User Notes for PMA-Ethiopia 2023
Cross-sectional Survey Household & Female Dataset, Version 1.0

Disclaimer: PMA cannot provide in-depth support for data analysis or data related questions; hence, this user note was prepared to provide more information of the dataset for the end-users.

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PMA Ethiopia

Performance Monitoring for Action Ethiopia (PMA Ethiopia) builds on the previous success of PMA2020/Ethiopia and PMA Maternal and Newborn Health study in the Southern Nations, Nationalities and Peoples Region (SNNP). PMA Ethiopia is a five-year project implemented in collaboration with Addis Ababa University, Johns Hopkins University, and the Federal Ministry of Health. It measures key reproductive, maternal and newborn health (RMNH) indicators. The funding is provided by the Bill & Melinda Gates Foundation.

Cross-sectional data, including a health facility-based survey, are collected annually in all regions. Longitudinal data (following pregnant women through one year postpartum) are collected in two cohorts of women (2019-2021 and 2021-2023) in four large, predominantly agrarian regions: Tigray,

Oromiya, Amhara, and Southern Nations, Nationalities, and Peoples' Region, and one urban region, Addis Ababa. Afar is included in the first cohort (2019-2021) of the longitudinal survey.

Sampling

PMAET 2023 Cross-sectional survey used a two-stage cluster design with urban-rural, and major regions as strata, sampling across all 11 geographical regions in Ethiopia. Enumeration areas (EAs) were selected from the master sample frame of the Central Statistical Agency. A census of all households within selected EAs was done in panel regions: Oromiya, Amhara, SNNP, and Addis Ababa. This census served as the sampling frame for both cross-sectional survey and identification of women for panel survey. A standard household listing, which involved identification of all households but no generation of a complete household participant list, was conducted in non-panel survey regions. This household listing served as the sampling frame in the non-panel regions.

After completion of census/household listing, a cross-section of 35 households were randomly selected from within each enumeration area. All women aged 15-49 years in the selected households were eligible for the cross-sectional survey.

The final sample for cross-sectional survey was designed to provide regional level estimates of modern contraceptive prevalence rate (mCPR) among all women with a 5% margin-of-error or less.

Questionnaires

PMA uses standardized questionnaires to gather data about households, individual females and health facilities that are generally comparable with other existing national surveys. Prior to launching the survey in each country, local experts review and modify these questionnaires to ensure all questions are appropriate to each setting. Three questionnaires were used to collect PMA Ethiopia 2023 Cross-sectional survey data: the household questionnaire, the female questionnaire, and service delivery point questionnaire.

The household questionnaire gathers basic information about the household, such as ownership of livestock and durable goods, as well as characteristics of the dwelling unit, including wall, floor and roof materials, water sources, and sanitation facilities. This information is used to construct a wealth quintile index. The household questionnaire also captures age, sex, and marital status for all usual members of the household or visitors who slept in the household the night before.

The female questionnaire gathers specific information on education, migration; fertility and fertility preferences; family planning access, choice and use; empowerment; quality of family planning services; and exposure to family planning messaging in the media. In addition, the female questionnaire gathers data from women who were pregnant and recently postpartum women on key indicators of maternal health such as receipt and quality of antenatal care and delivery experience.

The service delivery point questionnaire gathers the information on infrastructure and staffing, in addition to questions that focus on commodity availability and provider readiness. Facility questions cover the range of commodities and services provided in the RMNH continuum, including, to family planning services.

All PMA questionnaires are administered using Open Data Kit software and Android smartphones. The PMA Ethiopia questionnaires appeared in the two local languages (Amharic, and Afan Oromo), in addition to English. The questionnaires were translated using available translations from similar population surveys and experts in translation. The interviews were conducted in the local languages.

Training

The PMA Ethiopia fieldwork training started with a training of the entire field staff. The trainings started with a training of trainers (TOT) was held from October 30 to November 4, 2023 in Addis Ababa. This

was followed by a series of resident enumerator (REs) trainings from November 6 to November 14, 2023. The trainings were led by staff PMA staff from Addis Ababa University, with staff and faculty from the William H. Gates Sr. Institute for Population and Reproductive Health providing remote support. Throughout the trainings, all field staff were evaluated based on their performance on several written and phone-based assessments and class participation. All training participants were given in-depth instructions on survey protocols, the questionnaires and guidance for conducting interviews using an Android phone.

The resident enumerator training was conducted primarily in Amharic, whereas some small group sessions were conducted in Afan Oromo, or Tigrinya."

Data Collection & Processing

Data collection was conducted between November 2023 and January 2024. The ODK application enabled REs and supervisors to collect and transfer survey data to a central ODK Aggregate cloud server. This instantaneous aggregation of data also allowed for daily monitoring of data collection progress, concurrent data processing, and course corrections while PMA was still active in the field.

Throughout data collection, the central staff at AAU in Ethiopia and the data manager at the William H. Gates Sr. Institute at Johns Hopkins in Baltimore, Maryland routinely monitored the incoming data and notified field staff of any potential errors, missing data or problems found with form submissions on the central server. The use of mobile phones combined data collection and data entry into one step; therefore, data entry was completed when the last interview form was uploaded at the end of data collection.

Once all data were on the server, data analysts cleaned and de-identified the data, applied survey weights and prepared the final data set for analysis using Stata® version 16 software.

Who is in the Data?

PMAET 2023 Cross-sectional survey used a two-stage cluster design with urban-rural, and major regions as strata. A total of 280 enumeration areas (EAs) were selected from the master sample frame and a cross-section of 35 households are randomly selected from within each enumeration area. All women aged 15–49-years old in the selected households are eligible for the cross-sectional survey. The final sample included 9,763 households and 8,943 women who completed the survey.

Materials Included in the Data Zipped File

This data zipped file includes:
1. Household questionnaire pdf file
2. Female questionnaire pdf file
3. User notes pdf file
4. Dataset in 3 file formats: .csv, .xlsx and Stata .dta

Codebook

The codebook for this dataset can be found in the PMA Ethiopia Household and Female Survey Master Codebook. The latest version of the master codebook can be downloaded from the https://www.pmadata.org/data-codebooks.

GPS Variables

GPS coordinates are not released in this dataset.

General Variables

SIF variables: Date and time variables are provided in both string format and as Stata Internal Format (SIF) values. The variable name of any variable that has been changed into SIF is appended with SIF (e.g. **system_date** and **system_dateSIF**).

Select multiple variables: Some questions allow for the selection of multiple answers. These variables are in string format and the values are the concatenation of answer choices (e.g. if a household respondent said that they use two sources of water, such as a protected well and rainwater, the value of the observation would read "protected_well rainwater"). Multi-select options are generally, though not always, transformed into binary variables for analysis.

Variable Response Options

Select one: Most select one numeric variables have consistent values for option choices across all PMA countries (e.g. marital_status==1 is equivalent to currently married in all PMA countries). Exceptions include the variables **school**, **floor**, **roof**, and **walls**, which have country-specific options and numbering.

Select multiple: Similarly, most select multiple variables have the same response options across all PMA countries. Some select multiple variables, however, such as **assets**, have answer options that vary across countries.

See the PMA Ethiopia Household and Female Survey Master Codebook for complete details on variables and answer choices for each survey.

Specific Variables

metainstanceID: metainstanceID is the unique ID generated by ODK for each form submitted to the central server. For PMA-Ethiopia, the variable metainstanceID is unique for each household but will be repeated within the household. **memberID** will provide a unique ID for each person within the household.

FQmetainstanceID: FQmetainstanceID is the unique ID generated by ODK for each female form submitted to the central server. For PMA-Ethiopia, the variable FQmetainstanceID is unique for each female surveyed.

EA_ID: The primary sampling unit masked with a random number for anonymity. The same random number is applied to the same EA across multiple survey years.

RE_ID: Identification number of the resident enumerator (RE), or interviewer. RE names are masked with the PMA-Ethiopia random numbers in the household dataset. The same random number is applied to the same REs across different surveys of the PMA-Ethiopia grant.

PMA2020_RE_ID: The resident enumerators (REs), or interviewers, who were involved in the previous PMA2020 surveys (2014-2018), also had PMA2020 IDs. This ID is consistent for all survey rounds of the PMA2020 grant.

wealth: PMA Ethiopia datasets include **wealthquintile**. The continuous variable **score** is included to allow for construction of various wealth categories.

current_methodnum: The numbering scheme for contraceptive methods is consistent across all PMA countries. For example, female sterilization is equal to 1 in every PMA country, whether or not there are any reported uses of female sterilization in the dataset. In some countries, therefore, the numbering will be non-consecutive if some method choices are not selected.

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cp, mcp, tcp: Variables that identify current users of any contraceptive method (**cp**), a modern contraceptive method (**mcp**), and a traditional contraceptive method (**tcp**) are included in publicly available datasets so that PMA-Ethiopia estimates involving current contraceptive use and method mix can be replicated. Values for these variables are 0 (no) or 1 (yes). PMA codes **cp**, **mcp**, and **tcp** based on the variable **current_methodnum** with the following caveats:

1. Women who report not being a current user of contraception (**current_user**=0), but who report using EC in the past 12 months are coded as **cp**=1 and **mcp**=1. During analysis, current method is classified as EC in the method mix. The variable **current_methodnum_rc** reflects this.

2. Women who report using LAM as a current method (**current_methodnum**=14. LAM) must satisfy the three conditions listed below to be coded as **mcp**=1. If any of these conditions are not met, these women are coded as **tcp**=1. During analysis, current method is classified as LAM or traditional method. The variable **current_methodnum_rc** reflects this.
   a. Less than six months post-partum
   b. Amenorrheic
   c. Indicating that they are using LAM with the intention of preventing pregnancy

Contraceptive Calendar

PMA collects reproductive calendar data from women of childbearing age. The calendar data are retrospective data which provide a month-to-month history of a woman's reproductive events during her calendar period. The calendar period is 24 or 36 months depending on the survey. The contraceptive calendar consists of two columns. Column 1 records births, pregnancies, terminations and contraceptive use, while column 2 records reasons for discontinuation of contraceptive use.

calendar_c1_full, **calendar_c2_full**: These variables are the contraceptive calendar column 1 and column 2 data prepared as string variables in a reverse chronological order from the left end. Any months that occur in the future in reference to the time of the interview during the calendar period has no data and are denoted with just commas. The codes for the options of column 1 and column 2 are listed in the table below.

During data collection, the calendar data is filled out by REs for women who have had at least one birth event and/or who have used a contraceptive method in the preceding 24 or 36 months. For women with no birth events or who have been continuously using contraception for more than 24 or 36 months, no calendar entry is made. Instead, the data managers impute appropriate values for these scenarios during the data cleaning stage for women who completed or partially completed the female questionnaire. The Contraceptive Calendar period for Ethiopia 2023 Cross-sectional Survey was 48 months (2021-2024).

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Column 1		Column 2	
Code	Births, Pregnancies or Contraceptive Use	Code	Reasons for Discontinuation
B	Births		
P	Pregnancies		
T	Terminations		
0	No method used	1	Infrequent sex / husband away
1	Female Sterilization	2	Became pregnant while using
2	Male Sterilization	3	Wanted to become pregnant
3	Implant	4	Husband / partner disapproved
4	IUD	5	Wanted more effective method
5	Injectables	6	Side effects / health concerns
7	Pill	7	Lack of access / too far
8	Emergency Contraception	8	Costs too much
9	Male Condom	9	Inconvenient to use
10	Female Condom	10	Up to god / fatalistic
11	Diaphragm	11	Difficult to get pregnant / menopausal
12	Foam / Jelly	12	Marital dissolution / separation
13	Std Days / Cycle Beads	96	Other
14	LAM		
30	Rhythm method		
31	Withdrawal		
39	Other traditional methods		

Dataset Citation

Report Data Errors or Inconsistencies:

To report errors or inconsistencies regarding the dataset, please email datamanagement@pmadata.org