 SHOP . . . . . 42 FRIEND/RELATIVE . . . . . 43 OTHER _____ 96 (SPECIFY)	
305	Are you currently married or living together with a man as if married?	YES, CURRENTLY MARRIED . . . . . 1 YES, LIVING WITH A MAN . . . . . 2 NO, NOT IN UNION 3	→ 401
306	Have you ever been married or lived together with a man as if married?	YES, FORMERLY MARRIED . . . . . 1 YES, LIVED WITH A MAN . . . . . 2 NO . . . . . 3 → 401	
307	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED . . . . . 1 DIVORCED . . . . . 2 SEPARATED 3	

SECTION 4. MATERNITY CARE

401	CHECK 224: ONE OR MORE BIRTHS IN MESKERM 2001 E.C. OR LATER ☐		NO BIRTHS IN MESKERM 2001 E.C. OR LATER ☐ →	461A
402	CHECK 215: ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN MESKEREM 2001 E.C. OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES). Now I would like to ask some questions about your children born in the last five years. (We will talk about each separately.)			
403	BIRTH HISTORY NUMBER FROM 212 IN BIRTH HISTORY	LAST BIRTH BIRTH HISTORY NUMBER ☐☐	NEXT-TO-LAST BIRTH BIRTH HISTORY NUMBER ☐☐	SECOND-FROM-LAST BIRTH BIRTH HISTORY NUMBER ☐☐
404	FROM 212 AND 216	NAME _____ LIVING ☐ DEAD ☐	NAME _____ LIVING ☐ DEAD ☐	NAME _____ LIVING ☐ DEAD ☐
408	Did you see anyone for antenatal care for this pregnancy?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 421)		
409	Whom did you see? Anyone else? PROBE TO IDENTIFY EACH TYPE OF PERSON AND RECORD ALL MENTIONED.	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . . . B HEW . . . . . C OTHER HEALTH PERSONNEL_____ D (SPECIFY) OTHER PERSON TRAINED TRAD BIRTH ATTENDANT . . . E UNTRAINED TRAD BIRTH ATTENDANT . . . F VCHW . . . . . G OTHER_____ X (SPECIFY)		
410	Where did you receive antenatal care for this pregnancy? Anywhere else? PROBE TO IDENTIFY TYPE(S) OF SOURCE(S) AND RECORD ALL MENTIONED. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	HOME YOUR HOME . . . . . A OTHER HOME . . . . . B PUBLIC SECTOR GOVT. HOSPITAL . C GOVT. HEALTH CENTER . . . . . D GOVT. HEALTH STATION /CLINIC . . . . . E GOVT. HEALTH POST . . . . . F OTHER PUBLIC _____ G (SPECIFY) NGO HEALTH FACILITY . H PRIVATE MED. SECTOR PVT. HOSPITAL . . . I PVT. CLINIC . . . . . J OTHER PRIVATE MED._____ K (SPECIFY) OTHER_____ X (SPECIFY)		
411	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS . . . ☐☐ DON'T KNOW 98		
412	How many times did you receive antenatal care during this pregnancy?	NUMBER OF TIMES . . . ☐☐ DON'T KNOW 98		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
413	As part of your antenatal care during this pregnancy, were any of the following done at least once? Was your blood pressure measured? Did you give a urine sample? Did you give a blood sample?	YES NO BP . . . . . 1 2 URINE . . . . . 1 2 BLOOD 1 2		
414	During (any of) your antenatal care visit(s), were you told about the signs of pregnancy complications?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 421) ← DON'T KNOW 8		
414A	Which signs of pregnancy complications were you told about?	VAGINAL BLEEDING . A VAGINAL GUSH OF FLUID. . . . . B SEVERE HEAD ACHE C BLURRED VISION. . . . D FEVER . . . . . E ABDOMINAL PAIN. . . . F OTHER _____ X (SPECIFY)		
421	During this pregnancy, were you given or did you buy any iron tablets? SHOW TABLETS.	YES . . . . . 1 NO . . . . . 2 (SKIP TO 433) ← DON'T KNOW 8		
422	During the whole pregnancy, for how many days did you take the tablets? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS.	NO. OF DAYS . . . ☐☐☐ DON'T KNOW 998		
433	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . . B HEW . . . . . C OTHER HEALTH PERSONNEL _____ D (SPECIFY) OTHER PERSON TRAINED TRAD BIRTH ATTENDANT . . . E UNTRAINED TRAD BIRTH ATTENDANT F VCHW . . . . . G RELATIVE/FRIEND . . . H OTHER _____ X (SPECIFY) NO ONE . . . . . Y	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . . B HEW . . . . . C OTHER HEALTH PERSONNEL _____ D (SPECIFY) OTHER PERSON TRAINED TRAD BIRTH ATTENDANT . . . E UNTRAINED TRAD BIRTH ATTENDANT F VCHW . . . . . G RELATIVE/FRIEND . . . H OTHER _____ X (SPECIFY) NO ONE . . . . . Y	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . . B HEW . . . . . C OTHER HEALTH PERSONNEL _____ D (SPECIFY) OTHER PERSON TRAINED TRAD BIRTH ATTENDANT . . . E UNTRAINED TRAD BIRTH ATTENDANT F VCHW . . . . . G RELATIVE/FRIEND . . . H OTHER _____ X (SPECIFY) NO ONE . . . . . Y
434	Where did you give birth to (NAME)? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	HOME YOUR HOME . . . . . 11 (SKIP TO 437A) ← OTHER HOME . . . . . 12 PUBLIC SECTOR. GOVT. HOSPITAL . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. HEALTH STAT/CLINIC . . 23 GOVT. HEALTH POST . . . . . 24 OTHER PUBLIC . . . 26 _____ (SPECIFY) NGO HEALTH FACILITY . . 31 PRIVATE MED. SECTOR PVT. HOSPITAL . . . 41 PVT. CLINIC . . . 42 OTHER PRIVATE MED. _____ 43 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 437A) ←	HOME YOUR HOME . . . 11 (SKIP TO 461) ← OTHER HOME . . . 12 PUBLIC SECTOR. GOVT. HOSPITAL 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. HEALTH STAT/CLINIC . . . 23 GOVT. HEALTH POST . . . . . 24 OTHER PUBLIC 26 _____ (SPECIFY) NGO HEALTH FACILITY 31 PRIVATE MED. SECTOR PVT. HOSPITAL . 41 PVT. CLINIC . . . 42 OTHER PRIVATE MED. _____ 43 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 461) ←	HOME YOUR HOME . . . 11 (SKIP TO 461) ← OTHER HOME . . . 12 PUBLIC SECTOR. GOVT. HOSPITAL 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. HEALTH STAT/CLINIC . . . 23 GOVT. HEALTH POST . . . . . 24 OTHER PUBLIC 26 _____ (SPECIFY) NGO HEALTH FACILITY 31 PRIVATE MED. SECTOR PVT. HOSPITAL 41 PVT. CLINIC . . . 42 OTHER PRIVATE MED. _____ 43 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 461) ←

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
435	Was (NAME) delivered by caesarean, that is, did they cut your belly open to take the baby out?	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
436	After you gave birth to (NAME), did anyone check on your health while you were still in the facility?	YES . . . . . 1 (SKIP TO 439) ← NO 2		
437	Did anyone check on your health after you left the facility?	YES . . . . . 1 (SKIP TO 439) ← NO . . . . . 2 (SKIP TO 446) ←		
437A	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 TRANS- PORTATION . . . . . C DON'T TRUST FACILITY/POOR QUALITY SERVICE . D NO FEMALE PROVID- ER AT FACILITY . . . E HUSBAND/FAMILY DID NOT ALLOW . . . F NOT NECESSARY . . . G NOT CUSTOMARY . . . H OTHER _____ X (SPECIFY)		
438	After you gave birth to (NAME), did anyone check on your health?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 446) ←		
439	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PRERSONNEL DOCTOR . . . . . 11 NURSE/MIDWIFE . . . 12 HEW . . . . . 13 OTHER HEALTH PERSONNEL_____14 (SPECIFY) OTHER PERSON TRAINED TRAD BIRTH ATTEND . . . . . 21 UNTRAINED TRAD BIRTH ATTEND . 22 VCHW . . . . . 23 OTHER _____96 (SPECIFY)		
440	How long after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 DAYS 2 WEEKS 3 DON'T KNOW . . . 998		
446	In the first two months after delivery, did you receive a vitamin A dose (like this)? SHOW CAPSULES	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
461		GO BACK TO 433 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 461A.	GO BACK TO 433 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 461A.	GO BACK TO 433 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 461A.
461A	RECORD THE TIME. MORNING = 1 EVENING = 2		MORNING/EVENING HOUR . . . . . . MINUTES	

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF SUPERVISOR: _____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR: _____ DATE: _____