User Notes for PMA-Ethiopia 2023
Cross-sectional Survey Service Delivery 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.

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.

PMA Ethiopia is led by Makerere University School of Public Health at the College of Health Sciences and the overall direction and support are provided the William H. Gates Sr. Institute for Population and Reproductive Health at the Johns Hopkins University and Jhpiego. The funding is provided by the William H. Gates Sr. Foundation.

Sampling

PMAET Service Delivery Point (SDP) 2023 Cross-sectional survey used a two-stage cluster design with urban-rural, major regions as strata. A total of 280 enumeration areas (EAs) were selected from the master sample frame of the Central Statistical Agency. For each EA, all public SDPs that served the EA and up to 3 private facilities were selected. The final sample included 824 SDPs which completed the interview.

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 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. PMA uses Open Data Kit (ODK) Collect, an open-source software application, to collect data on mobile phones. All the questionnaires were programmed using this software and installed onto all project smartphones. The ODK questionnaires are programmed with automatic skip-patterns and built-in response constraints to reduce data entry errors.

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 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 in January 2023.

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.

REs in each enumeration area (EA) administered the household and female questionnaires in the selected households, and the SDP questionnaire for sampled private SDPs.

The field supervisors administered the SDP questionnaire at all public SDPs that serve each EA; the lowest, second lowest and third lowest-level public health SDPs (health post, health center, and district hospital) designated to serve each EA population.

Materials Included in the Data Zipped File

This data zipped file includes:
1. Service Delivery Point questionnaire pdf file
2. User notes pdf file
3. Dataset in 3 file formats: .csv, .xlsx and Stata .dta

Codebook

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

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. **year_open** and **year_openSIF**).

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 service delivery point respondent said that the facility offers female sterilization counseling, provision, and charges for the provision, the response for the variable **offered_female_ster** would read "counseled provided charge"). Multi-select options are generally, though not always, transformed into binary variables for analysis. Most select multiple variables have the same response options across all PMA countries, with exceptions for variables with choices that are country specific.

Variable Response Options

Select one: Most select one numeric variables have consistent values for option choices across all PMA countries (e.g. fees ==1 is equivalent to charging contraceptive fees in all PMA countries). Exceptions include the variables which have country-specific options and numbering. For examples:

- Geographic variable (e.g. **region**, **county**): geographic variable names and response options vary across countries
- **facility_type**: facility types vary across countries
- **postpartum**: options of items discussed during postpartum visits vary slightly across countries

Select multiple: Similarly, most select multiple variables have the same response options across all PMA countries, with exceptions for variables with choices that are country specific.

See the PMA Ethiopia Service Delivery Point Survey Master Codebook for complete details on variables and answer choices for each survey.

Specific Variables

metainstanceID: A unique ID generated by ODK for each SQ survey form submitted to the central server. This variable is unique for each facility within a survey.

facility_ID: Facility names are masked with unique ID numbers. This variable is unique across different surveys.

PMA2020_faclity_ID: For facilities that were included in the previous PMA2020 (2014-2018) surveys, this variable provides their PMA2020 IDs. Th observation would be missing for new facilities which were not part of the PMA2020 surveys. For ones that have PMA2020 IDs, it is unique across different surveys.

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

RE_ID: Identification number of the resident enumerator (RE), or interviewer. RE names are masked with unique numbers. The same unique number is applied to the same RE across different PMA survey phases.

PMA2020_RE_ID: For the resident enumerators (REs), or interviewers, who were involved in the previous PMA2020 surveys (2014-2018), this variable provides their IDs from PMA2020 surveys. This ID is unique across different surveys.

EAserved#: Some SDPs serve more than one EA. The EAserved# variables indicate the additional EAs that a given facility serves, if any. Information regarding which EAs an SDP serves comes from the country/local government. Only public facilities are assigned to serve more than one EA.

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GPS Variables

GPS coordinates are not released in this dataset.

Notes for Missing Data

In Stata, Missing data is expressed as "." in the cell. Generally, Stata commands perform computations of any type handle missing data by omitting the row with the missing values. However, this may vary across commands. PMA does not impute missing values. Missing data in datasets should be studied and/or treated before proceeding to analysis.

Reasons for missing data:

Normal situations:

1. Incomplete forms: If a household, female, or SDP form is not marked as completed (**HHQ_result**, **FRS_result**, **SDP_result** and **CEI_result** not equal to 1), the observation is likely to miss most of the information. Incomplete forms should not be included in the analysis.
2. Observations that are ineligible for subsequent forms: Only eligible respondents will receive subsequent forms. For example, males and ineligible females will not receive female questionnaires in family planning surveys, hence their observations will have all missing values in female forms.
3. Question not administered due to skip logic: PMA surveys use ODK's skip logic function. The subsequent questions are administered selectively based on the respondent's previous answers. Irrelevant or inapplicable questions are skipped. For example, a woman who is not a contraceptive user will not be asked questions about contraceptive usage subsequently.

Uncommon situations:

1. Lost forms: Due to technical constraints in some challenging data collection areas, forms can be lost in the process of data submission. Although most forms were recoverable, there are occasionally a few that cannot be found. For example, an observation from an eligible woman with completed female form information but missing household form information, or vice versa. These observations may be dropped based on analysis needs.
2. Missing due to incorrect skip logic: PMA surveys were conducted under rigorous quality control. However, in rare cases, there can be incorrect skip logic, which skipped a question that was supposed to be administered, resulting in missing values. These errors are documented in the PMA codebook, which can be downloaded from PMA website. It's not necessary to drop the entire observation since this will likely affect only a few questions.

Distinguish missing data from negative values:

1. -99: No response. The respondent was administered with the question but did not provide an answer. PMA survey requires consent from the respondent and the respondent has the right to refuse to answer any questions at any point. -99 is recorded to reflect that the respondent did not provide an answer to a certain question.
2. -88: Did not know. The respondent consented to answer a specific question but without knowing the answer.
3. -77: Not applicable. The question is administered to the respondent but not applicable to the respondent's situation.

Dataset Version Updates

Any updates made to datasets after their initial release will be documented here. PMA releases new versions on as needed basis and users who have been approved previously to get access to the datasets will be notified via email upon the release of the new versions. Users can then log onto the PMA website and re-download the datasets without having to submit a new request.

Users should always be using the latest version of the datasets available on the PMA website. However, if users need an access to the old versions of the datasets for any reasons, users can contact datamanagement@pmadata.org directly with an explanation for why the access to the old version was needed.

PMA GitHub Repository

The PMA GitHub Repository https://github.com/PMA-DM/PMA_Analyses_Public has Stata .do files which could be used to generate indicators in the briefs, using the Household and Female, Service Delivery Point, and Client Exit Interview datasets that are publicly available.

Note: Data presented in the online briefs represent preliminary results. Therefore, there may be slight differences between the .do file results and those in the brief. Please access the PMA DataLab https://datalab.pmadata.org/ to cross check any discrepancies and get the final estimates.

Dataset Citation

Suggested citation: Addis Ababa University School of Public Health; and William H. Gates Sr. Institute for Population and Reproductive Health at the Johns Hopkins Bloomberg School of Public Health. Performance Monitoring for Action Ethiopia (PMA-ET) 2023 Cross-sectional Service Delivery Point Survey (Version 1.0), PMA2023/ET-2023-CS-SQ. 2023. Ethiopia and Baltimore, Maryland, USA. https://doi.org/10.34976/xphk-kc27.

Report Data Errors or Inconsistencies:

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